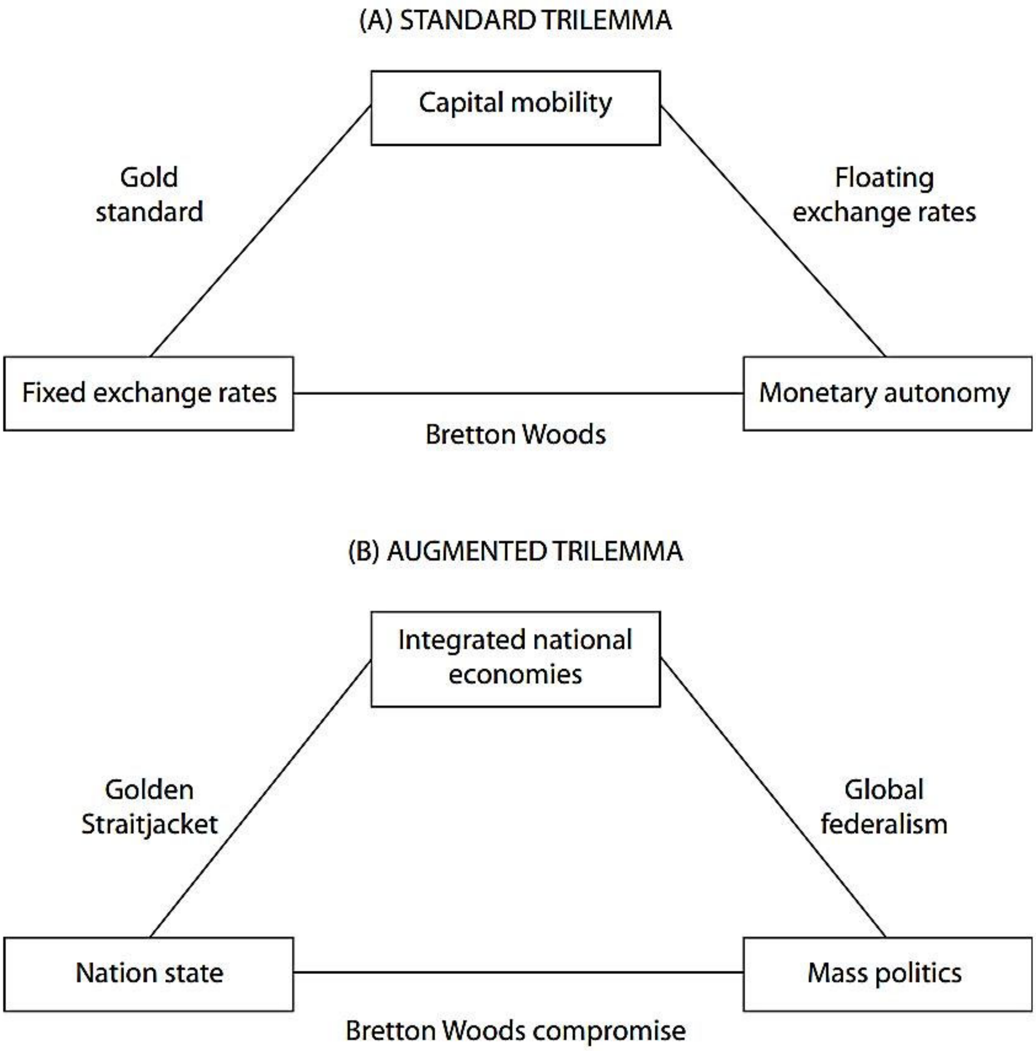
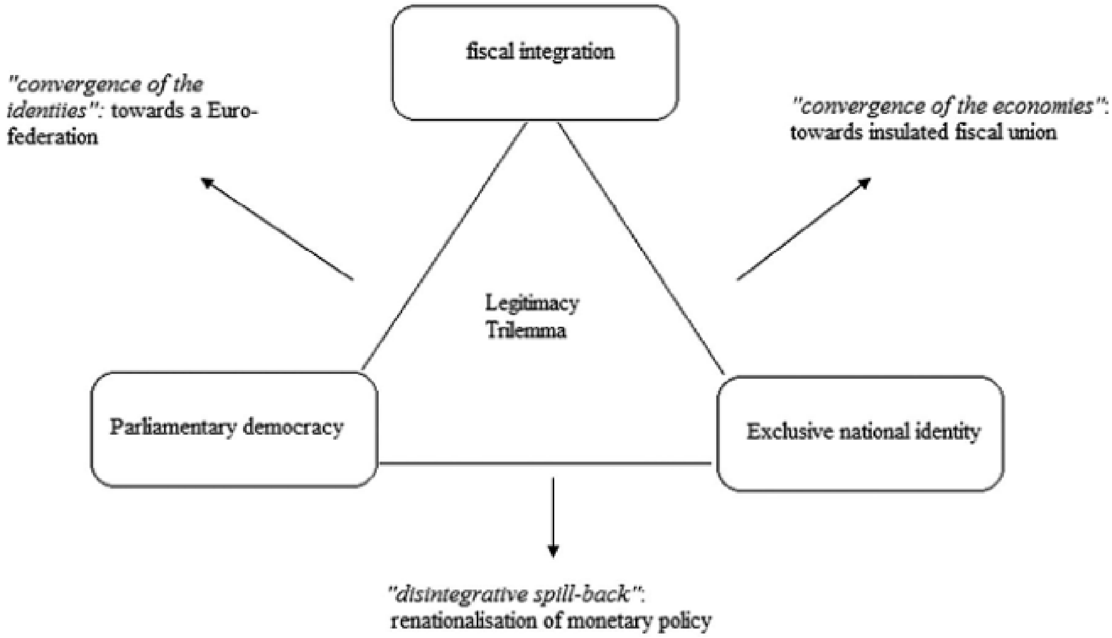

(A) STANDARD TRILEMMA
Capital mobility
Gold
standard
Floating
exchange rates
Fixed exchange rates
Monetary autonomy
Bretton Woods
(B) AUGMENTED TRILEMMA
Integrated national
economies
Golden
Straitjacket
Global
federalism
Nation state
Mass politics
Bretton Woods compromise



Francesco Nicoli (2017): "Democratic legitimacy in the era of fiscal integration," Journal of European Integration 39(4), 389-404

14. Attributes of an international reserve currency (Eichengreen, 2013)

A currency must possess three attributes to be international adopted in commercial and financial international transactions and held as reserve by central banks and governments.

