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# DOMINANT CURRENCY HYPOTHESIS AND CREDIBILITY ISSUES: THE CASE OF EUROPEAN MONETARY SYSTEM[1]

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**ABSTRACT**

Linked to the gold standard of post war Monetary System, Bretton Woods System governed world-wide bilateral exchange rates successfully over the decades. The monetary stability that had been reached and maintained over the years within the system was largely attributed to the design of the system within which U.S. had undertaken the dominant role in determining the monetary trajectory for other participants. The international or regional monetary systems worked on the basis of likewise leadership models, would pave the way for theoretical considerations in the literature. Dominant Currency Hypothesis is to explain that in a given fixed exchange rate system in which there are *n* numbers of the participant currencies, if there is a leading country which is relatively stronger than others in economic terms; its currency will equally be stronger and will be able lead others in terms of monetary policy. The leading country authorities will hold total independence in monetary policy making whereas the followers will be bound by the actions of leader country. That is to say, the anchor country independently determines its domestic monetary policy path whereas the weak currencies' monetary authorities would have to follow its foot steps passively in the hope of gaining anti-inflationary credibility. Regarding the European Monetary System (EMS), The Bundesbank would act as an anchor in the EMS. Other members, particularly those with high inflationary reputation would benefit by subscribing to the policies of the anchor. The disciplinary policies determined by Bundesbank would be imitated by them.

**Key Words:** Dominant Currency Hypothesis, German Dominance, European Monetary System, Exchange Rate Mechanism, Bretton Woods System.

**ÖZET**

İkinci Dünya savaşı ertesinde oluşturulan altın standardı esasına dayanan Parasal Sistemin bir parçası olan Bretton Woods Döviz Kuru Sistemi, küresel düzeyde döviz kuru yönetimini onlarca yıl başarıyla yürütmüştür. Elde edilen ve uzun yıllar devam eden bu parasal istikrar, büyük ölçüde, A.B.D.'nin, diğer katılımcıların para politikasının belirlenme sürecinde üstlendiği baskın rolü yaratan sistemsel özelliklere dayandırılmaktadır. Liderlik unsuru temeline dayanan bu tarzdaki uluslararası yada bölgesel parasal sistemler, daha sonra literatürde teorik kapsam içerisinde ele alınmıştır. Parasal Baskınlık Hipotezi, *n* sayıda para biriminin bulunduğu bir sabit kur sisteminde , eğer ülkelerden biri, diğer ülkelerin tümünden göreceli ekonomik üstünlüğe sahipse, aynı zamanda bu ülkenin para birimi de diğerlerine kıyasla daha güçlü olacak ve bu

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durum bu ülkeye, diğer ülkelerin para politikası belirlenme sürecinde liderlik statüsü sağlayabilecektir. Öncü ülke otoriteleri, para politikasının formüle edilme sürecinde tamamen bağımsız olma yeteneğini elinde tutarken, bu ülkeyi takip etmek zorunda kalan ülkeler, o ülkenin belirlediği hareket alanıyla sınırlı kalmaktadırlar. Bu, Öncü ülkenin ulusal para politikasını bağımsız olarak beliryebilme yetkisine sahip olduğunu açıklarken, göreceli olarak zayıf olan paraların temsil ettiği ülkelerin otoritelerinin, anti enflasyonist güvenilirlik sağlamak amacıyla, öncü ülkenin para politikası programını pasif olarak takip etmesi manasına gelmektedir. Avrupa Para Sistemi (APS) söz konusu olduğunda, Alman Merkez Bankası APS içerisinde çapa rolünü üstlenmektedir. Diğer üyeler, özellikle yüksek enflasyonla adları anılanlar, öncü ülke politika kurucularının politikalarını kabullenerek fayda sağlayabileceklerdi. Alman Merkez Bankası'nın belirlediği disiplin politikaları bu ülkeler tarafından taklit edilecekti.

**Anahtar Kelimeler:**Parasal Baskınlık Hipotezi, Alman Baskınlığı, Avrupa Para Sistemi, Döviz Kuru Mekanizması, Bretton Woods Rejimi

## Dominant Currency Hypothesis and Credibility Issues: Evidence from the EMS

### 1-Introduction

Dominant currency hypothesis asserts that, in a fixed exchange rate scheme where there are *n* numbers of the participant countries' currencies, if there is a leading country relatively stronger than others, its currency will equally be stronger and endowed with the capacity to lead others given the independence to do so. In the light of this, when there are *n* numbers of participating currencies, the *n*-1 currency will possibly dominate the other currencies, in return, most notably the monetary policy making authority of the dominant currency will equally exert dominance over their counterparts in associated economies.

