

11-2012

# Activity-based Criteria on Internationalization

Kamal Fatehi

*Kennesaw State University, kfatehi@kennesaw.edu*

Mohsen Sharifi

*California State University - Fullerton*

Follow this and additional works at: <https://digitalcommons.kennesaw.edu/facpubs>



Part of the [Management Sciences and Quantitative Methods Commons](#)

---

## Recommended Citation

Fatehi, K., & Sharifi, M. (2012). Activity-based Criteria on Internationalization.

This Article is brought to you for free and open access by DigitalCommons@Kennesaw State University. It has been accepted for inclusion in Faculty Publications by an authorized administrator of DigitalCommons@Kennesaw State University. For more information, please contact [digitalcommons@kennesaw.edu](mailto:digitalcommons@kennesaw.edu).

## **ACTIVITY-BASED CRITERIA ON INTERNATIONALIZATION**

Kamal Fatehi, Kennesaw State University  
kfatehi@kennesaw.edu

Mohsen Sharifi, California State University, Fullerton  
mshrifi@fullerton.edu

### **ABSTRACT**

The world economy is moving ever faster toward a highly interdependent state in which international business is creating a global market. Often, in this environment, growth or even survival of a business hinges on its successful internationalization. Therefore, firms need to ask the vital question of how internationalized are their operations? To answer such question requires, among other things, measuring the extent of global involvement. This paper is an attempt toward constructing an internationalization measure by using financial performance and market engagement data outside firm's home country.

### **ACTIVITY-BASED CRITERIA ON INTERNATIONALIZATION**

There is no exaggeration if we claim that we have arrived at the "global village." In fact, globalization, the advanced phase of internationalization is well underway (Author, 2008). However, this phase is marked with a note of caution and a reminder. The caution note warns us that there are un-anticipated outcomes to globalization such as heightened security concerns due to the rising acts of violence and terror instigated by, among other things, the stark awareness of value differences. These value differences are brought forth by globalization forces that threaten the possibility of preserving separate nationality or ethnic identities and the prospects of assimilation of all by the forces of modernity. The isolation of cultures, nations, and markets of the previous period has been replaced by close interaction, intermingling and integration among them, actually or virtually.

The reminder is to shake us up from the comfortable complacency that is an attribute of success. The past technological progress in product and process developments has lulled firms from industrialized nations into the false assumption that past success can continue un-abated into the future. This is far from the true reality. The challenge to this comfortable position comes from business corporations from emerging markets. Business enterprises from emerging markets are internationalizing at a fast pace. These firms pose formidable challenges to existing rivals from industrialized countries. In these markets that are home to the majority of the world population, the emerging global firms have an advantage of being insiders. These are the future firms in the future markets. These markets are growing at much faster rates than their counterparts in

developed countries. To grow and prosper, regardless of their geographic locations, firms need to participate in supplying these markets. This means going international and becoming a part of the network of global business.

Globalization and vanishing national borders have influenced almost everything that we do particularly in business organizations. Although conflicts between nations have not disappeared, commonality of interest among them in creating a better life for their people, by and large, is amply evident. This commonality of interest, in part, is manifested through international business. While national governments are obligated to take a nationalistic posture, business organizations are slowly but inexorably forced to transcend national boundaries. Businesses have the difficult task of integrating the varied values of their diverse workforce in establishing a vision and setting goals for the whole corporation. They have to manage people whose values and expectations are dissimilar. The responsibility of managing across national borders and competing in a culturally diverse world can be satisfied if these managers assume a multinational/multicultural perspective.

The world economy, particularly with the advent of the Internet, is moving ever faster toward a highly inter-related, interdependent state, in which no nation will be immune from the forces of the global market. Successfully managing a business in such a milieu requires being a part of the international market. Therefore, firms should be introspective and ask the vital question of how internationalized are our operations? To answer such a question requires, among other things, measuring the extent of internationalization of a firm. Such a measurement provides useful information about where a firm is in terms of expansion into foreign markets, how far it has to go, what opportunities it can exploit, and how should it prepare for such a journey. This paper is an attempt toward constructing such a measure.

While measuring the degree of internationalization of firms has been the subject of a number of studies, there has been no consensus on the variables chosen for the measurement. Some have used one single variable while others have opted for multiple variables, claiming that an analysis based on a single variable is susceptible to systematic error due to researchers' interpretation of the process (Ericsson and Herbert, 1980), would be subject to measurement error (Campbell and Fisk, 1959; Schoenfeldt, 1984), and increases the probability of Type I or Type II error (Bagozzi, Youjae and Phillips, 1991).

