# Chapter 10
# Market Attractiveness
# of Developing Countries

## 10.1 Introduction

Companies operating in international markets need to evaluate the potential market attractiveness of developing countries with which they may want to do business. These companies have access to substantial amounts of information from specialized sources and from statistical data supplied by international institutions. Such vast and diverse information is rarely used in a systematic way in the management decision process. When it is used, the entire process is most often inadequately formalized. The available information generally deals with economic factors, while in the present international arena, judgment about politics must also be taken into account. This chapter illustrates the applicability and advantages of the Analytic Hierarchy Process to this decision problem, and uses it to create maps of joint economic progress and political stability in a number of countries for two time periods 1990–1991 and 1995–1997.

A salient business phenomenon in the past 10 years has been the "globalization" of economic and industrial activity. Production is spreading throughout the world in pursuit of economic and labor advantages. These advantages offer greater flexibility in maintaining quality, lowering costs and improving competitiveness. In addition, the type of government running a country and its political outlook affect the internal administration and the international image of that country which could encourage or deter companies from seeking business there.

Companies operating in the international environment, who analyze the market of developing countries to determine their own actions, often only consider specific factors such as the supply of raw materials, infrastructure requirements, demand on the goods, and the exploitation of attractive production factors. Nowadays they must consider the international situation as a macroenvironment in which economic, financial and political factors create new conditions. These conditions, directly and indirectly, could represent threats or opportunities to business. The need for a thorough analysis of the macroenvironment is stressed in

the Strategic Management literature which is growing in importance with its own approaches. Such names as "External Audit" and "External Factor Evaluation" [2] are being used to classify the environment. To model the discontinuity in the present situation, the scenario approach has been used [7].

The authors' company, Iritecna, has manufacturing activities in the general engineering industry which include steel and non-ferrous metallurgy, logistic activities for industrial plants and transport systems, and various involvements in public utility infrastructures. It has locations in Latin America, North Africa, Eastern Europe, the Middle and Far East. Its relationship to the world market is not a simple transaction oriented buying-selling relationship. Rather, the relationship with partners places emphasis on: (1) the quantity of money involved (about $1,000,000 U.S.) and the significance of the length of a contract (preferably more than 1 year); (2) the complexity of the rules of payment; and (3) the presence of the company as a shareholder in some business activity.

The broad spectrum of industry segments in which the company operates as well as its close involvement with the host country required by the particular way of doing each type of business has suggested to the Planning Department the need for an ongoing activity to monitor prevalent political and economic-financial trends in the countries where it operates. In order of decreasing importance, the goals of this undertaking are to create a process through a study and resulting report that:

- incorporates and correctly addresses the use of information, standard scale data, ratings, and subjective judgments arising from different sources,
- supports and enhances the process of resource allocation for promotional and commercial purposes,
- suggests new opportunities not well perceived by the company because of its strong involvement in existing business activities,
- develops a final report containing a graded map with (cartographic) character-istics, a kind of tactical board which portrays activity countries positioned according to their socio-economic and political movements that influence the macro-factors,
- makes possible learning about the future of the macroenvironment in which the company operates,
- stimulates team discussion about the problem of where to go and when to go, and utilizes expert knowledge and judgment for that purpose.

The last three goals clarify the intention to start a "macroenvironment modelling activity" that enables involvement and utilization of the creativity and judgment of both analysts and managers. Reports usually do not conform with an ongoing modelling process, but must be examined item by item. The specialized literature [2] suggests the use of weighted scoring methods to summarize and evaluate infor-mation relating to "macroenvironmental analysis." Multicriteria methodologies such as Electre [9] specify a process to scale data and evaluate a final alternative to follow for each decision. But these methods do not satisfy the need for a flexible framework to represent an ongoing process of decision making. Multivariate sta-tistical methods, used as geometric representations supporting Multiple Criteria

Decision Making processes [3], were tested. It was difficult to interpret the final outcome as a map of the environment because of its dependence on the measurable statistical properties of the data rather than on the perception of the problem with its social and political ramifications as they apply to each country.

The AHP [11] appeared to be well suited mainly for the richness of its frame (hierarchical arrangement of the factors) which permits one to give evidence of how the problem is perceived. It also allows for the use of intangible factors side by side with tangible ones. It uses a simple procedure of paired comparisons to elicit judgments from which it derives ratio scales. It then combines these ratio scales to derive an overall ratio scale for the decision. Guided by a number of applications of the AHP in the socio-economic planning field, it was decided to use it in making this type of decision to: a) structure and map the problem in the economic and political dimensions; b) interpret and use the results for decision purposes.

## 10.2 Representation of the Problem

The market attractiveness of a country is perceived to be related to two sets of factors deriving from two points of view: economic and financial, and political. Explicit mention of politics stems from the need for specifying factors that are in general included but not completely measured, by some of the financial indicators of risk. The economic-financial factors considered here are:

1. *Growth rate of Gross Domestic Product* (*GDP*), to give evidence about the economic forces of the country.
2. *GDP per Person*, to monitor the present richness of the country. The assumption "per" person is a cover up for concentrated isles of richness in a developing country.
3. *Inflation rate*, is an indicator of stability in managing exchange rate leverage and of potential future development.
4. *Current account over GDP*, is an indicator of a country's proneness to invest.
5. *Risk of direct investment*, is a way to monitor the credit worthiness of a country.

