

DEPARTEMENT BEDRIJFSECONOMIE

**TENDENCIES AND IDIOSYNCRASIES
OF EUROPEAN TRADING PARTNERS**

by

Evrard CLAESSENS
Annemie COOLS

WORKING PAPER
96-232
July 1996

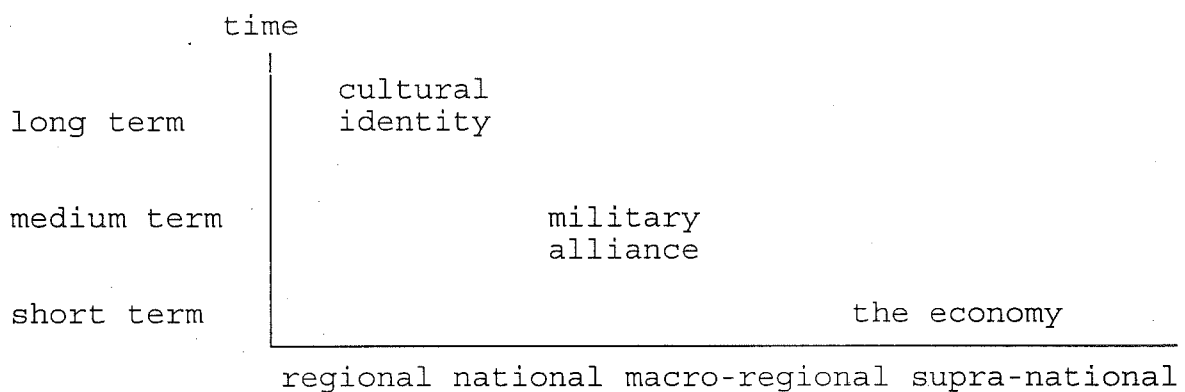
D/1996/2263/6

On the eve of a new world trading system (ZORGBIBE, 1993), the post cold-war debate includes the search of Europe's position in the new wave of worldwide regionalism. This debate is pinched between the trends towards a global economy and the phenomenon of regionalism, ie the search for geographical identity of certain regions within the whole.

1. Beyond economics

The dynamics of international relations can be identified by three major components, being security (the military and beyond), the economy and the search for cultural, linguistic and religious identity. These three components are portrayed in Figure 1, with explicit reference to the spatial coverage and the time span.

Figure 1 : culture, security and economy in a time and space



Cultural identities may be confined to a small geographical coverage, but they feature long term survival. Examples span the preservation of the Thai culture in perhaps the only Asian country which never obtained a colonial rule, and the Inca culture preserved at Machu Pichu, even without inhabitants.

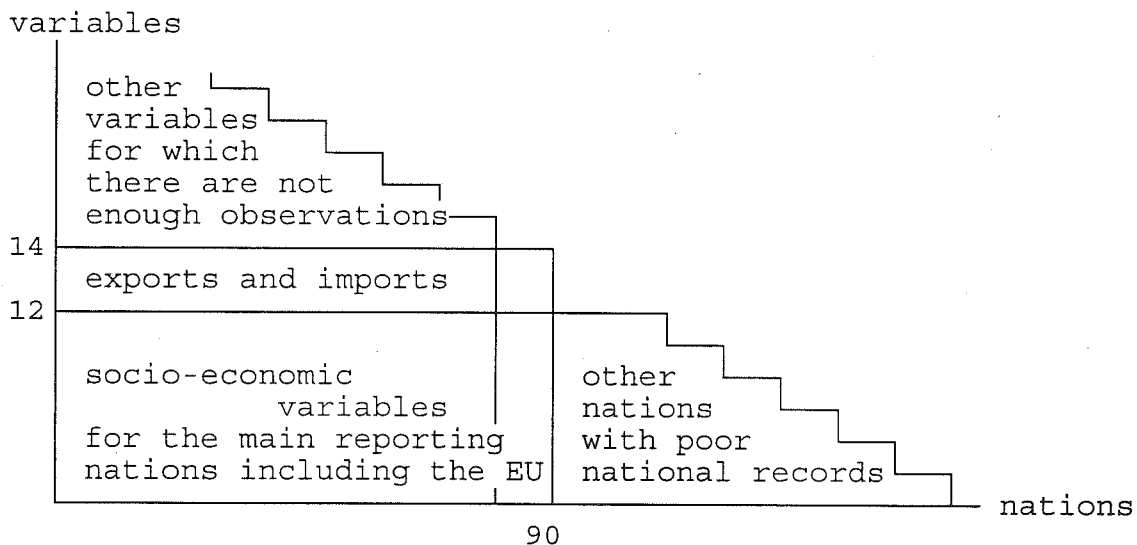
Ancient Greek knew that certain things "are not of today's or yesterday's, but of all times", as said in Sophocles' Antigone (verse 456). On the opposite, the economy adjusts quickly and world-wide. Its long term options are actually the short term. In between these extremes, Figure 1 situates the "alliances", covering security, the military and related issues.

This approach supports the assumption that socio-economic grouping can be executed on a cross-sectional basis, because of the (almost) instant adaptation of economic processes.