- Scale: the country that issues the currency must conduct a sufficiently large amount of transactions with the rest of the world.
- Stability: the currency's users must believe that the value of the currency is sufficiently stable for the currency to perform well the functions of medium of exchange and deposit of value.
- Liquidity: financial assets denominated in the currency are available in sufficient quantities to be sold and bought, without the currency's value being significantly affected.

The country whose currency becomes internacionalized must develop an economy which is significantly open and integrated with the rest of the world (open capital account), a reputation for financial (economic, political) stability and liquid markets in dollar-denominated assets.

13. The dollar in the international monetary system

The international monetary system is currently characterized by a centre (developed countries) and periphery that uses as reserves assets from the centre. The viability of this system depends on its participants to obtain from it what they want or need. Jeanne (2012) identifies three necessary conditions for the viability:

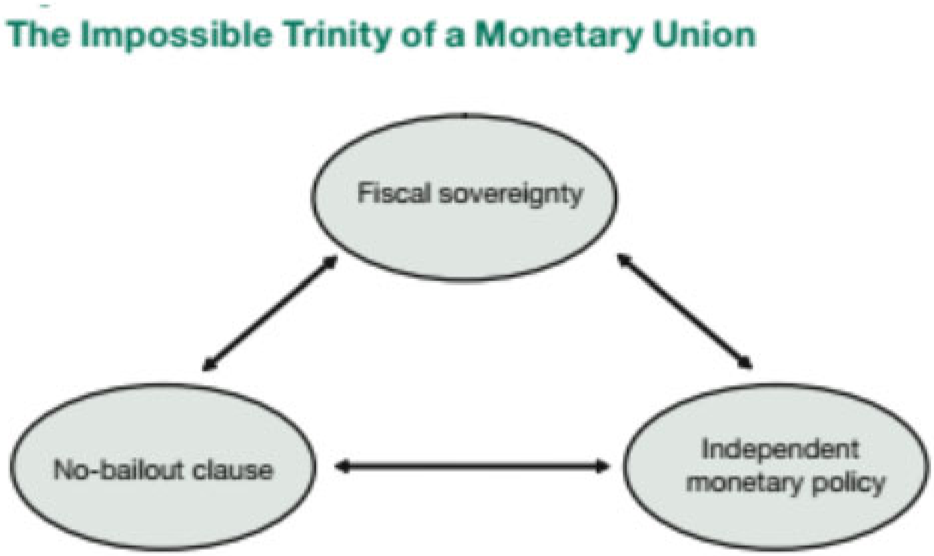
- the centre must provide liquid and safe assets;
- in a sufficient amount to meet the international demand; and
- providing a satisfactory return (global stable store of value).

The US has been so far playing a central role in the international monetary system: the US dollar is still the global reserve currency, which means that most countries choose to keep US dollars

12. EU crisis: a constitutional culture trilemma

"There are three paths to constitutionalism in the modern world. Under the first, revolutionary outsiders use the constitution to commit their new regime to the principles proclaimed during their previous struggle. India, South Africa, Italy and France have followed this path. Under the second, establishment insiders use the constitution to make strategic concessions to disrupt revolutionary movements before they can gain power. Britain provides paradigmatic examples. Under the third, ordinary citizens remain passive while political and social elites construct a new constitution. Spain, Japan and Germany provide variations on this theme. Different paths generate different legitimation problems, but the EU confronts a special difficulty. Since its members emerge out of three divergent pathways, they disagree about the nature of the union's constitutional problem, not merely its solution. Thus the EU confronts a cultural, not merely an economic, crisis."

Ackerman, Bruce (2015): "Three paths to constitutionalism – and the crisis of the European Union", British Journal of Political Science 45(4), 705-714.



Beck, Hanno; Aloys Prinz (2012): "The trilemma of a monetary union: Another impossible trinity", Intereconomics, DOI: 10.1007/s10272-012-0404-0

Another financial trilemma

Inconsistent goals:

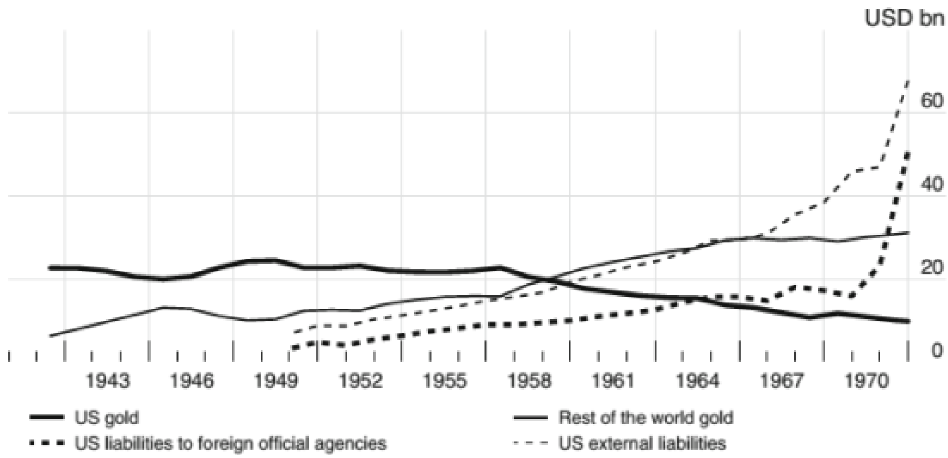
- Financial stability
- Financial integration
- National financial policies

Schoenmaker, Dirk (2011): "The financial trilemma", Economics Letters 111, 57-59

8. The Triffin dilemma (Robert Triffin, 1960)

Triffin predicted the end of the Bretton Woods system, which relied on the credibility of the commitment of the convertibility of dollars into gold. Triffin argued that the system faced a dilemma.