The political factors are:

6. *Turmoil*, relating to the level of sociopolitical conflict within the country.
7. *Strategic Relevance*, is an indicator of a country's geographic and historical importance.

Following the AHP approach, this portion of the problem is modelled as shown in the top portion of Fig. 10.1. Two important comments need to be made regarding the structure of the model.

First, the "economic-financial" node of the first level could be further subdivided into "economic" and "financial" and placed at the second level of the hierarchy. The five factors described above would then be positioned in the third level of the hierarchy and linked to the parent node to which they belong.
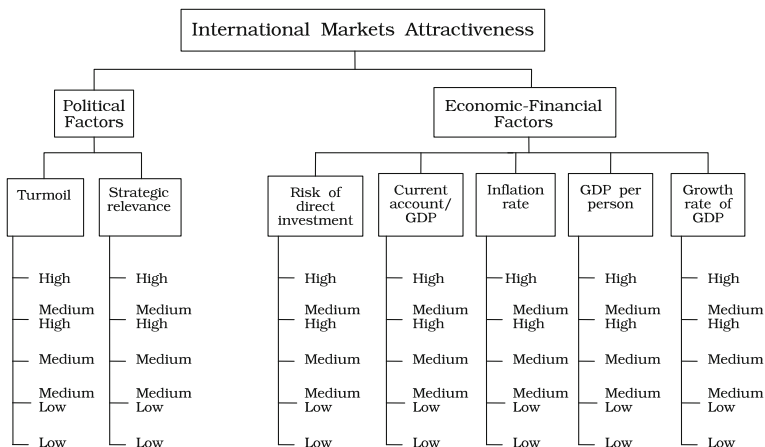
**Fig. 10.1** Hierarchical structure

Second, the "strategic relevance" node could be decomposed into four sibling nodes; underground resources, geographic position, historical importance, and power sharing.

These nodes have not been included in the present version because our aim has been to remain "simple" and relevant. We would also have encountered the difficulty of finding more specific data on them.

The third level of the model contains rating intensities by which the second level criteria are measured: High, Medium High, Medium, Medium Low, and Low.

Where quantitative information is available, a relationship between rating intensities and measurement data is used to make the evaluation (See Table 10.1). All evaluations are ordered to give less desirable traits a lower rating. For example, heavy turmoil, significant inflation and considerable risk for investment are all given low ratings.

A country is evaluated for its "performance" with respect to each second level criterion using the most appropriate rating grade to describe it. These results are weighted and combined to yield weights with respect to the two major criteria. A map of market potential displaying the synthesized results is the output sought.

## 10.3  Priorities

The AHP methodology requires priorities for each level of criteria and for each rating intensity. These priorities are always determined in terms of their parent node in the hierarchy. Relative value is derived from pairwise comparisons. Judgments can be made directly with numerical scales or with a semantic scale translated to numbers. For example, within the "Political" factors, the "Turmoil" subcriterion is strongly more important than "Strategic relevance" (scale value 5). This strength of dominance is assigned for two reasons.

**Table 10.1** Relation between rating grades and measurement data

| Sub-criteria | High | Medium–High | Medium | Medium–Low | Low |
|---|---|---|---|---|---|
| Turmoil | Consolidated and stable democracy or stable dictatorship. Absence of social tension | Democracy not fully consolidated or dictatorship with initial signs of opposition and of social tension | Very recent democracy with political power not consolidated. Spreading social conflict. | Strong opposition outside the democratic process. Presence of guerillas. Bad social conditions | Political anarchy and ugly social conditions |
| Strategic performance | Richness of raw materials. Key role for power sharing in the area. Bridge between two different areas. Historical relevance in the area | | Presence of some raw materials. Partnership in regional alliances. Active role in international negotiation processes | | Absence of raw materials. Marginal role (political, ideological and historical) in the area |
| Risk of direct investment | Time reference 1990–1991: (ref. Institutional Investors) in the top list of Credit Country ratings 1991. Time reference 1995–1997: (ref. Planning Review) Risk Rating for direct investment A+, A | Time reference 1995–1997: (ref. Planning Review) Risk Rating of direct Investment A−, B+, B | Time reference 1990–1991: (ref. Institutional Investors) In median position of the list of Credit Country rating 1991. Time reference 1995–1997: (ref. Planning Review) Risk rating for direct investment B−, C+, C | Time reference 1995–1997: (ref. Planning Review) Risk Rating for direct investment C−, D+ | Time reference 1990–1991: (ref. Institutional Investors) At the bottom of the list of Credit Country rating 1991. Time reference 1995–1997: (ref. Planning Review) Risk for direct investment D, D− |
| Current account/GDP | >3% | 3% ≫ 1% | 1% ≫ 0% | 0% ≫ −2% | −2% > |
| Inflation Rate | <2% | 2% ≪ 4% | 4% ≪ 7% | 7% ≪ 10% | 10% < |
| GDP per capita | >5000$ | 5000$ ≫ 3000$ | 3000$ ≫1500$ | 1500$ ≫ 500$ | 500$ > |
| Growth rate of GDP | >4% | 4% ≫ 3% | 3% ≫ 2% | 2% ≫ 1% | 1% > |

**Table 10.2** Pairwise comparison matrix components of the financial economic criteria

|                          | Risk of direct investment | Current account/ GDP | Inflation rate | GDP per person | Growth rate of GDP | Priorities |
|--------------------------|---------------------------|----------------------|----------------|----------------|--------------------|------------|
| Risk of direct investment | 1                         | 6                    | 3              | 3              | 1                  | 0.353      |
| Current account/ GDP     |                           | 1                    | 1/2            | 1/1            | 1/6                | 0.058      |
| Inflation rate           |                           |                      | 1              | 1              | 1/3                | 0.118      |
| GDP pro capite           |                           |                      |                | 1              | 1/3                | 0.118      |
| Growth rate of GDP       |                           |                      |                |                | 1                  | 0.353      |

First present conditions are more relevant and pressing than long term and uncertain evidence, and secondly, for "Turmoil" there is a significant amount of information supplied by the specialized press and/or ratings institutes, while the importance of "Strategic relevance" requires expert knowledge.