Fixed exchange rates entails multilateral guarantee for the all participants that seems hard to commit when domestic monetary policy autonomy wanted to be preserved fully or reluctance was shown to remove much of such autonomy. In a situation where lack of such a guarantee persists or insufficient commitment attached to it, the irrevocable fixity of the exchange rates possibly will not be long lasting. The more binding the arrangements becomes, the more credible the overall conduct of the system will become.

Lack of commitment will make the regime look like a unilateral arrangement where non-commitment would not invoke serious implications in terms of punishment. The ERM of the EMS by a large stands as an example for about a decade from the date it was set to work.[2] The achievement of the full fixity meant to be achieved progressively, but successfully materializes only when policies pursued by the individual countries are deemed credible. The credibility required to keep the exchange rates at a steady state is a target hard to gain and subject to alterations as the judgment

[2] The early years of the ERM has been underlined with the insufficient level of commitment to the exchange rate fixity by the participants.

of the markets on monetary authorities' actions may diverge. With independent monetary authorities, such an outcome is hard to materialize since national policy line is in conflict with that of required multilateral commitment, even if the conflict between two is reduced to lowest level. Without a central institution, the so called fixed exchange rate regime will inherently bear strong incentives for countries to pursue their own course of policy line at the expense of other members. The disciplinary view of the EMS contends that intrinsic asymmetries born in the EMS as regards the countries' ability to obtain anti-inflationary reputation from the Bundesbank reducing the cost of disinflation. N-l members' central banks relinquish their policy autonomy in favour that of German Bundesbank.[3]

The objective of this paper is to analyze the Dominant Currency Hypothesis and; its past European version, "German Dominance Hypothesis", from theoretical perspective and give evidence from application. The author attempts to account for a critical version of the theoretical treatment in the literature. In order to make in depth analysis, it is necessary to refer to the relevant views of others related to the topic under discussion. The views and findings of the others will be handled critically in this respect. The wider implication of German Monetary Policy influence in Europe receives a detailed coverage where the measurement of the degree of German dominance and/or influence is investigated. The structure of the rest of this research paper is as follows:

After the introduction, Chapter two presents and analyses the dominant currency hypothesis in connection with the European Monetary System. A detailed account of German leadership model and its implications are appropriately covered in this chapter. Next; Chapter three attempts to exhibit a more analytical picture of the research topic by focusing on the EMS in the European context. A critical treatment on the degree and weaknesses of German Dominance and; evidence drawn from the EMS are the particular features covered in this chapter. Finally; the last chapter concludes the overall results.

## 2- Linking The Approach Of Dominant Currency Hypothesis To The Ems: German Dominance Hypothesis

### 2.1. European Monetary System; German Dominance Hypothesis and Credibility Argument

GDH set forth to explain Germany's monetary superiority automatically assumes that the ERM is asymmetric in nature.[4] Hence; design of such asymmetry de

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[3] This disciplinary view of the ERM for example well illustrated and evaluated by *Von Hagen* and *Fratianni* (1990) which is difficult and costly to achieve by another means.

[4] When the formation of the EMS was being initiated, one the main discussions was that ERM should be more flexible than former snake regime, that would ease the former problem of equal share of the burden. The initial design may be considered as more symmetrical than snake regime, but however actual working of the system usually described as asymmetric.

facto discharges a particular country's central bank as a leader notwithstanding unofficial, a possibility of ability to determine monetary policy for the whole participants.[5] It is a contentious issue whether the ERM would have turned out to be an anti inflationary bias if had functioned symmetrically. The imposed symmetry would strengthen the freedom to opt for monetary policy autonomy that in return would likely to pave the way for uncoordinated policies given the divergent economic outlook in the EU. In terms of the ERM participants, this could imply looser monetary policies for the higher inflationary countries that would possibly impede the process of coordination and render the pursuit of credible monetary policies difficult. Symmetric version of ERM therefore could have made reducing the cost of inflation higher for high inflation countries as the policies would not have been deemed as credible by the public.[6] Yet, the suggestion that German monetary policy must take into board the peculiar circumstances of the other members, whose foremost aim is to import disinflation has not always been the case.[7]

The primary goal of price stability that Germany made strict commitment to has been instrumental in encouraging other countries for taking part in a scheme like that of the EMS**.** The willingness of the large countries like France and Italy to join in an exchange rate arrangement where Germany acted as a leader is usually explained in a way that made ERM as a superior tool to reduce inflation through importing credibility as a *defacto* result of this arrangement.[8] If one country in a fixed exchange rate mechanism is the dominant player, then it will tend to dictate the inflation rate in the long run. (Barrel**,** 1992: 33). The German Bundesbank acted as a nominal anchor in the system and adapting to the conditions generated by the anchor, others like France Italy hope to reduce their high level of inflation. In terms of the credibility argument initiated by Barro and Gordon, the Bundesbank has a high credibility with a strict adherence to requirements of the policy rule which is enforced by full commitment to the price

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[5]This is a central issue highlights the hegemonic design of a fixed exchange rate mechanism often associated with the situation in Bretton Woods regime and European Monetary System. The German leadership argument in the EMS will be covered in detail later in this chapter.

