

3 The Rational Expectations Revolution

The preceding chapter has reviewed the debate between Keynesians and monetarists, which underlies much of the public debate in Germany. However, macroeconomic theory has evolved considerably, with potentially far-reaching implications for this debate. A large impetus into the way macroeconomic models changed was the introduction of rational expectations into macroeconomic modeling. This was pioneered by New Classical models, and later refined by Real Business Cycle models. In the former, expected monetary policy actions have neither short- nor long-run effects on output, and in the latter monetary policy does not matter at all. These results undermine any case for activist demand management policies, thereby putting a large question mark behind the Keynesian line of argument. This chapter provides a short introduction into these two models. This is followed by an overview of the response by so-called New Keynesian economists, who provide micro-foundations to much of the Keynesian argument and show that monetary policy can be effective even in the presence of rational expectations.

3.1 New Classical Economics

In the 1970s the principles of macroeconomic modeling of the 1950s and 1960s were challenged by economists like Lucas, Sargent, Wallace, and others. Their research program became known as New Classical economics. In a sense this research program represented the logical conclusion of the monetarist line of enquiry: While monetarists reintroduced some classical principles into macroeconomic models by rejecting nominal rigidities and assuming instead flexible prices, New Classical economists adopted the classical paradigm in full and applied it in an innovative way to business cycle research. Their starting point is the classical assumption that individuals and firms make the decisions that maximize their well-being subject to their budget and technological constraints (Espinosa-Vega and Russell 1997: 18). That is, in New Classical models the behavior of agents is derived from microeconomic principles. The emphasis on microeconomic principles separates New Classical models from traditional Keynesian and monetarist macroeconomic models because the latter were not built on micro-foundations but were based on assumptions about the behavior of

consumption, investment etc. on the aggregate level.¹²⁰ Moreover, in New Classical models the principle of optimization is extended to intertemporal decisions. With intertemporal optimization New Classical models took a new approach to dynamic analysis and went beyond the comparative-static analysis common in traditional Keynesian and monetarist models.

The New Classical approach to modeling economic fluctuations as resulting from decisions of intertemporal optimizing agents implies that the process of expectation formation plays an important role in the dynamic analysis of economic models. Intertemporal optimization means that current choices do not depend only on current and past conditions, but also on future conditions. Since future conditions cannot be known with certainty, agents have to form expectations. New Classical economists argued that adaptive expectation formation, which was favored by monetarists, is hard to reconcile with rationally acting agents, because adaptive expectations only use some of the available information. Since the resulting expectation errors have large real consequences, it is likely that rational agents would choose to form their expectations in a more sophisticated manner to avoid these disturbances. Moreover, adaptive expectations imply that agents do not learn fully from their earlier mistakes. For example, in monetarist models an entirely predictable policy of monotonically increasing the growth rate of the money supply is sufficient to fool workers again and again into working more hours even though this decreases their welfare. Since New Classical economists found the implications of adaptive expectations to be implausible they chose instead to assume that the expectations of households and firms are formulated in the most accurate possible manner, given the information available to them (Espinosa-Vega and Russell 1997: 19). This assumption is called rational expectations.

An important implication of rational expectations is that agents form expectations about the behavior of policy makers. If the government changes its policy, agents may not recognize this immediately, but they will learn the new policy rule eventually and adjust their behavior accordingly. Technically, rational expectations imply that the mean expectation of agents with respect to some phenomena, say the price level, is equal to the prediction that would be made by the relevant economic theory (Buiter 1980: 35). Thus, the agents in the model do not make systematic expectation errors. The relevant economic theory is, of course, the theory underlying the model in question. In other words, the agents in the model are assumed to know the structure of the model.

New Classical economists conduct their investigations in general equilibrium settings (Espinosa-Vega and Russell 1997: 18). In accordance with the classical paradigm they assume perfect price flexibility, implying that the economy is in

¹²⁰ Principally, monetarists used the same modeling framework as Keynesians but put more emphasis on price flexibility and on the role of expectation formation in the dynamic analysis of these models.