Evaluation of the elements under "Economic and financial" factors appears in Table 10.2.

The resulting priorities show that:

- "Risk of Direct Investment" and "GDP Growth" are equally important and together these two criteria dominate the remaining criteria.
- "Inflation Rate" and "GDP per Person" are next in priority and are significantly less important than the previous two.
- "Balance Account/GDP" has the lowest priority.

These results mean that in order for a country to be attractive it should be in the expansion phase and present low risk.

The AHP proved useful in creating intensity ratings for the next stage because for most of the criteria there were no data for rating the alternatives and one had to resort to the use of judgments. The resulting priorities are related to the relevance given to the scale. For example, "Risk of Direct Investment" had no economic indicator to evaluate the countries. Therefore, we had to create a scale of relative intensities for the criteria and then used that to rate the countries. Here we did not have the means to conduct and combine diverse analyses and to produce a numerical outcome to be used in the model.

The pairwise comparison matrices for the five rating grades under each second level criterion appear in Table 10.3a–g. The local priorities represent the relative importance of a particular rating with respect to the parent criterion. It should be noted that the differences in priorities decrease as one moves from the two highest rating grades (High and Medium High) to the two lowest ones (Medium Low and Low) for nearly all seven second level criteria. Exceptions are "Risk of Direct Investment" and "Inflation Rate" for which it appears more correct that there should be significant change from Medium High to Medium.

**Table 10.3** Pairwise comparison matrix for the rating grades

**(a) turmoil**

|  | High | Medium high | Medium | Medium low | Low | Priorities |
|---|---|---|---|---|---|---|
| High | 1 | 1.5 | 3 | 5 | 7 | 0.429 |
| Medium–high |  | 1 | 1.5 | 3 | 5 | 0.268 |
| Medium |  |  | 1 | 1.5 | 3 | 0.156 |
| Medium–low |  |  |  | 1 | 1.5 | 0.091 |
| Low |  |  |  |  | 1 | 0.057 |

**(b) Strategic relevance**

|  | High | Medium high | Medium | Medium low | Low | Priorities |
|---|---|---|---|---|---|---|
| High | 1 | 1.5 | 3 | 5 | 7 | 0.429 |
| Medium–high |  | 1 | 1.5 | 3 | 5 | 0.268 |
| Medium |  |  | 1 | 1.5 | 3 | 0.156 |
| Medium–low |  |  |  | 1 | 1.5 | 0.091 |
| Low |  |  |  |  | 1 | 0.057 |

**(c) Risk of direct Investment**

|  | High | Medium high | Medium | Medium low | Low | Priorities |
|---|---|---|---|---|---|---|
| High | 1 | 1.5 | 3 | 5 | 9 | 0.409 |
| Medium–high |  | 1 | 1.8 | 4 | 9 | 0.295 |
| Medium |  |  | 1 | 2.5 | 7 | 0.117 |
| Medium–low |  |  |  | 1 | 5 | 0.09 |
| Low |  |  |  |  | 1 | 0.029 |

**(d) Balance account/GDP**

|  | >3% H | 3% $\gg$ 1% M H | 1% $\gg$ 0% M | 0% $\gg$ −2% M L | −2% > L | Priorities |
|---|---|---|---|---|---|---|
| >3% H | 1 | 2 | 4 | 7 | 9 | 0.460 |
| 3% $\gg$ 1% M H |  | 1 | 3 | 5 | 8 | 0.299 |

(continued)

**Table 10.3** (continued)

(d) Balance account/GDP

|  | >3% H | 3% ≫ 1% M H | 1% ≫ 0% M | 0% ≫ −2% M L | −2% > L | Priorities |
|---|---|---|---|---|---|---|
| 1% ≫ 0% M |  |  | 1 | 3 | 6 | 0.144 |
| 0% ≫ −2% M L |  |  |  | 1 | 3 | 0.065 |
| −2% > L |  |  |  |  | 1 | 0.032 |

(e) Inflation rate

|  | <2% H | 2% ≪ 4% M H | 4% ≪ 7% M | 7% ≪ 10% M L | 10% < L | Priorities |
|---|---|---|---|---|---|---|
| <2% H | 1 | 1.5 | 3 | 6 | 9 | 0.409 |
| 2% ≪ 4% M H |  | 1 | 3 | 5 | 7 | 0.324 |
| 4% ≪ 7% M |  |  | 1 | 3 | 6 | 0.159 |
| 7% ≪ 10% M L |  |  |  | 1 | 4 | 0.076 |
| 10% < L |  |  |  |  | 1 | 0.033 |