[6]In a symmetric setting, assuming that each country had monetary autonomy, there would be more room available for government to incline for discretion. As far as higher inflationary countries concerned, they may not have selected price stability as a primary policy goal considering the fact that governments could resort to cheating. Cheating would be practically possible in the case of non-commitment because of the availability of realignments.

[7]This situation will be discussed in the chapter six where German Monetary policy spill over generated system wide problems.

[8] In a way German Dominance Hypothesis set to explain German leadership in terms of its superiority in monetary field. Those two countries are almost as large as Germany and although Germany's production capacity and productivity is larger than those two, not to greater extent. The superiority that endows Germany with leadership lies in her reputation of monetary stability, mainly strict adherence to price stability. Positive trade balance is an important factor in that respect enables Germany to hold large amount of DM reserves and joint reserves were also largely held in DM to be prepared for interventions.

stability. On the other hand, the French and Italian Central Banks have lower credibility. By fixing the value of their currencies to the German mark they exclusively exposed to the new monetary condition where German policy standard must be adopted. Tying their monetary policies to the German standard imply for those countries the surrender of their monetary policy autonomy.[9] Incorporating this line of argument of fixed exchange rates into *Barro and Gordon* setting, the cost of reducing the level of inflation seems to be smaller than other versions of policy rule commitment schemes since credibility or reputation building is made simpler by adoption of an anchor.

### 2.2. N-l Solution Within The Asymmetric Position

Symmetric EMS would imply very high degree of monetary policy independence for the weak currency countries, whilst asymmetric nature of the EMS, as suggested by the GDH, would impose stricter monetary discipline on them. Under such a circumstance "a "beggar-thy-neighbour" deflationary strategy from divergent countries, aimed at provoking an exchange rate change, will bias deflation at a disadvantage of the leader country" (Farina, 1991: 447). In the light of this, the multi-country strategic game entails that the hegemony country has to obtain assurances from the participants which promise that they would stand by the hegemonic model in this asymmetric setting.[10] Let us assume a regime within which the above like featured divergent countries maintains authority in managing their exchange rate vis-à-vis the leader country where the latter is attached to the asymmetric solution.[11] This condition exposes the reserve currency country to a privileged situation where it can exploit monetary policy in order to alter domestic circumstances for stabilization purposes never mind it has fixed its currency against N-l countries. Reserve country can enjoy keeping monetary policy autonomy intact for free rider policies if needed without a need to intervene in the currency market. Reserve currency does not need to intervene in the market in order to hold the currency fixed as opposed to other countries whose currency cross fixed against the other participants' currencies. As a result of this, reserve currency holds a great privilege to be able to use monetary policy as a stabilization tool.

The asymmetric solution is referred to N-l solution, as one version to this consideration expressed above. Keeping in mind the credibility argument that is linked to the exchange rate regime; this concept will be taken further. Again, it is to be repeated that the sharing of the monetary autonomy is not equally distributed.

There is only one country that decides and operates its monetary policy independently. Let's assume that a fixed exchange rate regime is consisted of N members. N-l countries will lose monetary policy autonomy while on the other hand

[9] That is the striking feature of the pegging versus importing credibility. There is a clear trade off between importing credibility from the anchor country and monetary autonomy for the individual member which took part in the pegging arrangement.

[9] strategic game, i.e. France and Italy must guarantee that they will abide by the hegemonic structure of the regime and the rules that supports it. i.e. intervention rules.

[11] The centre (leader) country under these circumstances assumed to have been determining monetary policy.