2. Organization of the clusters

Briefly, the question of this contribution is to what extent nations may possess a similar combination of socio-economic characteristics, and whether they cluster together in homogeneous regions. This hypothesis is tested by a hierarchical cluster analysis, using the complete linkage method, following the graph of Figure 2. The World Bank's data contain bottom-line statistics of about two hundred nations, of which still 90 provide twelve key variables, including foreign trade. This appears a sufficiently large sample for our exercise.

Figure 2 : organization of the cluster analysis



The variable axis on the left comprises population, GDP, urban population, the importance of agriculture, industry and services to the economy, access to communication (eg telephones), female labour (viz. emancipation), age dependency rate, population growth, energy consumption, gross domestic investment and the export and import value of trade. The trade variables measure the openness of an economy and are only used in the third and the fourth exercises as shown in the table below.

	with EU	without EU
without trade	first	second
with trade	fourth	third

3. The basic first cluster exercise

The first basic exercise looks at the European Union within the world economy, without trade being a variable. The listing is given in Table 1 .

This cross section contains 16 clusters of which the ACP countries (here only Africa) occupy two (5a & 5b). When taking only 15 clusters, these two groups are joined. This provides a small but clear difference between the poor ACP members and the better off (which are similar to the Himalaya nations).

Some nations are grouped into existing regional associations, whereas others remain separated. An example of the latter is NAFTA, where Canada and the USA constitute a separate cluster from Mexico which joins the "main Latins". This group covers the petrol nations of the Nord (Venezuela & Mexico, and the larger MERCOSUR nations of South America (Chile, Argentina Brazil and Uruguay). Lebanon joins as a geographical outlayer.

The "small Latins" group covers Central America, much of the "Pacto Andino" and have also similarities with the North African Maghreb, Egypt and Iran.

Europe is an interesting case too with four groups, covering members of the European Union:

- the European countries of the G-7, ie France, Britain, Italy and Germany which constitute an homogeneous group;
- the small rich countries which include the Benelux, Spain, Ireland, Switzerland, Greece and Cyprus. Also Singapore is included in this group because of the city state's similarities, even though it is not a part of Europe.
- the retarded periphery, being mainly the Visegrad, the Balkan and Portugal.
- the rich North, being Scandinavia and later joined later by Canada.

The Newly Industrialized Countries (NIC) are best identified in Asia, with ASEAN being joined by Sri Lanka, Turkey, South Africa, Mauritius and Guyana.

This first exercise shows that "natural regionalism" exists with clear groups emerging such as ASEAN, the Mercosur, the Pacto Andino, the Maghreb and central America.

Six countries remain "single"; their association in inter-governmental agreements thus features strategic items, such as the TRIAD (with Japan, USA and the EU) and NAFTA (with USA, Canada and Mexico).

The European Union is "united" but in parts: the bigger G-7 members and three groups of smaller nations (Scandinavia, the central rich and periphery). Here, the strategic part apparently consists in keeping these different groups together.

Table 1 : The basic clusters of the first exercise

cluster 1 : the small latin countries and the MAGREB-type

Algeria, Egypt, Iran, Morocco, Tunisia
Bolivia, Colombia, Dominican Rep., Ecuador, El Salvador,
Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru.

cluster 2 : the main latin countries

Argentina, Brazil, Chile, Mexico, Uruguay, Venezuela
outlayer : Lebanon

cluster 3 : the richer European niche

Austria, Belgium, Cyprus, Greece, Ireland, the Netherlands,
Spain, Switzerland, and the outlayer : Singapore.

cluster 4 : the main poor (Asia & Africa)

Bangladesh, Pakistan, Mali, Mauretania, Tchad.

cluster 5 : the poor African ACP

Benin, Burkina Faso, Burundi, Central African Republic, Congo,
Ethiopia, Gabon, Gambia, Ghana, Guinea Bissau, Madagascar,
Malawi, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra
Leone, Tanzania, Uganda.

cluster 5/b : other ACP and Himalaya

Cameroon, Ivory Coast, Kenya, Togo, Zimbabwe.
Myanmar (Birma), Nepal, Butan.

cluster 6 : Canadacluster 7 : Scandinavia

Denmark, Finland, Iceland, Norway, Sweden.

cluster 8 : the European G-7

France, Germany, Italy, Great Britain

cluster 9: the Newly Industrialized Countries

ASEAN: Indonesia, Malaysia, Philippines, Thailand, Vietnam
others: Mauritius, Sri Lanka, Turkey, Guyana, S.Africa.

cluster 10: the retarded European periphery

Hungary, Poland, Romania, Portugal

cluster 11: Indiacluster 12: Japancluster 13: Jordancluster 14: Koweitcluster 15: U.S.A.

4. The second exercise (basic cluster without the EU)

When the pre-1992 EU countries are taken out of the sample, the clustering of the remaining changes to some extent. The remaining "small rich" of cluster nr.3 join the periphery (cluster 10). Scandinavia remains united and is even joined by Canada in a kind of "Nordic Club". The NIC consolidate their South East Asian base with Myanmar. Sri Lanka and Guyana now constitute a separate group, and Singapore goes alone.