(f) GDP per person

|  | >5000$ H | 5000$ ≫ 3000M H | 3000$ ≫ 1500M | 1500$ ≫ 500% M L | 500$ > L | Priorities |
|---|---|---|---|---|---|---|
| >5000$ H | 1 | 2 | 4 | 7 | 9 | 0.460 |
| 5000$ ≫ 3000M H |  | 1 | 3 | 5 | 8 | 0.299 |
| 3000$ ≫ 1500M |  |  | 1 | 3 | 6 | 0.144 |
| 1500$ ≫ 500M L |  |  |  | 1 | 3 | 0.065 |
| 500$ > L |  |  |  |  | 1 | 0.032 |

(g) Growth rate of GDP

|  | >4% H | 4% ≫ 3% M H | 3% ≫ 2% M | 2% ≫ 1% M L | 1% >L | Priorities |
|---|---|---|---|---|---|---|
| >4% H | 1 | 1.5 | 2.5 | 5 | 9 | 0.460 |
| 4% ≫ 3% M H |  | 1 | 1.5 | 3 | 9 | 0.299 |
| 3% ≫ 2% M |  |  | 1 | 2 | 7 | 0.144 |
| 2% ≫ 1% M L |  |  |  | 1 | 7 | 0.065 |
| 1% > L |  |  |  |  | 1 | 0.032 |

**Table 10.4**  Basic map for countries positioning

```
        L          M L             M              M H            H
   H                                                                    H
                  RELEVANT FOR                  WITHIN the MARKET
                  the MARKET
                                                countries able to host:
                  interesting for:               - design
                  - education                    - decision
                  - historical relevance         - production
                                                 - consumption
                  not only production
                  and consumption
                                                                              political factors
   M H                                                                  M H


   M                                                                    M
                                ATTRACTED TO and BY the MARKET
                                characterized by:
                                - increasing share of the production cycle
                                - increasing attractiveness as final market
   M L                                                                  M L
                  AT the Border of the MARKET

                  mainly involved in production
                  and supply of raw materials


   L                                                                    L
        L          M L             M              M H            H
                        economic - financial factors
```

Two axes were chosen to represent "Political" and "Economic and Financial" criteria. The five rating intensities are positioned along each axis in increasing priority order. In synthesizing the local priorities established above, the rating scales can be grouped into four segments with respect to each of the two major criteria (see Table 10.4). The result is that the intersection of the two groupings leads to a division of each segment of one into four subsegments.

Each of the segments and subsegments has a unique size. Here the AHP analysis offers a different approach than the commonly used procedure called the Boston Consulting Group matrix representation. Segment uniqueness is a feature provided by the AHP to more accurately set the values of the five rating intensities which is not possible in other methods known to us. Table 10.4 portrays an interpretation of the four major segments in terms of overall market attractiveness.

## 10.4  Country Ratings

Countries examined in the study fall in six geographical regions:

- Latin America
- Mediterranean Africa
- Middle East

- Eastern Europe
- Indian Subcontinent, and
- Far East

For historical reasons, the first four regions represent the reference market for Italian companies exporting industrial plants and infrastructures. The last two are included because in the last decade they have come to represent growing opportunities for Italian exports. There are also other reasons than historical ones that necessitate tracing countries according to recent trends, to attract some of them into influence zones, whose leaders are:

- U.S.A.;
- E.E.C.;
- Japan.

The countries included in this analysis (see Table 10.5) are the more important ones in each region. They belong to the well known category of Developing or Newly Industrialized Countries. Some relevant countries which one might expect to find in Table 10.5, are missing mostly because of lack of complete data and/or because they are in the process of splitting into sovereign states. South Africa and Nigeria, which do not belong to the geographical regions mentioned above, are included for their relevance to Italian companies. The country list reflects the fact that the company originating the study is based in Italy and is dependent on its government's political and cultural relationship with other nations. Had the company been French instead of Italian, the list could have been different, including some countries in Central Africa.

The model evaluates each country under each of the seven second level criteria. The evaluation is made by assigning the most appropriate rating intensity to a country's "performance" in each of the "performance" categories. The most appropriate rating intensity is determined by the best available quantitative and qualitative information. The study considers two time reference periods: 1990–1991 and 1995–1997 (Table 10.6).

The sources of financial and economic information for each of the reference periods are the following:

Period 1990–1991

- "Risk of Direct Investment" is based on rating data [1];
- "Current Account/GDP" is based on data from the "World Bank Annual Report";
- "Inflation Rate" is based on the annual report on risk forecast published by Planning Review;
- "GDP per Person" was derived using data relating GDP and Population [12];
- "GDP Growth" is based on data from the annual report of Planning Review.

Period 1995–1997

- "Risk of Direct Investment" is based on rating data of the annual report of Planning Review;