- On the one hand, to meet the international liquidity needs (which were growing with an expansionary world economy), a sufficient amount of dollars should circulate; that is, foreign dollar balances should increase.
- But, on the other, a large and growing proportion of foreign dollar balances with respect to US gold reserves endangers the credibility of the convertibility commitment. Hence, if the US international liabilities grow too slowly, global trade is restrained and deflation may ensue; but if the US international liabilities grow too much (to satisfy the demands of a growing international trade), the dollar would lose value against gold and a run on the US gold stock will precipitate the downfall of the system. The chart below illustrates how the Bretton Woods system broke down.



9. The safe assets dilemma: A new Triffin dilemma?

The Triffin dilemma was the discovery that the unbalanced growth of certain macrofinancial magnitudes could generate systemic instability. The safe assets dilemma would provide another instance of this principle of instability fuelled by unsustainable growth.

Specifically, the Triffin dilemma highlights the possibility that the global demand for a stock (US international liabilities) would outgrow the US official holdings of another stock (gold). The safe assets dilemma points out another financial trouble: the possibility that the global demand for another stock (US Treasury liabilities) would outgrow a flow (the US GDP), a flow that provides the taxes needed to service the Treasury's debt).

10. A Triffin general dilemma

Tommaso Padoa-Schioppa suggested in 2010 a 'Triffin general dilemma': "the stability requirements of the system as a whole are inconsistent with the pursuit of economic and monetary policy forged solely on the basis of domestic rationales in all monetary regimes devoid of some form of supranationality." In particular, as during the Bretton Woods era, the US monetary policy strongly influences global monetary conditions; yet, this policy is conducted without taking into account its international repercussions. In general, the US use its privileged economic status to its own advantage, letting the rest bear the costs of the colateral effects the US decisions cause abroad (the global financial crisis, started in mid-2007 in the US, could be a case at hand; the collapse of the Bretton Woods system, another).

11. A Triffin general dilemma

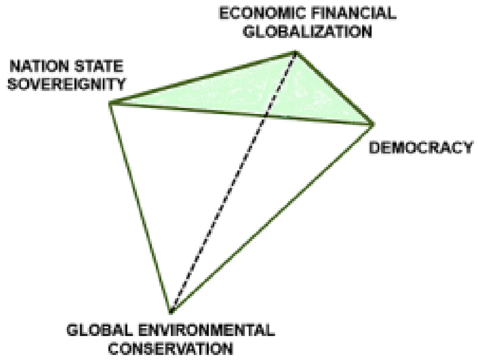
"Many economists and government officials have concluded that the unipolar, dollar-based monetary system is seriously flawed. Belgian-American economist Robert Triffin pointed out in the 1960s that an international monetary system based on the currency of one country cannot sustainably deliver both liquidity and confidence. More specifically, the continuous growth of the world economy demands a steady stream of dollars, which requires the US to run balance-of-payments deficits. However, excessive US deficits erode people's confidence in the dollar's value (convertible into gold at a fixed price). This inherent conflict between the dollar's role as the world's reserve currency and the declining confidence in the dollar in the postwar international monetary system is called the Triffin dilemma. Though the Triffin dilemma was directed against the Bretton Woods monetary system, it remains valid for today's international monetary system. The modern version posits that the massive amount of dollars created by the US authorities to satisfy world demand is inconsistent with people's confidence in the dollar's value (convertible into a fixed basket of US goods and services). Here arises the question of why the dollar remains the preeminent currency in the international monetary system despite the relative American economic decline and the obvious flaw of dollar hegemony. Eichengreen provides a simple but compelling answer: 'The dollar's dominance was supported by a lack of alternatives.'"

52. A paradox of dominance?

If the global contest for dominance is a zero-sum game, then the resources used by the rising powers are no longer available to the lead states to maintain or expand their dominance. In fact, the economic system created by the dominant powers is used by the challengers to rise: when the profit opportunities become scarce in the lead economies, it becomes an attractive option to invest abroad and that helps less developed economies to develop and close the gap with the richer economies. As it is cheaper to produce in poorer economies, these economies could develop easier and faster by selling their production in the leading economies. Hence, the initial leadership of some economies is accompanied by convergence of the rest of economies.

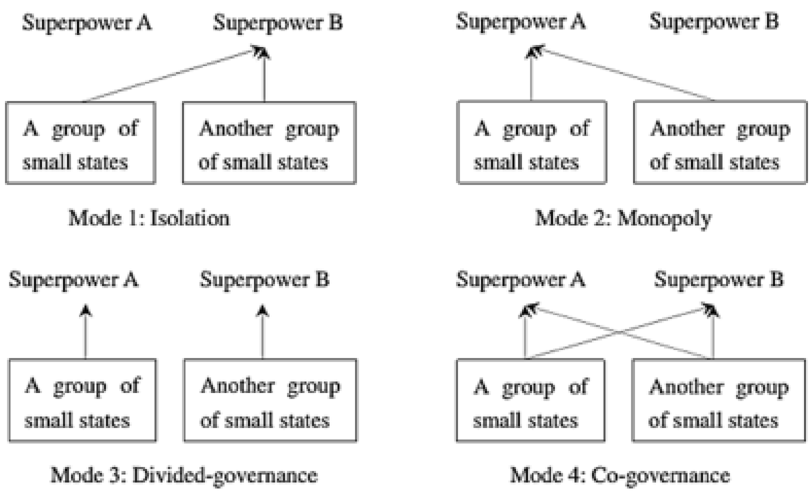
- "The paradox of power for the USA is therefore that the very economic system that has propelled it on to the world stage also contains within it the potential seeds of its own destruction." Glenn (2016, p. 2)

27. Quadrilemma in climate change international negotiations. "Current global climate change negotiations face some contradictions that are not always addressed as they are considered politically incorrect. These include, first, the decoupling of commitments for planetary environmental policies with the actual national strategies. A relevant example is the Bolivian administration, which presents a strong rhetoric for biospheric Mother Earth Rights, but its national development strategies generate more environmental impacts and weaken enforcement at the local level. Second, the core ideas and beliefs that explain development varieties that generate climate change are deeply rooted, so changes in political ideologies, either from traditional 'left' or 'right', do not determine policies to effectively overcome climate change. Third, accumulation of scientific information is not enough to promote the necessary changes, because these deep roots conditioned perceived and acceptable alternatives. Fourth, this lead to tensions among the pursuit of economic financial globalization, the sovereignty of the nations-states, democracy, and the basement of global environmental conservation. This is a quadrilemma, because if one or two of these objectives are pursued, at least one other is violated. Nevertheless, international negotiations rest on wishful thinking that this is possible. Uncovering these contradictions is politically incorrect for many realms."