one country, often called as leader or centre, will enjoy greatly the freedom of determining monetary policy by itself. That great freedom possibly gives the leader country the authority of being able to fix the monetary in accordance with the domestic goals of the economy. The rest, N-l countries have not great choice but adopt to the rules of the game, within the given framework, N-l countries would produce policy responses not as much to the basic needs of the domestic economy, but in accordance with what is being enforced by the leader country. Hence, for them, monetary policy followed is not a choice but a design to be pursued. Centre country determines and puts into action monetary policy independent of others and makes the rest to follow them if they are fully commited to the pegging arrangement. Therefore, the N-l countries will have to shoulder the full cost the macroeconomic adjustment because their monetary policy may not match the target of exchange rate stability. This implies that policy maker cannot commit to the domestic stabilization while at the same time sticking on the exchange rate target that dictates monetary policy at the expense of the former. The countries other than anchor will import the latter's monetary conditions that dominates the whole currency area. The anchor country does not own any obligation for exchange rate stability, it will design its monetary policy as if did not take part in an exchange rate regime. Though anchor country is known of strictly committed to the price stability, it is in a position to act as if in a flexible exchange rate regime. The followers surrender monetary policy autonomy in favour of exchange rate stability. Their interest rate policy reflects the anchor country's decisions hence their monetary policy conduct changes in pursuance of the changes in the monetary conditions of the anchor country. The other condition that may entail changes is to attempt exchange rate pressures. The mandatory intervention to preserve exchange rate stability is the task of follower countries. The ERM of the EMS, in terms of sharing the burden of intervention, distribute the intervention obligations among the whole members in the system. This includes the anchor currency, namely the DM.

The principle logic behind the explanation of leadership formula lies in the fact that centre country will be the one enjoying the reputation of having the lowest inflation level. Linking that to the central bank independence argument, possibly the centre country is the one which has a independent central bank. Not only will N-l countries tie their currencies to the lowest inflation country's currency but also follow the footsteps of an independent central bank whose foremost aim is to maintain price stability, and in return import anti inflation. The N-l solution reflects that inflation convergence to centre country is an automatic process. The fact that although asymmetric formation in a likewise arrangement is a clear-cut way of importing anti--inflation pending on the existence of such reputation of the centre, accommodation of higher inflation is also possible when such higlighted reputation comes to an halt.**[12]**

Policymaker has no choice but to follow the initiated policies by the centre and

[12] The position of the dollar as a vehicle currency in the Bretton Woods regime clearly fits in this explanation. The dollar has been a centre currency in this regime and other countries have largely gained in terms of importing anti inflationary reputation as result of pegging to dollar for long period of time. Nevertheless, when American Policy choice has changed in favour of monetary expansion, not only U.S. economy were dragged into an endemic inflationary spiral but also other countries who were to adopt to such a policy switch.

this inevitably renders monetary policy endogenous for him. The policymakers in the N-l countries would automatically build up anti inflationary reputation as a reward for the tight monetary policy imposed by the centre country and reducing the cost of reducing inflation accordingly. Reputation building thus is facilitated by following the monetary rule designed by the centre country. The pegging arrangement provides the follower countries with the advantage to signal their commitment to pursue price stability resolution of the anchor country. The poor ex-commitment to price stability will be strengthened by the pegging arrangement by changing the expectations of the market participants. Fixing the exchange rate may eliminate the previous inflationary bias by rendering follower's monetary policies credible. Hence, such regimes help to promote reputation building. Importing credibility will also generate disciplinary gains in the fiscal area. Pegging agreement by a large rule out the monetary financing of the budget deficits therefore implying enforceability in the budgetary field, preventing accumulation of large budgetary deficit.[13]

While inflation convergence brought about by disciplinary policies leads to the overvaluation of the weak currency, in turn, the strong currency will be undervalued. In the light of the theoretical considerations, the immediate effect of such a convergence - other things equal- will be a worsened competitiveness for the weak currency country as opposed to the improvement for the centre country in this scale. Having claimed that, the weak currency country may be subject to deterioration in current account balance *vis-à-vis* centre country while the latter may observe an improvement on the other edge on this account. Therefore, in order to improve the competitive situation in the short run, the weak currency has to realign vis-à-vis centre country currency that would be costly not only for the short run but also longer time horizons. When weak currency realizes devaluation the immediate effect will be strengthened competitiveness though sacrificing price stability in exchange for the short run concerns. This practise jeopardizes the anti- inflationary reputation that was earned previously possibly with a worsened credibility for the longer run.[14]

### 2.3. The Credibility of Exchange Rate Targeting

In order to reach to a judgment about a pegging arrangement and the alleged credibility that it is expected to generate, the degree of monetary autonomy foregone poses as an integral element in the process.[15] Exchange rate adjustment as a tool would

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[13] See *Carlo Monticelli and Luca Papi,* p.46,47

[14] As pointed out previously, deviations from the policy target, in this case exchange rate pegging, will effect overall inflationary outcome in the future, in a way that it would be hard for the policymaker to convince the public that he would implement the prerequisite of the rule followed. The longer the period to persuade the public, the more pervasive the inflationary impact will become as a cost of breaking the pre-announced commitment-which is interpreted as cheating.