**Table 10.5** Country ratings 1990–1991

| Time reference 1990/1991 Local priorities | Political factors | | Economic-financial factors | | | | | Political evaluation | Economic financial evaluation |
|---|---|---|---|---|---|---|---|---|---|
| | Turmoil 83% | Strategic relevance 17% | Risk of direct investment 35% | Currect account/ GDP 6% | Inflation rate 12% | GDP per person 12% | Growth rate of GDP 35% | | |
| Algeria | M | MH | M | L | L | M | M | 40.8 | 35.8 |
| Argentina | M | M | M | ML | L | H | M | 36.5 | 32.6 |
| Bangladesh | M | ML | L | L | M | L | L | 33.9 | 11.0 |
| Bolivia | ML | L | L | L | L | ML | M | 19.8 | 21.5 |
| Brazil | M | M | ML | M | L | ML | L | 36.5 | 16.9 |
| Bulgaria | M | L | L | ML | L | ML | L | 32.4 | 8.9 |
| Chile | M | L | M | L | L | MH | L | 32.6 | 57.9 |
| China | MH | MH | MH | ML | ML | L | H | 62.5 | 63.2 |
| Colombia | ML | ML | ML | M | L | ML | H | 21.2 | 46.8 |
| Cuba | H | MH | L | ML | ML | ML | ML | 93.8 | 17.0 |
| Ecuador | ML | ML | L | L | L | ML | ML | 21.2 | 15.3 |
| Egypt | M | MH | ML | L | L | ML | H | 40.6 | 45.2 |
| Hong Kong | H | MH | H | ML | ML | H | H | 93.8 | 85.1 |
| Hungary | M | M | MH | L | L | MH | L | 36.5 | 36.1 |
| India | M | M | MH | L | ML | L | H | 36.5 | 62.7 |
| Indonesia | ML | M | MH | ML | ML | ML | H | 23.7 | 64.1 |
| Iran | ML | MH | ML | ML | ML | L | MH | 40.8 | 34.9 |
| Iraq | H | MH | M | ML | M | M | ML | 28.1 | 30.1 |
| Malaysia | M | M | H | ML | MH | M | H | 89.4 | 62.6 |
| Mexico | MH | M | M | L | L | MH | M | 58.2 | 38.3 |
| Morocco | M | M | ML | L | M | ML | MH | 36.5 | 37.7 |
| Nigeria | ML | M | L | ML | L | L | H | 23.7 | 39.6 |
| Pakistan | ML | M | ML | L | ML | L | H | 23.7 | 45.5 |

**Table 10.5** (continued)

| Time reference 1990/1991 | Political factors | | Economic-financial factors | | | | | Political evaluation | Economic financial evaluation |
|---|---|---|---|---|---|---|---|---|---|
| Local priorities | Turmoil 83% | Strategic relevance 17% | Risk of direct investment 35% | Current account/ GDP 6% | Inflation rate 12% | GDP per person 12% | Growth rate of GDP 35% | | |
| Peru | ML | ML | L | MH | M | ML | L | 21.2 | 15.6 |
| Philippines | ML | M | ML | L | ML | ML | H | 23.7 | 46.4 |
| Poland | M | M | ML | L | L | M | L | 36.5 | 15.4 |
| Russia | M | MH | M | ML | L | ML | L | 40.8 | 21.3 |
| Saudi Arabia | H | H | H | L | MH | H | MH | 100.0 | 80.5 |
| Singapore | MH | M | H | H | MH | H | H | 58.2 | 97.6 |
| South Africa | MH | H | M | MH | L | MH | ML | 68.8 | 36.8 |
| South Korea | MH | MH | H | MH | M | H | H | 82.5 | 90.7 |
| Syria | MH | MH | L | M | L | ML | H | 62.5 | 41.6 |
| Taiwan | H | M | H | H | MH | H | H | 89.4 | 97.6 |
| Thailand | M | MH | H | L | M | M | H | 40.8 | 77.5 |
| Turkey | M | H | MH | M | L | M | H | 47.1 | 65.9 |
| Venezuela | M | M | M | H | L | M | MH | 36.5 | 49.3 |
| Vietnam | H | M | L | ML | L | L | MH | 89.4 | 29.5 |

**Table 10.6** Country ratings 1995–1997

| Time reference 1990/1997 | Political factors | | Economic-financial factors | | | | | Political evaluation | Economic financial evaluation |
|---|---|---|---|---|---|---|---|---|---|
| Local priorities | Turmoil 83% | Strategic relevance 17% | Risk direct investment 35% | Current account GDP 6% | Inflation rate 12% | GDP person 12% | Growth rate GDP 35% | | |
| Algeri | M | M | ML | L | L | M | H | 23.7 | 47.1 |
| Argentin | M | M | M | ML | L | H | H | 36.5 | 64.3 |
| Banglades | M | ML | L | L | M | L | ML | 33.9 | 18.0 |
| Bolivi | ML | L | L | L | L | ML | M | 19.8 | 21.5 |
| Brazi | M | M | ML | M | L | M | M | 36.5 | 30.1 |
| Bulgari | M | L | M | L | L | MH | H | 32.6 | 22.1 |
| Chil | M | L | M | L | L | MH | H | 32.6 | 57.9 |
| Chin | MH | MH | M | M | ML | L | H | 62.5 | 64.3 |
| Colombi | ML | ML | L | M | L | ML | H | 21.2 | 41.6 |
| Cub | MH | M | ML | ML | M | ML | ML | 58.2 | 24.5 |
| Ecuado | ML | ML | L | L | L | ML | M | 21.2 | 21.5 |
| Egypt | m | M | L | ML | L | ML | M | 36.5 | 21.9 |
| Hong | MH | H | MH | MH | ML | H | H | 68.8 | 78.7 |
| Hungar | MH | ML | MH | MH | L | MH | M | 55.6 | 53.0 |
| Indi | M | MH | M | L | ML | ML | H | 40.8 | 52.6 |
| Indonesi | ML | M | M | ML | ML | ML | H | 23.7 | 54.2 |
| Ira | M | MH | ML | M | ML | L | H | 40.8 | 46.8 |
| Ira | M | M | L | ML | L | M | ML | 36.5 | 17.7 |
| Malaysia | H | M | MH | L | M | MH | H | 89.4 | 71.4 |
| Mexic | MH | M | MH | L | L | MH | H | 58.2 | 67.8 |
| Morocc | M | M | ML | L | M | ML | MH | 36.5 | 37.7 |
| Nigeri | ML | M | L | M | L | L | MH | 23.7 | 37.7 |
| Pakistan | ML | M | L | L | L | L | H | 23.7 | 29.6 |