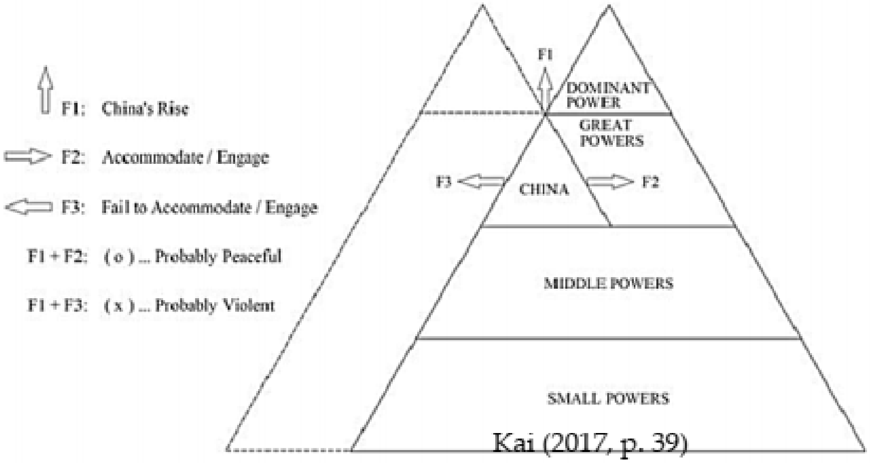
Gudynas, Eduardo (2016): "Climate change, the quadrilemma of globalization, and other politically incorrect reactions", Globalizations, DOI: 10.1080/14747731.2016.1162995

56. Sino-US interaction (rising vs stablished power): Thucydides trap, Churchill trap or co-ruling? "The 'Thucydides trap' is in a large part an induction of historical experiences on great power politics. In the contemporary era, however, there is small risk of all-out war between a rising power and a hegemonic power. By contrast, the 'Churchill trap', whereby the superpowers fall into a long-term confrontation reminiscent of that between the US and the Soviet Union during the Cold War, presents a genuine risk and one that should be taken far more seriously (...) there is a third type of great power relationship between the two poles, which I call 'co-ruling', whereby rather than being geographically demarcated according to their respective 'spheres of influence', the two superpowers jointly lead all or most of the small and medium-sized countries in the system."



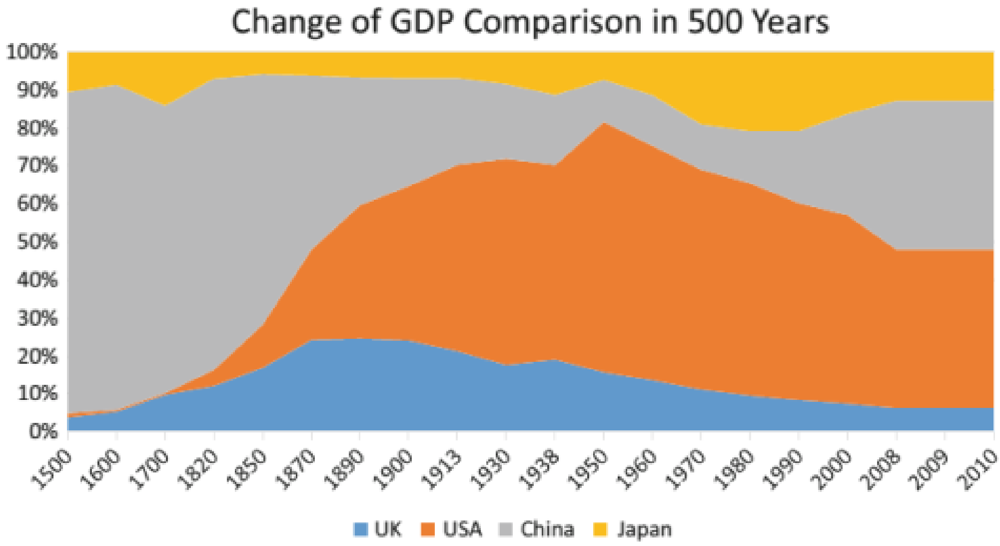
58. Power transition theory (A.F.K. Organski). It is a theory (alternative to the balance of power and collective security theories) that has been used to describe, analyze and predict the power interactions between a dominant but relatively declining power (the US) and a rising challenger (China). The theory represents the international system as a power hierarchy with

- a dominant state at the top of the hierarchical structure controlling most of the power resources;
- the other great powers below the dominant power: states with the potential to become rivals to the dominant power;
- the middle powers, states that are relatively powerful at a regional level; and
- small powers and 'colonies' at the bottom of the hierarchy.



Kai (2017, p. 39)

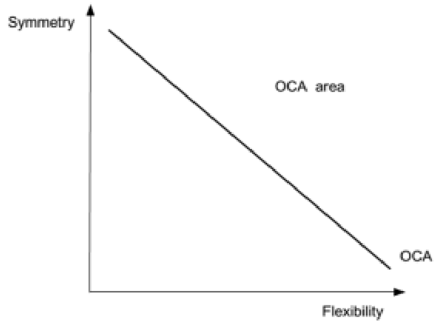
Violent conflict, or even war, is most likely to arise when some great power becomes increasingly powerful and dissatisfied with the existing hierarchy or the alliance with the dominant power and challenges the status quo to change the rules or the hierarchy to the challenger's advantage. The chances of a power transition war increase with three factors: (i) the power potential of the emerging power; (ii) the speed with which the emerging power rises; and (iii) the flexibility with which the dominant power can meet the challenge of the rising power.



