Convergence, the Maastricht Criteria, and Their Benefits

PANOS C. AFXENTIOU

Professor of Economics
University of Calgary

Designs for a united Europe were popular amongst idealists and peace-loving thinkers, who, horrified by the devastation of conflict, wanted to reduce, if not totally eliminate, the causes of war. From the Franco-Prussian War and the First and Second World Wars, it became clear that Germany and France had to be together in any future alliance as the main continental powers. Depending upon the degree of inclusion, more countries were envisioned as future participants in a unified Europe. Great Britain was aloof in these designs. In line with its traditional gradualism and initial reluctance to accept a role lesser than that of a great power, the United Kingdom was prepared to wait on the sidelines and observe developments carefully before participating in the European experiment.

Progress toward the realization of plans for European unification required the confluence of necessary politico-economic conditions. Such conditions were cemented by the end of WWII and the emergence of both the Eastern bloc headed by the U.S.S.R. and the Western block headed by the United States. Western European countries faced poverty, calorie deficiencies and hunger, ultimately realizing the increasing popularity of communist parties and the threat of the colossus of the Red Army stationed at their borders. To forestall communism and to defend themselves from a possible attack from the East, they organized themselves into the American-led NATO. Concurrently, a generous Marshall plan provided valuable resources for European economic recovery. Economic prosperity was the best strategy against the equalitarian slogans of communism, while NATO collective strength was the best defense against any possible aggressive military adventurism from the East.

As the feasibility of a politically united Europe disintegrated, more emphasis was placed on the enhancement of European economic integration. This paper examines the steps that eventually led to the establishment of the European Union, the Maastricht convergence criteria as preconditions for the success of the euro, and the costs and benefits of monetary unions within the context of the Maastricht Treaty.

The Steps Towards an Economic Union

Thwarting possible communist aggression was central in the minds of Western intellectuals and strategists and gave rise to an impression that the original motives for a unified Europe were exclusively political. Scholars such as Feldstein and Bean share this opinion.[1] Both argue that even after the collapse of communism, European unification should be seen as a product of political intentions since it cannot be justified easily by their economic appraisals. As I will argue in the following pages, political considerations are not free from economic considerations, and economic considerations eventually dominated the objective of a unified Europe as intense political unification proved unattainable.

Multinational political agreements can never remain purely political. Relations within interdependent collectives bring economic consequences to the surface. These relations are more visible in the life of the average citizen than the behind-the-scenes political arrangements of countries. In early postwar years, the benefits of market size and competition were seen as sine qua non conditions that would promote efficiency and strengthen the future economic standing of Europe vis-à-vis the United States. The rich resource endowments and large market size of the United States stimulated innovation by a diversified, industrialized Europe rich in entrepreneurial experience.[2] Europe had what economists later called a "high-standard social capability factor."[3] Compared to the economic leadership of the United States, Europe was a laggard. However, because of its social capability factor, it would be able to introduce timely institutional and structural changes that would spread ideas and transfer technology. Ideally, Europe would eventually catch up with, if not surpass, the United States. In this process, which growth economists now call convergence, similarity of human and natural resources leads to an equilization of per capita incomes through free market economies.[4]

Convergence was not anticipated in the immediate postwar years when Jean Monnet, considered by many the intellectual force behind the unification of Europe, was actively involved in planning the Europe of the future. Later, large strides were made in the economic field beginning in 1951 with the creation of the European Coal and Steel Community, comprised of six countries. The number of member countries increased. The Treaty of Rome in 1957 transformed the European Coal and Steel Community into the European Economic Community. The European Monetary System (EMS) of 1979 was followed by this Single European Act of 1986, which eliminated inter-state tariffs. The Single European Market in 1992 provided for the free movement of goods, persons, services and capital. The Maastricht Treaty signed on February 7, 1992 gave four convergence criteria, which guided the introduction of a common currency in line with the principle "One Market, One Currency."[5] In 1993, as the European Union was emerging from the Single European Market, the final touches were put in place for the introduction of the euro by January 2002 as the common currency for all transactions of the European Union. Membership, in the meantime, expanded from six to nine in 1973, to ten in 1981, to twelve in 1986, and to fifteen in 1995. The EU consists presently of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom. (Denmark, Sweden, and the United Kingdom have temporarily remained outside the euro, while Greece did not satisfy the conditions of adoption. By 2002 all countries, with the probable exception of Britain, will likely adopt the euro as their common currency. Beyond 2002, membership is likely to expand through admission of Eastern European countries, including Cyprus, Malta and even Turkey, whose European credentials are rather questionable.) With a single currency inevitable, members established the European Central Bank in mid-1998. As of January 1999, it operated solely in euros. Modeled after the Bundesbank, which is renowned for its unwavering commitment toward price stability, the European Central Bank could be equally successful in its mission if the preconditions of price stability, provided by the Maastricht Treaty, are firmly established by January 2002 and strongly preserved and protected thereafter.[6]