[15] The degree of autonomy lost will be higher if the inflation differentials between the centre country and other country whose currency pegged against the that of centre country is relatively high. The higher the differentials get, the larger the degree of the autonomy lost will become.

no longer become available if realignments mechanism were not an available option for the members in the dynamic process. In a case where high inflation differentials hold between those two country in question, it is likely that the market participants will hold expectations about the possible realignments, making the devaluation a reality for the ongoing exchange rate regime that is going be justified by the monetary authority as regarding changes making up for the effect of lost competitiveness. When the system failed to function in the way that serving to the goals of the domestic policymakers, it is likely that the domestic policymakers' degree of commitment in the regime will decline.
-When the agents conceived that given threshold to be overlapped, devaluation expectation arise (Ranki, 1998: 13).When weak currency realizes devaluation, the immediate effect will be strengthened competitiveness though sacrificing price stability in exchange for the short run concerns. This practice jeopardizes the anti- inflationary reputation that was earned previously, signaling a deterioration on this account in the long run.[16] Pegging regime possibly increase the cost of inflation as the competitiveness *vis-à-vis* other participants tends to deteriorate between the two intervals of realignments.[17]

The credibility of exchange rate targeting, especially like that of EMS, consisted of a basket of currencies made up of all participants, largely depends on the institutional structure that accommodate explicit coordination mechanism among the participants. In order to construct coordinated policies it is also essential to develop effective instruments that are linked to what is required by implementation of this pegging argument. The exchange rate targets, initiated by EMS participation were more transparent than prior monetary target policy rule. The monetary rule in the example of France and Italy were not pursued who had announced to tackle inflation. "The idea here is that economic agents are more likely to be convinced by a government's commitment to a specific exchange rate, which the markets can observe, than by a general commitment to reduce inflation or even specific commitment to a monetary target, which the markets cannot directly observe." (Frieden, 1994: 27).

Another extent to the supposed commitment to the EMS rules and alleged credibility that markets attached to them were regarded as the progressive monetary union which gained momentum in the late 1980s. Policy coordination became more important as result of the extensive agenda that was introduced into the European Integration process and other elements together with it. It is important to mention the freedom of capital mobility in that respect often considered being an integral part of the progressive economic and monetary union, but implementation of it also perceived to be a danger for the exchange rate fixity if national policies are not fully coordinated. The extensive market integration and the gradual realization of Economic and Monetary

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[16] As pointed out previously, deviations from the policy target, in this case exchange rate pegging, will effect overall inflationary outcome in the future, in a way that it would be hard for the policymaker to convince the public that he would implement the prerequisite of the rule followed. The longer the period to persuade the public, the more pervasive the inflationary impact will become as a cost of breaking the pre-announced commitment-which is interpreted as cheating.

[17] For this reasoning, see, Francesco Giavazzi, and Marco Pagano, (1988)

Union is largely related to the successful implementation of the EMS.

Hence, coordination is also seen an important path to follow for the EMS participants after the late 1980s, marked the initiation of the step by step implementation of Monetary Union, especially by those with a keen commitment to accomplishment of it. Not only the political enthusiasm towards EMU would press for such a coordination that would call for disciplinary policies, but also the institutional enforcability of the Maastricht treaty would strengthen and furthermore make it inevitable by introducing sets of criteria as yardstick of disciplinary policies. It is important to conclude in this context that commitment to the goal of EMU would de facto increase the commitment to the EMS that would in return conditional upon close policy coordination. More successful in this progressive pass through are the members, more credible the EMS is going to become. After all, Monetary Union could only be achieved among the members when the exchange rate fixity is fully and irreversibly achieved. In that sense, the credibility of exchange rates would also imply, at least partially, for the market participants that a possible EMU project would also be credible. Therefore, the ERM and EMU, although initiated in different periods-are complementary for each other in terms of achieving individual goals.[18]

## 3. European Monetary System; German Dominance And Convergence

### 3.1. Germany's position as a leader country and credibility expectations within the EMS

Linked to the credibility argument; it is assumed that the devaluations in a semi-fixed exchange rate regime is expected to become less desirable for the public as they are being associated with the erosion in the value of the domestic currency and consequent weakness that brings in the economy. The ERM of the EMS generally viewed as German DM zone which is linked to the assumption of asymmetric formation where German Bundesbank supposedly fixed the monetary policy for the other members.