Kai (2017, p. 59)

59. Central dilemma of international relations. E. H. Carr has identified the 'problem of peaceful change' as the central dilemma of international relations.

71. Conditions to make a monetary union. "The conditions that are needed to make a monetary union among candidate Member States attractive can be summarized by three concepts: Symmetry (of shocks); Flexibility; Integration. Countries in a monetary union should experience macroeconomic shocks that are sufficiently correlated with those experienced in the rest of the union (*symmetry*). These countries should have sufficient *flexibility* in the labour markets to be able to adjust to asymmetric shocks once they are in the union. Finally they should have a sufficient degree of trade *integration* with the members of the union so as to generate benefits of using the same currency."



"Figure 1 presents the minimal combinations of symmetry and flexibility that are needed to form an optimal currency area by the downward-sloping OCA line. Points on the OCA line define combinations of symmetry and flexibility for which the costs and the benefits of a monetary union just balance. It is negatively sloped because a declining degree of symmetry (which raises the costs) necessitates an increasing flexibility. To the right of the OCA line, the degree of flexibility is sufficiently large given the degree of symmetry to ensure that the benefits of the union exceed the costs. To the left of the OCA line, there is insufficient flexibility for any given level of symmetry.

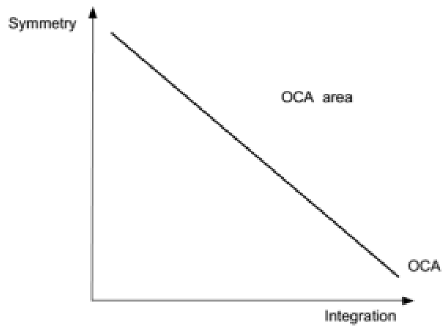


Figure 2 presents the minimal combinations ofsymmetry and integration that are needed to form an optimal currency area. The OCA line represents the combinations of symmetry and integration among groups of countries for which the cost and benefits of a monetary union just balance. It is downward sloping for the following reason. A decline in symmetry raises the costs of a monetary union. These costs are mainly macroeconomic in nature. Integration is a source of benefits of a monetary union, i.e., the greater the degree of integration the more the member countries benefit from the efficiency gains of a monetary union. Thus, the additional (macroeconomic) costs produced by less symmetry can be compensated by the additional (microeconomic) benefits produced by more integration. Points to the right of the OCA line represent groupings of countries for which the benefits of a monetary union exceed its costs.

The presumption of many economists at the end of the 1980s was that the EU countries should be located to the left of the OCA lines in Figures 1 and 2, i.e., given the degree of integration achieved in the EU there was still too much asymmetry and too little flexibility for the EU to form a monetary union whose benefits would exceed the costs."

While there are many factors contributing to Europe's travails, there is one underlying *mistake*: the creation of the single currency, the euro. Or, more precisely, the creation of a single currency without creating a set of institutions that enabled a region of Europe's diversity to function effectively with a single currency.

The eurozone was flawed at birth. The structure of the eurozone—the rules, regulations, and institutions that govern it—is to blame for the poor performance of the region, including its multiple crises. The diversity of Europe had been its strength. But for a single currency to work over a region with enormous *economic and political* diversity is not easy. A single currency entails a *fixed* exchange rate among the countries and a single interest rate. Even if these are set to reflect the circumstances in the majority of member countries, given the economic diversity, there needs to be an array of institutions that can help those nations for which the policies are not well suited. Europe failed to create these institutions.

There is a large economic literature asking, what is required for a group of countries to share a common currency and have shared prosperity?[22] There was consensus among economists that for the single currency to work, what was required is that there be *sufficient* similarity among the countries.

So much importance was assigned to these fiscal concerns that they came to be called the *convergence criteria.* But the way the euro was designed led to *divergence*: when some country had an adverse "shock," stronger countries gained at the expense of the weaker. The fiscal constraints imposed as part of the convergence criteria—limits on deficits and debt relative to GDP—themselves contributed to divergence.[20]

The adverse effects of a eurozone structure almost inevitably leading to divergence have been compounded by the *policies* that the eurozone has chosen to follow, especially in response to the euro crisis. Even within the strictures of the eurozone, alternative policies could have been pursued. That they were not is no surprise: a central theme of this book is that the same mindset that led to a flawed structure led to flawed policies.

Stiglitz, Joseph E. (2016): *The euro: How a common currency threatens the future of Europe*, W. W. Norton.

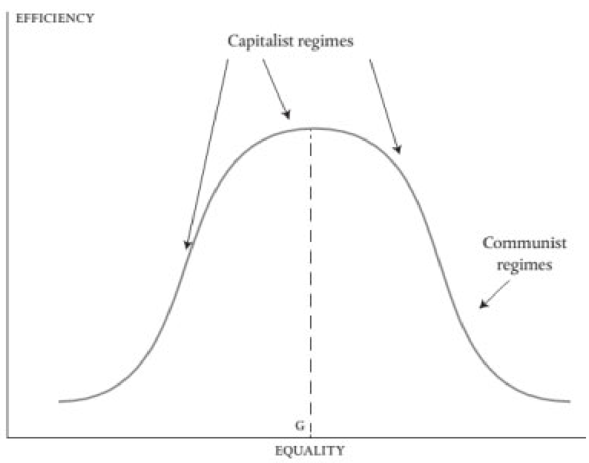
80. Trichet's (2013) economic and fiscal federation proposal

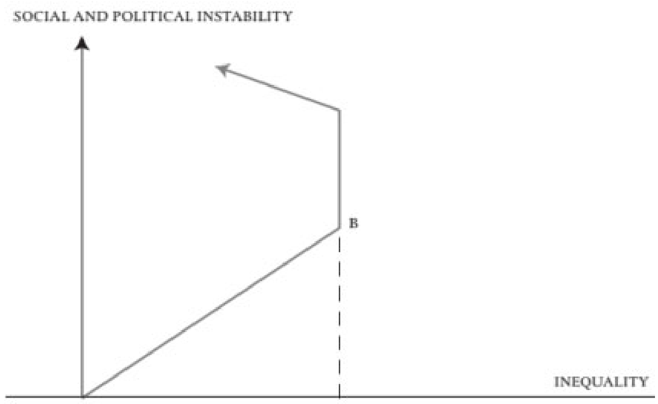
The current system (the Macroeconomic Imbalance Procedure) is one of 'fines' (a percentage of GDP) for countries whose improper conduct (materialized in excessive macroeconomic imbalances) puts at risk the stability of the EMU. Since such fines have not proved effective to deter countries in undesirable behaviour, Trichet suggests replacing this system with a new decision making process he calls 'the activation of an economic and fiscal federation by exception', in which fiscal sovereignty can be limited in exceptional cases by a majority vote of the members of the European Parliament from Euro area states.