**Table 10.6** (continued)

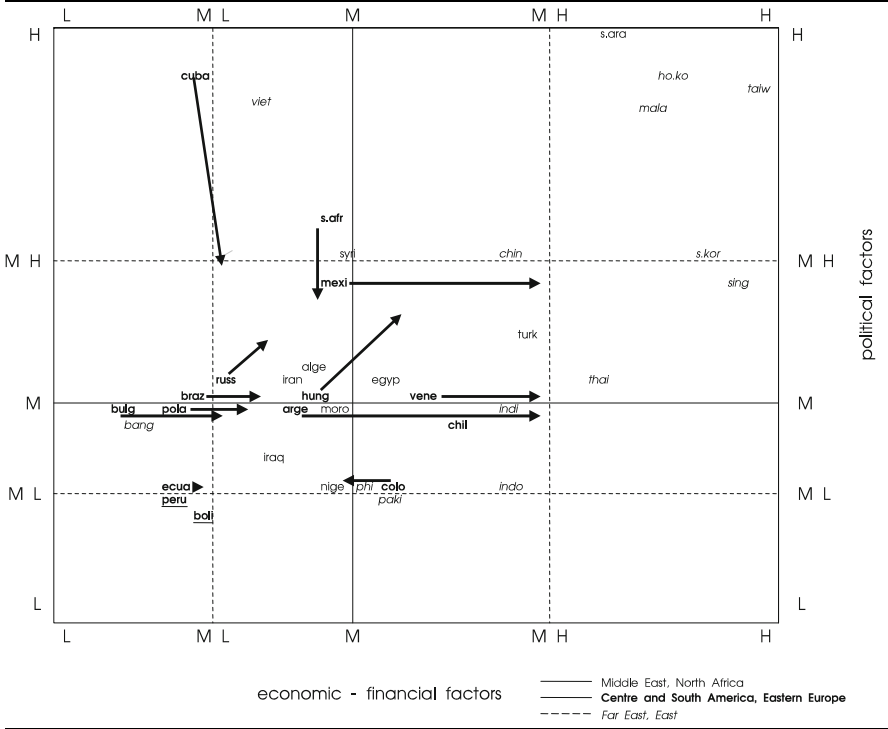| Time reference 1990/1997 Local priorities | Political factors | | Economic-financial factors | | | | | Political evaluation | Economic financial evaluation |
|---|---|---|---|---|---|---|---|---|---|
| | Turmoil 83% | Strategic relevance 17% | Risk direct investment 35% | Currect account GDP 6% | Inflation rate 12% | GDP person 12% | Growth rate GDP 35% | | |
| Per | ML | ML | L | L | L | ML | ML | 21.2 | 15.3 |
| Philippine | ML | M | L | L | L | ML | MH | 23.7 | 29.0 |
| Polan | M | M | M | ML | L | M | ML | 36.5 | 30.1 |
| Russi | M | H | M | ML | L | ML | ML | 47.1 | 28.3 |
| Saudi | H | H | MH | L | M | H | H | 100.0 | 77.3. |
| Singapor | H | M | H | MH | MH | H | H | 89.4 | 95.3 |
| South | M | H | L | M | L | MH | MH | 47.1 | 35.9 |
| South | MH | H | H | MH | ML | H | H | 58.2 | 85.1 |
| Syri | MH | MH | L | M | L | ML | M | 62.5 | 23.0 |
| Taiwa | H | M | H | H | MH | H | H | 89.4 | 97.6 |
| Thailan | MH | MH | H | L | M | M | H | 62.5 | 77.5 |
| Turke | M | MH | MH | M | L | M | H | 40.8 | 65.9 |
| Venezuel | M | M | M | H | L | MH | H | 36.5 | 63.9 |
| Vietna | H | M | L | ML | L | L | H | 89.4 | 39.6 |