The German Bundesbank has had a widely held reputation of being credible, with an excellent past record of low inflation-due to an excellent record of monetary policies. As a consequence of partnership with the Germany, the other members would borrow some of the Germany's credibility the reason of which often attributed to the choice of ERM membership. The fashionable paradigm was the belief that the expected credibility gain would extensively reduce the cost of disinflation. As referred to formerly, lack of credibility in policy making increases the cost of reducing inflation; importing credibility from extensively credible policymaker hence seen as significantly

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[18] As also subject to this study, there have been difficult times for the EMS after the proggressive Monetary Integration was put in the stage. Monetary Union project may have usually intensified commitment device towards the EMS but have not totally eliminated the occurrence of tough times. The example is widely known 1992-93 currency crises and enlargement of bandwidths succeeding this event. In fact, the reason that triggered the crises often related to the fact that markets were doubtful about the future of the EMU project which had just decided at Maastricht by then. This negative externalities were removed when individual policy makers adopted to the narrower targets in the ERM- and seemed to have commited to the implementation of proggressive EMU.

instrumental in the ERM case. After all, persuading market participants that government announcements on future monetary policy would be credible is not easy to achieve.

The pursuance of disciplinary monetary policy as exemplified for the ERM participants calls for disciplinary monetary policies, however cost of reducing inflation will be less costly. The strict monetary rule other than exchange rate pegging, theoretically thinking, will generate high interest rate for the markets. Instead of such a monetary policy rule, if a high inflationary fixed its currency against the DM, theoretically will converge over the time towards German inflation. For the market participants believing that German inflation will become stable, their expectations will be shaped accordingly towards contraction of domestic inflation. When a member country pegs its currency against the DM, it should have to follow German interest- rate path. In that sense, it can be suggested that the interest rates of the N- 1 countries should have been converged if the GDH is taken as granted.[19]

*Giavazzi and Pagano* (1988) have examined credibility of fixed exchange rate systems which also accommodates some ideas of *Kydland and Prescott* (1977) and *Barro and Gordon* (1983) on credibility concept. Countries with an inflationary bias would increasingly experience improved policy credibility while foregoing some unemployment cost relatively lower when pegged their own currency to that of the country with a low inflation record and stable monetary policy. As for the EMS, it is a useful tool to achieve greater convergence across the EU where 'divergence' in the basic indicators was clear-cut at the start. As far as the EMS experience is concerned, the cost of disinflation appears to be lower as result of exchange rate regime where high inflationary EU countries pegged against DM. What was seen risky in *Barro-Gordon* model has been well adapted to the actual EMS case.[20]

*Roof* (1985), reached at a resolution for credibility problem by suggesting that a conservative central banker must be appointed for the office as a policymaking authority. Under the rule of independent domestic monetary institution, France and Italy, with their high inflation propensity, would delegate their monetary policy to the German Bundesbank by joining the ERM of the EMS. Monetary policy making thus would be entrusted to an independent central bank.[21] As *Maurice Obstfeld* (1988) claimed, the EMS members have willingly surrendered some of their monetary autonomy to the German Bundesbank.

### 3.2. German Dominance Hypothesis and Policy coordination within the EMS

Within the EMS, the imbalances which prompted compensatory interventions were largely originated by balance of payment troubles due to loss of competitiveness that was visible in the persistent inflation differentials. The currency with a considerably high level of inflation would observe an overvaluation in the real exchange rate of its

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[19] As Axel Weber relates, announcement of an interest rate target consistent with a fixed exchange rate in relation with the low-inflation country reduces the sustainable rate of inflation.

[20] For more on this, see Francesco Farina (1991).

[21] See on this, Francesco Giovannini and Marco Pagano (1988)

currency, hence a rise in its balance of payment deficit. This highlights the potential vulnerability of the high inflation country's currency, hence calls for adopting corrective measures. Such measures may be summed as, rising the rate of interest, adopting restrictive economic policies that are considered useful and complementary in curbing the devaluation expectations. Those measures would appropriately be introduced for preventing a possible realignment. However, the intervention, especially the one which spread over the time would progressively cause the country to deplete its foreign currency reserves. This situation becomes persistent; the only solution to this inconsistency will be the devaluation of the currency.

The cooperative account of the EMS suggests that in a coordinated game, policy coordination will decrease uncertainty about inflation and exchange-rate as well as effectively reducing the inflation differentials over the time. It is a useful tool to achieve greater convergence across the EU where 'divergence' in the basic indicators was clear-cut at the start. What was seen risky in *Barro-Gordon* model has been well adapted to the actual EMS case.[22]

From the start of the EMS, France and Italy abandoned the policy of accelerating money growth and implicitly bringing in the use of surprise inflation in some occasions over the time, yet in a diminishing speed, the surprise inflation was to be used for internal purposes, i.e. reducing the level of overall real wages. The lessons of the past had taught monetary authorities that monetary expansion announced or non-announced is no panacea for long-run real growth but feeding into consistent inflationary spirals. Therefore, French and Italian policymakers soon after joining the EMS understood that expansion must be stopped and regarded the EMS as an important means of controlling it. So, French and Italian authorities were signaling their commitment some years after the take off of the EMS.