- "The scope of interventions and the measures taken by the federal institutions would so rely, even in the much longer term, on the principle 'as little as possible in normal times, but as much as necessary in exceptional times'." It appears that the ECB applied this principle during the Euro area debt crisis (July 2012: Draghi's 'whatever it takes' speech).
- Trichet also proposes the setting up of a Ministry of Finance of the Euro area. "This ministry would have the responsibility of the activation of the economic and fiscal federation when and where necessary. It would be responsible for the handling of the crisis management tools like the ESM [European Stability Mechanism]. It would also be responsible for the handling of the banking union, within the limits of the executive branch responsibility. And it would represent the Euro area in international institutions and informal groupings."

Trichet, Jean-Claude (2011): "Tomorrow and the day after tomorrow: A vision of Europe," Humboldt University, Berlin.

81. Government vs market





de Grauwe, Paul (2017): *The limits of the market: The pendulum between government and market*, Oxford University Press, Oxford, UK.

82. Explaining the divergence in the economic performance of EMU members

There is a big divide in the EMU between two groups of countries. One group is led by Germany and includes those countries (clearly, Netherlands, Austria, Belgium; less enthusiastically, France) that, since the early 1980s, have reorganized their macroeconomic institutions to match the performance of the German economy (by pegging their currencies to the Deutsche Mark and keep unit labour controls under control or facilitate their falling).

The second group is given by those who tried later to attain exchange rate stability by linking their currencies to the Deutsche Mark and, in general, adapted their instutional macroeconomic framework as a means to satisfy the Maastricth Treaty criteria to join the EMU (clearly, Portugal, Italy and Greece; also, Ireland and Spain). For the latter group, the initial drop in labour costs in the 1990s to get read for the EMU was replaced by a continuous increase in the 2000s after the adoption of the euro. The fiscal crisis of 2009-10 culminated that evolution.

- An explanation of the divergence is given by the (so-called) irresponsible fiscal policies, and the fiscal mismanagement, that resulted from the attempt to compensate through fiscal activism the loss of monetary policy independence. Before the 2008 financial crisis, the interest rate differentials between the debts of the two groups were very small. That allowed the members of the second group to run up large volumes of public debt. This created fiscal imbalances that make those countries strongly vulnerable under the extraordinary conditions of the global financial crisis. The perception of that vulnerability made the fiscal position of those countries untenable and led to the European debt crisis.
- A second explanation involves labour market regulations. When the fundamental policy tools (monetary, fiscal and exchange rate policies) cannot be freely used, as occurs in the EMU, other institutions and variables should be 'more flexible' (and that usually is supposed to mean the labour markets and wages). Lack of sufficient 'labour flexibility' in the members of the second group of countries makes the underlying macroeconomic problems and imabalances more serious. This argument seems to forget that the labour markets of the states in the first group are equally inflexible, as they have strong labour unions and their wage-setting systems are relatively rigid (but now the expression used is 'highly organized').

  - A third explanation (applied mostly to Spain and Ireland) have more to do with speculative manias and financial considerations: asset price inflation and bursting bubbles. Low interest rates fuelled an asset and construction boom through cheap mortgages and rising housing prices.
  - A fourth one revolves around poor financial regulation (that attracted risky capital).
  - A fifth explanation blames EMU itself, as some troubles made apparent by the euro crisis (such as massive current account divergences) correlate well with the start of EMU.

Bob Hancké (2013): Unions, central banks, and EMU: Labour market institutions and monetary integration, Oxford University Press, Oxford, UK.

Richard Peet (2009): *Unholy trinity: The IMF, World Bank and WTO.*

86. **Optimum currency area puzzle.** "The theory of optimum currency areas, suggesting the redrawing of currency areas across countries or splitting of national money into several currencies, is at odds with the one-money-one-country pattern that has dominated monetary history for 26 centuries. This paper puts forward an equilibrium approach which, by stressing the influence of the border effect on intranational adjustment, solves the puzzle and analyzes the closely related issue of the viability of monetary unions and regional specialization (...) In a world of continuous change, tailoring currency areas to one inbuilt characteristic, as the received view prescribes, would at best answer just one type of imbalance. Likewise, redesigning currency areas in order to avoid asymmetric shocks would not do because the adjustment problem would emerge again in the new setting: under ever-mutating circumstances, a once-and-for-all policy is illusory."

"When we look at the factors that actually determinate the domains of different monies, we find that they are not the economic considerations suggested by the theory of optimum currency areas, as first discussed by Mundell, Kenen, and McKinnon 30 years ago. They are, rather, political. In particular, virtually all of the world's nations assert and express their sovereign authority by maintaining a distinct national money and protecting its use within their respective jurisdictions. Money is like a flag; each country has to have its own." (Michael Mussa 1995)

Cesarano, Filippo (2013): "The optimum currency area puzzle", Int Adv Econ Res DOI 10.1007/s11294-013-9404-5.

Mussa, Michael (1995): "One money for how many?" In P. B. Kenen; ed.: *Understanding interdependence: The macroeconomics of the open economy*, Princeton University Press, pp. 98-104.

Obstfeld, Maurice; Rogoff, K. (2001): "The six major puzzles in international macroeconomics: Is there a common cause?", In B. S. Bernanke; K. Rogoff; eds.: *NBER Macroeconomics Annual 2000*, volume 15, MIT Press,

On one-size-fits-all policies?