**Table 10.7** Map—reference period 1990–1991
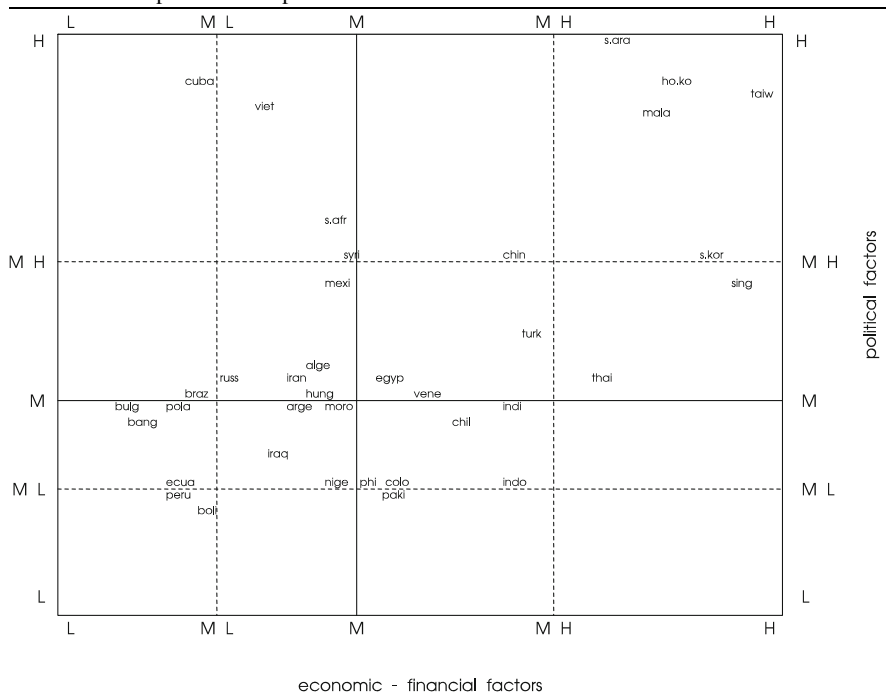


- "Current Account/GDP" is derived from the annual report of Planning Review (Current Account) and on World Bank Report data (forecast of GDP value);
- "Inflation Rate" is based on the annual report on risk forecast published by Planning Review;
- "GDP per Person" was derived using data relating GDP and Population of the World Bank Annual Report;
- "GDP Growth" is based on data of the annual report of Planning Review.

For the two reference periods, the country ratings for the two subcriteria of the political criterion are based on the annual report of Planning Review for "Turmoil" and on subjective judgments for "Strategic Relevance".

## 10.5 Positions of Countries

Based on the rating data of the countries, a market attractiveness map is developed in Table 10.4. The priority distribution of countries for the 1990–1991 time period appears in Table 10.7. Table 10.8 represents the change in priorities of the countries from the first to the second time period according to region. Table 10.9 shows the priority distribution of the countries for the 1995–1997 time period.
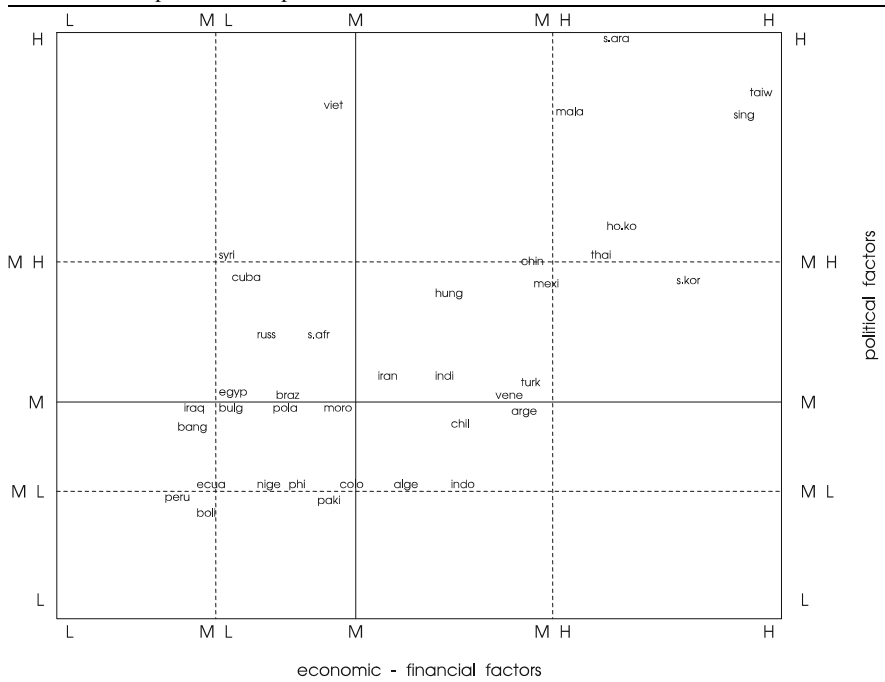
**Table 10.8**  Shifting in countries map position reference time period 1990–1991

cuba

viet

s.ara

ho.ko

taiw

mala

s.afr

syri                    chin                    s.kor

mexi

sing

turk

alge
iran
russ
braz      iran  hung  egyp  vene        thai
bulg  pola  arge  moro              indi
bang
chil

iraq

ecua                    nige  phi  colo      indo
peru                          paki
boli

political factors

economic - financial factors

————— Middle East, North Africa
————— Centre and South America, Eastern Europe
– – – – Far East, East

The final maps suggest the following ideas:

- Most countries fall along a diagonal starting from the lowest point (L–L) to the highest one (H–H) on both main criteria. This indicates that there is a possible correlation between the economic-financial and the political factors;
- The highest subquadrant (MH–MH, H–H) contains the Far Eastern Countries. The accuracy of this outcome is commonly supported by reports made in literature specializing in political and economic trends [6]. The Far East could be the one area in which newcomer countries are entering in a continental area market. This fact is perceived by commentators to be one of the major competitive advantages of Japan who is succeeding (where Europe and the USA have problems) in creating a market development area. The position of Malaysia and Hong Kong is worsening due to a decrease in their rating on Risk of Direct Investment. China is moving toward this subquadrant slowly but very significantly. Saudi Arabia is also included in this subquadrant, but its uniqueness (no other significant country of the area is as close a position on the map) indicates a possible long term instability.
- In the second highest subquadrant (M–M, MH–MH), there are countries that appear to shift their position on the map between the two reference periods. Turkey, perceived to be an interesting newcomer [10], shows a stable