5. the third exercise (with trade)

These clusters show only one change, compared to the previous: Mauritius leaves the ASEAN-dominated NIC group, and joins Sri Lanka and Guyana.

The stability of the second and the third group shows that trade is so much related to economic development in general, that it does not change very much the actual clusters, except for very open economies, such as the island state Mauritius.

6. the fourth exercise (with trade and including the EU)

Finally, the analysis repeats the first basic cluster (with EU) but now with foreign trade (Table 2). The argument of open economies now applies to the European Union itself. There, the main changes apply indeed on this basic indication:

The Benelux (Belgium or the BLEU and the Netherlands) leaves the club of the small rich and joins Singapore; the "openness" of those economies is without doubt, with a trade dependency factor of more than 3/4. Within the European G-7 club, Germany leaves the others (UK/Great Britain, France and Italy) and plays solitaire. The latter move is not clearly associated to a stable feature of imports or exports, since the observation period synchronizes with the German reunification process. A matter to be followed when things get "normal" again.

Table 2 : The basic clusters with trade (numbers cf. table 1)

cluster 1 : the small latin countries and the MAGREB-type
 Algeria, Egypt, Iran, Morocco, Tunisia
 Bolivia, Colombia, Dominican Rep., Ecuador, El Salvador,
 Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru.

cluster 2 : the main latin countries
 Argentina, Brazil, Chile, Mexico, Uruguay, Venezuela
 outlayer : Lebanon

cluster 3 : the richer European niche and the periphery
 Austria, Greece, Cyprus, Ireland, Spain, Portugal, Switzer-
 land, Hungary, Poland and Romania.

clusters 3/bis : the trading economies (separate cluster)
 Belgium, the Netherlands and Singapore

cluster 4 : the main poor (Asia & Africa)
 Bangladesh, Pakistan, Mali, Mauretania, Tchad.

cluster 5 : the African ACP
 Benin, Burkina Faso, Burundi, Central African Republic, Congo,
 Ethiopia, Gabon, Gambia, Ghana, Guinea Bissau, Madagascar,
 Malawi, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra
 Leone, Tanzania, Uganda.

cluster 5/b : other ACP and Himalaya (joined again with 5)
 Cameroon, Ivory Coast, Kenya, Togo, Zimbabwe.
 Myanmar (Birma), Nepal, Butan.

cluster 7 : the Northern periphery (Scandinavia & Canada)
 Canada, Denmark, Finland, Iceland, Norway, Sweden.

cluster 8 : the European G-7
 France, Italy, Great Britain

cluster 8/bis: Germany

cluster 9: the Newly Industrialized Countries
 ASEAN: Indonesia, Malaysia, Philippines, Thailand, Vietnam
 others: Mauritius, Sri Lanka, Turkey, Guyana, South Africa.
 the "others" group was separate in the third exercise.

cluster 11: India

cluster 12: Japan

cluster 13: Jordan

cluster 14: Koweit

cluster 15: U.S.A.

7. Evaluation

The cluster exercise was finally tested by applying iterative clustering instead of the hierarchical clustering. Here, only clusters 3 and 7 of the fourth exercise changed again with:

- a/ a group of the former EFTA (Scandinavia & Alpine states)
- b/ an enlarged mediterranean club (Greece and Cyprus with Lebanon) joining the South American (major) Latins,
- c/ a remarkable splitting of the Benelux with the Netherlands joining Spain and Canada joining Belgium.

Apart from these nations, the clusters themselves are quite stable with euclidian distances smaller than one within the clusters and scoring between 4 and 16 between the clusters.

The method proves a stable complement to historical studies on trade partners and their regions (CLAESSENS & COOLS, 1996).

references:

- ALDENDERFER, M.S. & BLASFIELD, R.K. (1984), Cluster Analysis, Sage Publications, 87 p.
- ANDENBERG, M.R. (1973), Cluster analysis for applications, Academic Press, New York, 359 p.
- BERLAGE, L. & TERWEDUWE, D. (1985), the Classification of countries by cluster and by factor analysis, K.U.Leuven, 45 p.
- CLAESSENS, E. (1984), Traffic and trade projections on the eastbound Suez shipping route, Maritime Policy & Management, vol.11, n°1, pp. 45-55.
- CLAESSENS, E & COOLS, A. (1996), Turning tides on the North Atlantic, in C. Paraskevopoulos, R. Grinspun & G. Eaton, editors, "Economic integration in the Americas", Elgar.
- HUIZINGH, E (1989), SPSS/PC & data entry, Addison Wesley, Amsterdam 302 p.
- NORUSIS, M.J. (1990), SPSS/PC+, statistics 4.0 for the IBM PC/XT/AT and PS/2, SPSS inc., Chicago, 305 p.
- ROMESBURG, H. C. (1984), Cluster Analysis for researchers, Lifetime learning publications, Belmont, 334 p.
- WORLD BANK (1995), World Tables 1995, the John Hopkins University Press, Baltimore and London.
- ZORGBIBE, L'après-guerre froide en Europe, P.U.F., 1993.