### 3.3. Asyymetric Policy Design and Economic Policy Coordination

The claims that posit German monetary policy as a disciplinary device in face of fighting inflation in European Community countries has increasingly become a consensus among the academics and European policymakers from the second half of the 1980s. In that sense, GDH defends that EMS is an asymmetric system in which Germany independently sets its monetary policy consistently with its domestic goals whilst other countries would have to produce similar policy responses to such predetermined policies. This kind of formation was reminiscent of the gold standard and Bretton Woods regimes where asymmetric outlay prevailed by placing a hegemonic anchor currency on top of the system.

According to GDH, countries other than Germany would have to forego monetary policy independence so long as they keep committing on their initial announcement of abiding by the rules of the exchange rate regime. This is to claim that Germany determines monetary policy unilaterally for the whole community that took part in Exchange Rate Mechanism (ERM) of the European Monetary System (EMS). GDH focuses on the initial German monetary policy to the extent to see whether those policies were emulated by other policymakers. This implies that the view that EMS has

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[22] For more on this, see Francesco Farina (1991).

become a disciplinary device for other members will hold true if the policy line followed by them is consistent with that of Germany. Therefore, testing GDH also has implications for the proposition whether the EMS was an influential disciplinary device in the monetary policy making.

The initial greater aim of forming the EMS was to establish monetary stability in Europe.[23] From this definition, it can be worked out that stability has two aspects: Stability of price level and stability of exchange rates. As for the cooperative approach to the EMS, policy coordination is powerfully instrumental in reducing uncertainty in both exchange rates and price level; furthermore allowing those variables to converge progressively. Indeed; the EMS has been immensely influential by providing EMS countries with relatively higher level of exchange rate and price level convergence. Exchange rate fluctuations have been reduced to tolerable minimum level, following the initial period, after the mid 1980s, with the exception of 1992-93 Exchange Rate Crisis till the irreversible locking of the bilateral exchange rates prior to the EMU. A parallel achievement gained in price level convergence towards that of Germany was also by a large promoted by EMS and other accompanying disciplinary measures.

### 3.4. Monetary Stability and Inflation Convergence

The progressive monetary integration project maintains that full convergence in inflation rates must be implemented. This approach has been reflected among the Maastricht convergence criteria, the aim of the EMS coincides with the goals of progressive EMU project but entails greater level of policy coordination in order to achieve convergence target. In fact; the EMS has been instrumental in providing nominal convergence and monetary stability within its sphere of influence. On that account, after over a decade of experimenting with EMS, European Commission Report (1990) quotes as follows: It can be empirically proven that exchange rate volatility in ERM over the time has been reduced to a significantly low degree. "Indeed, there are some data that suggest that the low degree of real exchange rate variability achieved in the ERM corresponds to the level one could expect to find even inside a monetary union consisting of rather diverse regions as would be the case for the community." (European Commission 44, 1990: 69).

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Let's assume a regime within which the above like characterized divergent countries maintains authority in managing their exchange rate vis-à-vis the leader country whereby the latter is attached to the asymmetric solution[24]. Under such a circumstance "a beggar-thy-neighbour" deflationary strategy from divergent countries,

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[23] For this, see December 1978 European Council Resolution, Brussels.

[24] The centre (leader) country under these circumstances is assumed to be determining monetary autonomy.

aimed at providing an exchange rate change, will bias deflation at a disadvantage of the leader country" (Farina, 1991:447). In the light of this, the multi-country strategic game entails that the hegemonic country has to obtain assurances from the participants that they will stand by the hegemonic model in this asymmetric setting.[25].

The fact is that German Currency was the strongest one among other currencies in the EMS, German Bundesbank's participation in the interventions were often possibility, whether it be "Voluntary" or "Mandatory" intervention. However; Germany were often reluctant to take part in those intervention; often rejected the calls for to take part in voluntary interventions. This fact illustrates the fact that Germany avoids any changes that would risk the monetary policy target which is largely depending on its monetary autonomy. As result of the above account, "German dominance" can be taken as the structural condition of the EMS mechanism where stability lies in the likewise functioning of that regime.

The presence of the possibility of realignment is one of the key features of the EMS which is often included in the credibility analysis. From the date it was set to work until December 1987, there had been 10 realignments altogether. It has been subject of the discussion that whether the 4.5 total fluctuation band is too wide so that nominal exchange rate fluctuations would persist as result. The realignments and fluctuation bands have been jointly taken up for discussing the credibility of the EMS.