**Table 10.9**  Map—reference period 1995–1997

```
        L         M L        L          M              M H           H
   H ┌──────────────┬─────────────────────┬──────────────────────┐ H
     │              │                     │         s.ara         │
     │              │                     │                       │
     │              │                     │                 taiw  │
     │              │      viet           │   mala          sing  │
     │              │                     │                       │
     │              │                     │                       │
     │              │                     │         ho.ko         │
 M H ┤──────────────┼─────────────────────┼── chin ── thai ───────┤ M H
     │         syri │                     │        mexi           │
     │         cuba │                     │               s.kor   │
     │              │                     │                       │
     │      russ    s.afr                 │   hung                │
     │              │                     │                       │
     │         egyp │         iran  indi  │       turk            │
   M ┤── iraq bulg braz pola moro ────────┼── vene ───────────────┤ M
     │   bang       │              chil   │       arge            │
     │              │                     │                       │
     │      ecua nige phi  colo  alge  indo                       │
 M L ┤── peru ──────┼── paki ─────────────┼───────────────────────┤ M L
     │   boli       │                     │                       │
     │              │                     │                       │
   L │              │                     │                       │ L
     └──────────────┴─────────────────────┴───────────────────────┘
        L         M L        M              M H           H
                 economic - financial factors
```

                                                                    political factors

economic-financial position. It is a country moving west by requesting EEC
membership, and east toward the ex-USSR republics with Turkish languages.
Hungary and Mexico are entering this subquadrant, both being close to other
continental markets (the European and the North American). Mexico and other
Latin American countries (notably Argentina) are also moving close to this
subquadrant. This is an indication of significant movements in the American
continent whose central core is NAFTA (North American Free Trade Agree-
ment), represented in the literature [4] as a possible strategic initiative to
counter the EEC. India is also moving to this subquadrant and is reported to be
the western reference of the far eastern continental area market.

- To the left of the above mentioned subquadrants is the ML–M corner where one
  finds Russia and Poland. The position of Russia especially in the 1995–1997
  reference frame is worthy of a short observation. It is positioned in that grouping
  in Table 10.4 because it is "relevant for the market for its educational and
  historical relevance—not just for production and consumption." It is interesting
  to note that the specialized press [5] has described Russia as "very attractive
  because high-tech companies could hire the best Russian experts at low cost in
  the fields of fiber optics, nuclear physics and satellite technology.
- At the top left side of the map one finds two countries, Cuba and Vietnam. These two
  countries are expected to have a transition phase with less political and economic

troubles than Eastern Europe. Vietnam is considered by the specialized press [5] to be very interesting because of its skilled, disciplined and cheap labor force.

- Below the main diagonal there is a set of countries (Indonesia, Colombia, Pakistan, Philippines, and Nigeria) that have a medium economic-financial position but a poor political position. Within this group there are two countries, Columbia and Pakistan, which because of drug trade and investment in the nuclear sector may become a serious cause of instability in the North–South relationship.
- At the end of the main diagonal there are three Latin American countries (Ecuador, Peru, and Bolivia) which even without a negative environment in Latin America do not show clear signs of progress.

## 10.6  Conclusion

The observations made above on the countries' positions, show the effectiveness of the AHP in discriminating between different situations. But there also remain a number of countries in the center of the map that may need further separation, perhaps by expanding the second level criteria. Such work is in progress. It requires user interface modification of software implementation, combining the hierarchic composition and its resulting map. The decision maker is given the opportunity to add criteria, modify their weights and note the resulting map. This modification could allow a fine tuning of the model which would facilitate sensitivity analysis. Sensitivity analysis is particularly needed to deal with political change. It is believed that in the current environment, "Turmoil" is more important than "Strategic relevance". It seems important to explore changes in countries' positions by shifting emphasis from the present situation ("Turmoil") to the long term trend ("Strategic Relevance"). Similarly, by scrutinizing the economic-financial side of the model, it appears promising to assign higher priority to indicators of richness and to the competitive position (GDP per Person, Balance Account/GDP) to obtain greater resolution at the center of the map.

The outcome of this study has been well received within the company with interest being shown by managers through their participation. They began with the final map and worked backwards to the structure of the model making suggestions for further improvements. The map provides evidence for the validity of the impact of macroenvironmental changes on international business and it is a valid support for establishing a connection between scanning the macroenvironment and perceptions of strategic issues [8].

## Bibliography

1. Credit Country Rating (1991) Institutional Investor, 1991
2. David RF (1991) Concepts of Strategic Management. Maxwell McMillan International Edition, 1991

3. Marescal B, Brans JP (1991) Geometrical representation for MCDM. Eur J Oper Res 54:6
4. Le Monde Diplomatique (1993) no. 486, March 1993
5. Le Monde Diplomatique (1993) no. 469, April 1993
6. Le Monde Diplomatique (1993) no. 169, April 1993
7. aa.vv., Monografic issuesissues on Scenarios (1992) *Planning Review*, March–April, April June 1992
8. Morecroft JDW (1992) Executive knowledge models and learning. Eur J Oper Res 56:1
9. Roy B (1990) The outranking approach and the foundations of Electre methods. In: Bana e Costa CA (ed) Readings in multiple criteria decision aid. Springer, New York
10. Rullani E (1992) due problemi irrisolti per il capialsimo industriale negli anni novanta. Economia e Politica Industriale 74:76
11. Saaty TL (1990) Multicriteria Decision Making: The Analytic Hierarchy Process. RWS Publications, 4922 Ellsworth Avenue, Pittsburgh
12. World Bank Annual Report (1993)