Sectoral identity **NPS (net private saving) = PD (public deficit) + NX (net exports)**

Sectoral identity for Germany

NPS > 0 (assume the private sector wants to accumulate net financial wealth)

NX > 0 (trade surplus)

Therefore, the government has 'fiscal space': PD could be positive, negative or zero (depending on the values of NPS and NX).

Sectoral identity for Spain

NPS > 0 (assume the private sector wants to accumulate net financial wealth)

NX < 0 (trade deficit: for some years before the 2008 financial crisis, Spain run the second largest trade deficit in the world)

As a result, there must be government budget deficit: Spain does not have the freedom to adopt Germany's fiscal rules.

Financial inconsistent quartet

This paper sets out to explain national preferences on the Single Supervisory Mechanism (SSM) concerning: support for creating and participating in supranational banking supervision in the European Union; the division of competences between the European Central Bank and national banking supervisors; the nature of indirect supervision. It is argued that member states in the euro area faced a 'financial inconsistent quartet', whereby they could not secure at the same time: 1) financial stability, 2) financial integration, 3) national financial policies and 4) the single currency. The 'financial inconsistent quartet' reinforced the logic for euro area member states to create the SSM (and other elements of Banking Union) and those seeking to join the euro area to participate.

Howarth, David and Quaglia, Lucia (2015) *The Political Economy of the Single Supervisory Mechanism: Squaring the 'Inconsistent Quartet'.*

THE INCONSISTENT QUARTET: FREE TRADE VERSUS COMPETING GOALS

MARTIN DAUNTON

The trade-off between fixed (or flexible) exchange rates, free (or controlled) movement of capital, and an active (or passive) domestic monetary policy forms the so-called 'tri-lemma' or 'unholy trinity' as set out in the Mundell–Fleming model.[2] In a dilemma, a choice has to be

The 'inconsistent quartet' adds a fourth variable, trade policy, which is

of particular significance for this volume. Regardless of the choice made in the 'trilemma', a country could opt for either protection or free trade. In Britain before 1914, the choice of fixed exchange rates and capital mobility was linked with free trade, which had, by the end of the nineteenth century, hardened into a dogmatic adherence to unilateralism as other countries moved to protectionism.[4] But in the case of the USA, adherence to the gold standard from 1873 was associated with a much more protectionist trade policy: in the UK import duties were 5.6 per cent of total imports in 1913, whereas in the USA they were 21.4 per cent.[5] The same point applied to Germany. Trade policy may vary independently of the trade-offs within the 'trilemma', with differing relationships. In the 1930s, many countries adopted protectionism with floating exchanges (often designed to undervalue currencies and so encourage exports and discourage imports); at present, floating exchanges are complemented by trade liberalization (unless attempts to hold down the value of currencies to secure export markets spill over into trade war). These relationships are historically contingent, depending on the interplay between domestic and international politics.

Amrita Narlikar, Martin Daunton, Robert M. Stern - The Oxford Handbook on the World Trade Organization-Oxford University Press, USA (2012)

The inconsistent quartet

(by Tommaso Padoa-Schioppa, one of the 'architects of the euro')

"In 1982, he coined the concept of the "inconsistent quartet", showing that among free trade, capital mobility, fixed exchange rates, and domestic monetary policy only three objectives could be pursued at the same time; he therefore argued for the creation of a European single currency. In an advisory capacity, he helped Jacques Delors to pave the road for single market and monetary integration. In 1986-87 he co-authored the report "Efficiency, Stability, and Equity", where he pleaded for the completion of the single market, and in 1988-89 he was co-rapporteur of the "Delors Committee", which outlined a three-stage plan for the achievement of the Economic and Monetary Union. At the European Central Bank, finally, he oversaw the first years of the single currency, while warning of the dangers of a "currency without a state"".

https://resume.uni.lu/story/tommaso-padoa-schioppa

"…the creation of a single market was a process. A process that could ultimately lead to the contradiction which Tommaso referred toas the "inconsistent quartet" – that free trade, free mobility of capital, a system of fixed exchange rates and autonomous national monetary policies were incompatible. One of the four would come under pressure and would have be surrendered in order to avoid inconsistency. The single currency was the way to square the circle in eliminating the independent national monetary policies. One single money for one single market."

"E PLURIBUSUNUM – THELEGACYOF TOMMASO PADOA-SCHIOPPA"

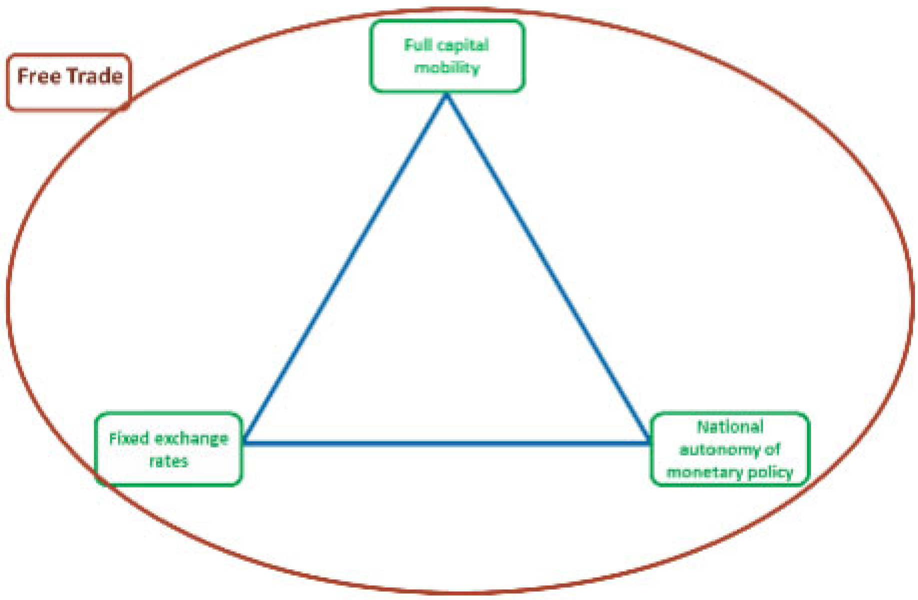
Speech by Jean-Claude Trichet

http://www.tommasopadoaschioppa.eu/wp-content/uploads/2011/02/Trichet.pdf

"International economists regularly refer to the "inconsistent quartet"to the incompatibility of international capital mobility, pegged exchange rates, monetary autonomy, and free trade. The phrase is frequently invoked in connection with Europe, where the elimination of capital controls by the Single European Act forced governments to choose between stable exchange rates and independent monetary policies. Some go further and argue that this is no choice at all, because exchange rate instability would have a corrosive effect on the freedom of trade within the European Union (EU) and jeopardize the Single Market. Given the difficulty of credibly forswearing monetary autonomy and pegging exchange rates within narrow bands, reconciling free trade and capital mobility in Europe means going all the way to monetary union"