### 3.5. Empirical Testing of German Dominance Hypothesis

At the very start, the EMS was designated to operate in a symmetrical version with the strengthening operational measures to ensure smooth running of the system. Every country that participated in the ERM then automatically assumed to demonstrate symmetrical conduct with the maximum commitment to the rules of the exchange rate regime. However; almost from the start to the end; the EMS has been viewed as a asymmetrical exchange rate regime as the hegemonic leadership models suggested. Germany was the hegemonic country that dominated its monetary policy in the Community while others were to follow the policy line designated by the Germany. (Putun, M; 2013)

Despite the greater consensus reached among academics on the significant influence of German Monetary Policy on other EMS countries' policies, the quantitative works that attempted to test the presence of GDH do not prove a likewise accord on the issue As far as the findings of the tests conducted on the presence of GDH are concerned, there have been some empirical support for it; while the degree of dominance varied depending on the method of the empirical investigation selected. The findings of the tests differed pending on the method and period subjected to the tests. Although German Dominance Hypothesis rejects the option of using independent monetary policy by the other members; they are proved to have had room for manoeuvre in independent monetary policy making though in limited degree. However; the findings that reject the presence of GDH do not necessarily rules out the presence of

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[25] In terms of the EMS strategic game, i.e. France and Italy must guarantee that they will abide by the hegemonic structure of the regime and the rules that supports it, i.e. intervention rules in the exchange market.

German Monetary Policy influence during the selected sample period of EMS. (Putun, M.; 2013) employed Cointegration Analysis in his work and his findings points to the presence of a partial German Dominance. As for these findings; the degree of German Monetary Policy impact was dispersive over the given sample period. *Rubio and Garces,* (2002) tested the German Dominance hypothesis by employing Granger Causality test; and their findings were in support of a weaker version of German Dominance. Further on the contrary; the findings of Empirical Work conducted by *Taufik Choudhry* (2002) can be taken as support for against the proposition of German Dominance Hypothesis. Finally; Katsimbris *and Miller* (1993) and *Caporale* et al. (1996) suggest that short term interest rates of the non- German ERM countries do not co integrate with that of Germany based on their findings.

**Conclusion**

In a fixed exchange rate regime where the goal of low-inflation was a high priority in a group of countries, it would be in the interest of all participants when the exchange rate regime functions under the leadership of the low-inflation country. The featuring divergence primarily emerges in the spread of inflation levels at the Union level and; by a large could be resolved by the thegemonic arrangement. The low inflationary monetary policies that are implemented by the leader will present the common monetary policy path, hence preventing free-rider version of policy application at the union level. .

It is widely held among economists that Bretton Woods exchange rate regime has benefited its participants those other than US by former countries fixing their exchange rates against the latter. Those members of system believed to have imported credibility by following the trajectory of the U.S. monetary policy. Same argument is held in the European context that incorporates the argument of Dominant Currency Hypothesis to the late European Monetary System (EMS). The EMS was a fixed but adjustable exchange rate regime of which foremost aim was to create a zone of monetary stability in Europe.

The countries other than Germany were volunteered to take part in the system so as to import credibility from the latter and stabilizing their economy by doing so. Convergence of inflation rates at lower level is viewed as a greatest gain for the participants who had pegged their currencies to the German Mark but they would also have to undergo some costs inflicted by the force of German dominance. Germany would often be criticized on the ground that they operated their monetary policy primarily for their own needs without sparing much attention to their disruptive spill over effects on others. Germany is unanimously given the status of hegemonic economy, but sometimes criticized on its unwillingness for accepting the responsibilities assigned for such leadership position. In view of such criticisms; Germany has not largely contributed to the interventions as a surplus country. Regarding that; it is appropriate to underline the Reluctance of German Bundesbank in joining voluntary interventions vis-à-vis with the central Bank of the weak currency country in currency market. Arrangements of this kind were not often observed may be largely due to the Germany's reluctance for sizeable lending facilities. Due to the complexities involved in dynamic process; the EMS had been criticized on many

grounds especially at the times of crisis. Nevertheless; it is widely held agreement among academics that the cost of disinflation has become lower as result of exchange rate regime where high inflationary EU countries had pegged their currencies against DM. Despite the greater consensus reached among academics on the significant influence of German Monetary Policy on other EMS countries' policies, the quantitative works that attempted to test the presence of GDH do not prove a likewise accord on the issue As far as the findings of the tests conducted on the presence of GDH are concerned, there have been some empirical support for it; while the degree of dominance varied depending on the method of the empirical investigation selected. However; the findings that reject the presence of GDH do not necessarily rules out the presence of German Monetary Policy influence during the sample period of EMS selected arbitrarily.

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