Visions for a united Europe after WWII were primarily guided by political designs and accompanied by economic considerations.

Membership expansion created more heterogeneity within the European Union. These linguistic and cultural diversities tended to undermine even the most determined efforts toward European political unification. As long as any country values its own heritage above that of any other country, it will be unwilling to surrender its sovereign power to a central community body. The experience of Canada with the separatist movement in Quebec is relevant in this context. Motivated by the power of nationalism and the need for Quebecois separatists feared the loss of their culture in the vast North American value system and constantly threaten to break up the country. The forces of non-assimilation which are so strong in the Canadian federation are likely to be just as strong in both large and small European countries. Pride in heritage and sovereignty renders political unification difficult. The relatively diminutive size of the central European authorities' budget demonstrates that a politically unified Europe has remained more a dream than a reality. Without a large budget, policies toward regional equalization emanating from the center cannot be implemented, nor can military and foreign initiatives be successfully launched. The recent upheavals in the Balkans are telling in this respect, for without determined American intervention, the region would have remained in tatters. American frustrations at Europe's unwillingness to shoulder its share of military expenses in Bosnia and Kosovo are understandable. Whether these events are the harbingers of a new swing in favor of political unification forces in the European Union is, however, difficult to predict. The fall of the Berlin Wall in 1989 and the subsequent disintegration of the communist bloc severely weakened the drive for political confrontation in Europe. Gradually, economic unification filled the gap left by the lack of political progress. The various institutional changes mentioned above from 1951 to the present, and especially the Maastricht convergence criteria, were central to this progress.

Functions of the Maastricht Convergence Criteria

Strictly speaking, the Maastricht criteria have had very little to do with convergence proper. Convergence, as described earlier, is a process which unifies technological and non-rival domains, preparing institutionally and structurally laggard countries to catch up with those at the forefront. In contrast, the Maastricht criteria are simply rules for price and fiscal stability. If there is some relation between convergence and the Maastricht criteria, it must be in the contribution of these criteria to the social capability factor in particular, or perhaps in the beneficial effects of the spread of ideas during general economic growth. In order to be effective rules for monetary and fiscal stability, the Maastricht criteria must operate within an environment characterized by economic homogeneity, not by internal or external economic disparities and disequilibria. Such an environment satisfies the main conditions for an optimum currency area.

These conditions have been analyzed in a seminal article by Mundell and further elaborated upon by McKinnon and Kenen.[7] An optimum currency area corrects regional shocks with lower prices in areas of unemployment and higher prices in areas of overemployment. Regional shocks are remedied through resource mobility, which responds quickly to differences in regional profitability, though this is fairly unrealistic. In the absence of price flexibility and/or resource mobility, transfers to adversely affected regions are made by the central authorities, similar to such federal states as the United States or Canada. If depressed regions are not assisted with transfers, their population moves to prosperous regions. In the case of the European Union, depopulation of countries does not appear to be a politically acceptable solution. Large quantities of resources normally involved in transfers are not presently provided for in the small budget of the European Union. For this reason, research teams such as Sachs and Sala-i-Martin, and Bayoumi and Masson question the long-term viability of the European Union.[8]

The Maastricht criteria, which are assumed to sustain the European Union in the future, specify in two separate protocols five conditions by which a country is admitted to the union:

- an inflation rate no more than 1.5 percentage points above the average of the three countries with the lowest inflation rates
- nominal long-term interest rates not exceeding by more than 2 percentage points those for the three countries with the lowest inflation rates
- no exchange rate realignment for at least two years
- a government budget deficit not in excess of 3 percent of each country's GDP
- a gross debt to GDP ratio that does not exceed 60 percent

The first three convergence criteria are designed to ensure monetary stability by supporting a fixed exchange rate regime among member countries. The stability of the euro is reinforced by the last two criteria, which protect the European Union from threats of inflation which may arise from government budget deficits. Afxentiou and Serletis examined the convergence performances of all fifteen countries with respect to each criterion.[9] This was done in accordance with the Haldane and Hall convergence method based on the use of time-varying parameter, or Kalman filter analysis.[10] The objectives of these two approaches were to investigate the "structural readiness" of each country prior to the introduction of the Maastricht criteria in 1992, and to determine whether post-Maastricht convergence developments before 1998 were compatible with long-term sustainability. All members had a satisfactory debt ratio convergence. This, however, should be discounted because the 60 percent guideline was taken as the average indebtedness ratio of all countries at the time of the Maastricht negotiations, and as such is devoid of theoretical value. Excluding also the third criterion, which by nature is not subject to convergence, the study found strong evidence of general progress in the Maastricht criteria through both historical analysis and the modeling approach. This evidence suggests that the monetary and fiscal foundations of the European Union are quite solid, though approximately half of the member-countries are considered too structurally weak to deal with inflation. The degrees of convergence in Greece, Finland, Italy and Sweden were attained by drastic measures. Based on their pre-Maastricht records, these may prove not to be easily sustainable in the future, especially with regard to the budget deficit ratio criterion.

Costs and Benefits of Monetary Unions

When countries form monetary unions, they abandon their own monetary unit in favor of a common unit. This abandonment deprives countries control of their own money supply. They yield control to a central bank, in this case the European Central Bank, whose concern will be the common interest of the union rather than the particular interest of a single country. Granting monetary control to a central bank deprives each member of (1) revenues from seignorage and (2) the exchange rate as a tool of macroeconomic stabilization policy. Naturally, the monetary union retains control of the exchange rate changes as an instrument in its dealings with the rest of the world.

The loss of seignorage mainly affects the high-inflation-rate countries that print money to finance their budget deficits, instead of borrowing in the money markets. Countries such as Greece, Italy, Portugal and Spain could be affected by this revenue loss, yet even for these few countries, the loss is rather limited in light of the fact that after the Maastricht Treaty they successfully reduced inflation in their efforts to qualify for membership in the euro.

From an individual country's point of view, the loss of exchange rate flexibility can present serious problems in the present environment of domestic wage and price rigidities. These problems are aggravated further by asymmetric shocks which require either significant resource transfers to depressed areas—a course of action rendered unlikely by the limited resources currently commanded by the central community authorities—or high labor mobility, which is impeded by known cultural and linguistic barriers and high psychological costs suffered by immigrants moving to an alien milieu. Cognisant of these costs and the social commotion in host countries generated occasionally by the large influx of foreign workers, the European Community waited until a significant convergence in per capita income among member-countries was attained before granting freedom of labor mobility.[11]

Research has confirmed that exchange rate changes have only temporary remedial power through the use of money illusions. Because prosperity cannot depend on money illusion, the loss of exchange rate manipulations as a macroeconomic tool may be considered minor. This flexibility of its economy is what protects a country from asymmetric shocks. Such flexibility is an ultimate goal of the European Union, bringing along with it a real convergence of per capita income across its members. Such a goal may be overly ambitious for such a number of dissimilar countries that are destined to become even more diversified with the anticipated expansion of membership. Instead, the attainment of the intermediate goal of industrial integration appears more realistic, and when this is done, it will be easier for countries to survive shocks, asymmetric and otherwise, with relatively little trauma. Monetary unions do not miraculously equalize real per capita incomes, nor do they change physical resource endowments or guarantee equality in human and made capital across their members. Rather, they provide an environment of resource mobility in which the competitive spirit can flourish. In those countries in which it does flourish, resource mobility produces prosperity, but when unsuccessful, it lowers standards of living.