Barry Eichengreen - European Monetary Unification. Theory, Practice, and Analysis-The MIT Press (1997)

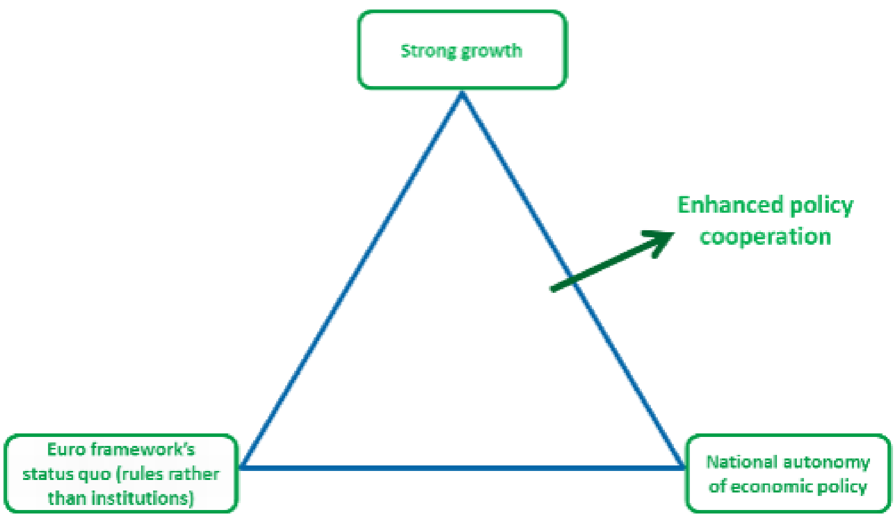
The "*inconsistent quartet*":



As early as 1982, Tommaso Padoa-Schioppa coined the term "**inconsistent quartet**"[4] (*quartetto inconciliabile*), thereby enlarging the impossible trinity to a fourth goal, free trade – a pillar of the Treaty of Rome. Let me quote here an analysis by Banca d'Italia[5]: "*At first sight this may appear to be a puzzling choice, since from the strictly analytical standpoint the inconsistency between the other three elements holds regardless of the presence or absence of free trade. But in a deeper economic sense, taking trade into consideration was essential, since the costs and benefits of different positions along that three-way trade-off depend crucially on the degree of trade integration.*" And as Tommaso Padoa-Schioppa wrote in 1988: " *In the long term, the only solution to the inconsistency is to complement the internal market with a monetary union. [Otherwise] it would be unrealistic to expect the Community to be able to square a circle that has never been squared.*"[6] The early 1990's were indeed difficult times for the European

2. Yet, despite the success of monetary union, Europe's economy is now confronted with a new trilemma.

Today's trilemma:



François Villeroy de Galhau (2017): The future of the euro area - from the "impossible trinity" to the "growth triangle", https://www.bis.org/review/r170612a.htm

Some questions

1. The US economy is at the centre of the global economy as the dominant player.

- US dominance was apparently achieved after two world wars (emergence of the dollar as a global currency after the First World War; international emergence of the US industrial, trading and investment power after the Second World War).
- The Bretton Woods system institutionalized this dominance.
- Has the US made abusive use of its global dominance and caused global imbalances?
- Was the collapse of the Bretton Woods systems the outcome of US abuse (its 'exorbitant privilege') or simply died as a result of its own success?
- Is the financial globalization that accelerated in the 1980s the consequence of the US to redefine its dominance (from global industrial to global financial power)?

2. Do prosperous economic regional blocks must necessarily be organized hierarchically?

- Is there an intrinsic limitation to the hierarchical organization of the global economy?
- Triffin dilemma and generalized Triffin dilemmas: a tension between the stability of the international monetary/financial system and its usefulness as an instrument for economic development.
- The global economy appears to be organized in a centre (developed economies) and a periphery (the rest). The same basic two-tier structure seems also to apply to regional economic blocks (in the European Union there is also a centre, the northern and Scandinavian economies, and a periphery, eastern and southern economies). Must this be necessarily so for these economies to develop/expand?
- The dominant global economic power appears to be led to run current account deficits. Dominant regional economic powers appear to require running current account surpluses (Germany, Japan, China). Could the US economically behave like Germany?

3. Must successful challengers to US dominance be global military powers?

- Japan: failed to replace the US in the 1980s
- Like Japan, Germany became after World War II an economic (industrial, export-led) power that lacked global military power/influence. The US could accept the full integration of the two economies in the global system the US created because, in the last instance, they could not pose a threat to US dominance.
- European Union: introduction of the euro has not been sufficient to displace US financial dominance (the European Union is politically a weak entity).
- Russia: serious military contender whose economy eventually failed.
- Is China the only real, serious challenger to US global supremacy, economic, political and military?

4. Conditions for global economic/financial dominance

- The centre of an international monetary system must provide: (i) a liquid and safe asset; (ii) in sufficient amount; and (iii) with a satisfactory return (to be a global and stable store of value).
- An international reserve currency must meet properties of scale (large number of transactions), liquidity and stability.
- The economy is better suited to provide a global economic currency if it has (i) large population, (ii) has economic success (develops the potential for economic expansion associated with a large population) and (iii) is sufficiently integrated with the rest of the world.