A NOTE ON THE MANAGERIAL RELEVANCE
OF INTERDEPENDENCE

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Abstract. The concept of interdependence between countries is analyzed from the view-
point of a profit-making firm. The author shows how the level of interdependence becomes
important for risk-avoiding, international sourcing and marketing decisions. By implica-
tion, the manager’s most useful option is one which includes not only varying degrees of
but also positive and negative types of interdependence.

Political scientists have produced a considerable body of literature on the
degree to which national states are interdependent, mutually dependent, or inter-
related. Most of this research is addressed, however, to governmental decision-
makers. This note attempts, instead, to relate the academic concepts and analyses
to managerial decision making in international business.

Concepts of interdependence vary considerably from author to author depending
upon the particular purposes of the analysis. The concept that is most relevant in
a managerial setting is similar to the vertical interdependence concept employed
by Rosecrance et al. [1977]:

There are two different concepts and two sets of measures of interdependence. The
size of the transactions between two societies is horizontal interdependence. . . Ver-
tical interdependence, in contrast, shows the economic response of one economy to
another, in terms of changes in factor prices . . . High horizontal interdependence is
the necessary (but not sufficient) condition of high vertical interdependence (pp. 428–
429).

There should be one modification, however. Rosecrance et al. deal only with in-
terdependence that has positive effects in the same direction, whereas the pres-
ent paper integrates their treatment with the approach taken by Keohane and Nye
[1977], who do not limit interdependence to situations of mutual benefit. As will
be seen, the cases of negative interdependence carry, in fact, particular rele-
ance for the managerial decision-maker.

To set the stage for the managerial interpretation of interdependence it is useful
to consider briefly the strategic decision-making activities of the typical interna-
tional manager, particularly in marketing, who must determine at what point in-
terdependence enters. The proposition here is that interdependence serves as an
indicator of the risk trade-offs that are possible between several countries. Gen-
erally, the figures generated by the decision-maker when dealing with the market-
ing problems represent very uncertain quantities. Not only do sales projections
of any market involve economic uncertainties, for example, but when foreign mar-
kets are analyzed, political risks need also be taken into account. Under some cir-
cumstances it might be possible to ignore these complications and simply compare

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different countries' expected sales figures as if they were known for a fact. In other cases—notably where the decision-maker is risk averse—the uncertainty of each country's projected future sales figure will directly affect his choice.

In risk averse cases a market with a lower, but more secure, sales prediction seems often preferable to a market with a higher, but uncertain, one. In addition, in cases where more than one country can be traded with simultaneously by the firm, it is often sensible to export to countries whose economies move in opposite directions (countercyclically, for example). With such differences between the countries, one can expect that forces which affect one country adversely (or positively) might not affect the other countries included in the same way, and these markets would therefore be able to counterbalance the ups and downs encountered in the first country. This desirable difference can be translated into maximally low vertical interdependence between the supplying countries selected. A manager can obtain this diversification protection from studying interdependencies between countries.

A "Portfolio" of Countries

The proposed interpretation of interdependence is related directly to the so-called "portfolio theory" that was developed for financial investment analysis [Markowitz 1952] and used also in an international finance setting [Rugman 1976]. The measure employed in portfolio analysis corresponding to the interdependence notion is the covariance (or correlation) between alternative stock options, which measures the degree to which changes in price of one asset are reflected in the price of the other asset.

Similarly, the measures of interdependence most useful in the portfolio context are the correlational measures proposed by Rosecrance et al. [1977]: "At least two measures as such 'vertical' interdependence are obvious: (1) a correlation of the movement of factor price indices between the two societies; and (2) a correlation of the changes in such movement" (p. 428). Thus the Rosecrance et al. framework—the conceptual development of vertical interdependence and the correlational indicators of interdependence—fits very neatly with the portfolio approach argued for here. The framework needs to be extended, however, by allowing, also, negative correlations. The augmented approach proposed here allows for the fact that interdependencies could be "negative" in the sense that the changes observed in the indexes are not necessarily of mutual benefit. This stand is very logical from a managerial perspective: The diversification gains result from the fact that what one loses in Country A can be recouped from Country B. In many cases those developments of a negative nature in Country A are a direct reflection and consequence of the upswing in Country B, and vice versa. Newspaper reports indicate that some people in political power see the interdependence between Japan and the U.S. in precisely this adversary framework. An even better example is the interdependence between the countries in the so-called "North-South dialogue." The present framework encourages and allows the manager to employ the correlational measures of interdependence, whether positive, negative, or zero, for the development of a diversified portfolio of countries.

A GLOBAL STRATEGY?

Is it realistic to assume that the proposed portfolio approach can be extended to a global strategy for the diversifying firm bent on conquering world markets? Although in principle there is nothing that inherently prohibits such an application of the model, at least two factors argue against such a strategy. First, even if the analysis is limited to exports (avoiding the direct foreign investment alternative), there are entry costs associated with identifying and organizing the representatives, import agents, distribution channels, and promotional support necessary for penetration of new markets. The costs involved in entering several markets...