One should add the benefits of (1) reduction in transaction costs, (2) elimination of risk of exchange rate volatility across members, and (3) reduced costs of financial services arising from the large size of available pools of financial assets, resulting from monetary unions to the benefits previously cited. The absence of convertibility of one currency to another is beneficial, especially in small transactions and for European tourism. For large transactions between corporations and financial institutions, electronic payments have already substantially reduced these costs. Because large transactions comprise the majority of transnational transactions, the cost-savings from a single currency would not make much of a difference. Also, by inference, the overall benefits from reduction of transaction costs are estimated to be small.

Equally small and difficult to estimate are the benefits from zero exchange rate volatility and from expanded pools of liquidity. Both of these benefits are perceived to be derived from lower financing costs due to the integration of bond markets and stock exchanges, and from a stimulation of investment and growth due to the reduction of risk and uncertainty.[12] These benefits are downplayed by claims that in a globalized world of integrated financial markets, foreign exchange hedging already protects people against currency fluctuations and uncertainty.

The above analysis clarifies that both the costs and benefits of the European Union appear to be rather small. More importantly, however, the costs and benefits are not reliably estimated; this fact gives room to researchers to argue either for or against the euro with equal power of persuasion. Intuitively, one gathers from these arguments that more likely than not, the benefits outweigh the costs by some small margin. When considered cumulatively over a number of years, it produces substantial results, tipping the scales in favor of the euro. If one adds the political dimensions of the European Union and the international leadership role it is destined to play, the case for its creation becomes still more convincing.

An additional consideration missing from the literature is the impact of the monetary and fiscal stability forcibly imposed on the economic growth of member-countries by the Maastricht criteria. Afxentiou and Serletis have attempted to fill this void.[13] Their statistical analysis of the 1971 to 1998 period showed inflation to have a negative impact upon the growth rate of real per capita income levels in all E.U. countries, except Finland. The investigation of the impact of the debt ratio on real per capita income growth in the European Union found, with a few exceptions, similar results. Based upon these findings, the authors concluded that anti-inflation benefits, together with significant benefits accrued from deficit and debt ratio reductions, confirm the hypothesized positive contribution of the Maastricht convergence criteria to the real per capita income growth and convergence in the European Union. The countries that appear to have benefited most from compliance with these criteria fall into two groups. The first, most benefited, group includes Denmark, Germany, Greece and Ireland, while the second includes Austria, Belgium, France, Italy, the Netherlands, Portugal and Spain. With eleven of fifteen EU members emerging beneficiaries, the positive impact of the Maastricht criteria, cannot be ignored.[14]

Conclusion

Visions for a united Europe after WWII were primarily guided by political designs and accompanied by economic considerations. When the dream for a politically united Europe became unattainable, interest shifted toward building the foundations for an economically integrated Europe. The process began in 1951 with the European Coal and Steel Community, which the Treaty of Rome transformed in 1957 into the European Economic Community. By the time the 1992 Maastricht Treaty led to the European Union, several steps had already been taken to create a single market with a single currency—the euro—to be used as the monetary unit for all transactions by January 2002.

Based on the rationale of optimum currency areas, the European Monetary Union used the five Maastricht convergence criteria, the satisfaction of which produced a monetarily and fiscally stable environment and guaranteed membership in an economically integrated Europe. The present body of fifteen countries will expand as more countries come to believe that the benefits outweigh the costs of membership. Both the costs and benefits of monetary unions are difficult to estimate accurately, and in the present environment of globalization characterized by relatively free capital mobility and reduced trade barriers, they are rather small. Yet in Europe the only game is participation. Countries believe they cannot afford to be excluded from an economically powerful association which, in time, is predicted to evolve into both a military and political superpower.

The record of progress regarding the satisfaction of the Maastricht convergence criteria bodes well for the future success of the euro. An increase in this success would ultimately depend upon the creation of flexible economic structures in each member state that would stimulate real per capita income convergence across the European Union. This goal is relatively long term. In the meantime, the contribution of monetary and fiscal stability provided by the Maastricht criteria to real per capita income growth is surely a step in the right direction.

Notes

1. See M. Feldstein, "The Political Economy of the European Economic and Monetary Union: Political Sources of an Economic Liability," Journal of Economic Perspectives 11 (1997), 23–42; "Why Maastricht Will (Still) Fail," The National Interest (Summer 1993), 19–22; and "The Case against EMU," The Economist (June 1992), 12–19. See also C. R. Bean, "Economic and Monetary Union in Europe," Journal of Economic Perspectives 6 (1992), 31–52.

2. M. Abramovitz and P. A. David, "Convergence and Deferred Catch-up: Productivity Leadership and the Waning of American Exceptionalism," in Ralph Landau, Timothy Taylor, and Gavin Wright, eds., The Mosaic of Economic Growth (Stanford: Stanford UP, 1996), 21–62.

3. Ohkawa and Rosovsky first used this term, which was subsequently popularized by Abramovitz. See K. Ohkawa and H. Rosovsky, Japanese Economic Growth (Stanford: Stanford UP, 1973) and M. Abramovitz, "Catching Up, Forging Ahead, and Falling Behind," Journal of Economic History 46 (1986), 385–406.

4. See W. J. Baumol, "Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show," American Economic Review 76 (1986), 1072–1085; and "Multivariate Growth Patterns: Contagion and Common Forces as Possible Sources of Convergence," in W. J. Baumol, R. R. Nelson, and E. N. Wolff, eds., Convergence of Productivity (Oxford: Oxford UP, 1994), 62–85.

5. See "One Market, One Currency," European Economy 44 (European Commission, 1990).

6. M. Feldstein doubts the ability of the European Central Bank to be as exemplary in fighting inflation as the Bundesbank. He predicts that the board of directors of the former, as political appointees of member countries, would push for money supply increases to rectify asymmetrical shocks to their respective countries, thus producing inflation contrary to the steadfast anti-inflation course followed by the latter. See M. Feldstein, "The Political Economy of the European Economic and Monetary Union: Political Sources of an Economic Liability."

7. See R.A. Mundell, "A Theory of Optimum Currency Areas," American Economic Review 51 (1961), 657–665; R. McKinnon, "Optimum Currency Areas," American Economic Review 53 (1963), 717–725; and P. B. Kenen, "The Theory of Optimum Currency Areas," in R. A. Mundell and A. A. Swoboda, eds., Monetary Problems of the International Economy (Chicago: Chicago UP, 1969), 41–60.

8. J. D. Sachs and X. Sala-i-Martin, "Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the United States," in M. B. Ganzoneri, Y. Grilli, and P. R Masson, eds., Establishing a Central Bank: Issues in Europe and Lessons from the U.S. (Cambridge: Cambridge UP, 1992), 195–219; T. Bayoumi and P. R. Masson, "Fiscal Flows in the United States and Canada: Lessons for Monetary Union in Europe," European Economic Review 39 (1995), 253–274.

9. P. C. Afxentiou and A. Serletis, "Structural Characteristics of the Maastricht Convergence Criteria," Department of Economics Working Paper (2000), University of Calgary.

10. A. G. Haldane and S. G. Hall, "Sterling's Relationship with the Dollar and the Deutschmark: 1976–1989," Economic Journal 101 (1991) 436-443.

11. See P. C. Afxentiou and A. Serletis, "Convergence and Labor Mobility in the European Union," Economic Notes 26 (1997), 11–34.

12. See S. Collignon, "European Monetary Union, Convergence and Sustainability—A Fresh Look at Optimum Currency Area Theory," The Sustainability Report, Economia Internazionale supplement 52 (1999), 7–38.

13. P. C. Afxentiou and A. Serletis, "The Maastricht Criteria: Convergence and Economic Benefits," Department of Economics Working Paper (2000), University of Calgary.

14. See P.C. Afxentiou, "The European Union Before and After the Euro: An Assessment of the Maastricht Criteria", Economia Internazionale 51 (1998), 1–14.