To estimate the degree of internationalization of firms (DOI), various proxies have been used. The proxies for DOI included foreign subsidiaries' sales as a percentage of total sales (Daniel and Bracker, 1989; Geringer, Beamish and daCosta, 1989; Langendijk, Hagman and Unlu, 2000; Lenn and Ramaswamy, 1999; Stopford and Dunning, 1983), and foreign assets as a percentage of total assets (Daniel and Bracker, 1989; Langendijk, Hagman and Unlu, 2000; Lenn and Ramaswamy, 1999), with the addition of international dispersion of subsidiaries (Langendijk, Hagman and Unlu, 2000; Lenn and Ramaswamy, 1999; Stopford and Wells, 1972) to differentiate extensive internationalization from limited internationalization. In an attempt to

broaden the scope of measuring firms' internationalization, the study by Sullivan (1994) suggested that an index measure of internationalization (such as ours) is superior to single – variable measure. Others, (e.g. Ramaswamy, et. al, 1996) expanded on this concept by raising concerns on the issue of psychometric, validity and reliability. But accounting ratios, such as return on investment (ROI) or return on assets (ROA) - similar to those employed in the present study - are not subject to those concerns. Sullivan (1994) employed foreign sales as percentage of total sales, export sales as a percentage of total sales, foreign profit as a percentage of total profit, and foreign assets as a percentage of total assets. Sullivan also used research and development intensity and advertising intensity as additional measures. In the same vein, Hsu and Boggs (2003) utilized foreign sales as percent of total sales.

## **MEASURING INTERNATIONALIZATION**

A firm is considered internationalized if it engages in foreign activities. This simple description does not differentiate among various degrees of internationalization. However, such a firm is considered very internationalized, if these activities constitute a significant portion of its total activities (Ietto-Gillies, 1998). This differentiation is reflected in geographic expansion or international dispersion of subsidiaries of multinational corporations (MNCs).

There are two major manifestations of internationalization, geographic expansion/international dispersion of subsidiaries (or market engagement/presence) and financial performance. Geographic expansion takes companies beyond their home market and results in building relationships with diverse people (e.g., Dunning, 1980, and 1998; Johanson and Vahlne, 1977; Sethi and Guisinger, 2002; Sethi, Guisinger, Phelan and Berg, 2003). Financial performance is reflected in accounting reports. We can measure the first facet of internationalization by simply counting the number of markets, other than its own home market, in which a firm operates. Financial reports and other documents provide us with the information regarding foreign operations of the business. Using both figures, a measure of internationalization of firm could be constructed. The purpose of this paper is to develop such a measure of internationalization of firm. The following is a discussion and suggestions for constructing such a measure.

Internationalization has immediate and concrete effect on the operation of the firm and its financial performance. When a firm expands abroad, its financial reports documents all the performance data related to operations outside the home market, such as sales revenues, profits, assets size, number of employee, etc.

## **FINANCIAL PERFORMANCE AND CORREDPONDING MEASURE**

Usually, a firms' performance is measured by using financial data, which is publicly available, on sales revenues, profits, return on investment, and economic value added (Stewart, 1991). In

this regard, earnings (sales revenues) are the summary measure of firm's performance (Dechow, 1994: 3). Similar information is available regarding MNC operations abroad in the form of foreign direct investment (FDI). FDI is an indication of ownership of assets abroad. As a sign of growing internationalization, FDI has been increasing worldwide. In 1970, FDI by all countries was \$13,270 million. By 2000, this figure increased more than 90 folds to 1,238,627 million (International Monetary Fund, 2001). The number of employees can be a proxy for size. For example, In the UK, sections 382 and 465 of the Companies Act 2006 defines the size of a company, among other characteristics, based the number of employees. A similar distinction is made by the U.S. Small Business Administration.

Information on sales revenues, assets size and number of employees abroad is readily available, and could be used to measure the degree of internationalization of firms. We should keep in mind, however, that we are interested in measuring how much firms are involved in international business rather than how successful they are in their international markets. Of course, the measure of internationalization could be used to determine some of the problems that a firm may experience in its expansion into foreign markets. This point is discussed later.

We acknowledge that due to unique cultural, political, legal, and economic factors across countries, accounting principles and auditing standards are different. These differences in financial reporting are increasingly being harmonized through the application of International Financial Reporting Standards (IFRS) (Smith, Sagafi-nejad & Wang, 2008). If this harmonization continues it should eventually make accounting reports from various countries comparable. Until that time, differences do exist. Nevertheless, the differences do not significantly impact our efforts.

To construct financial measure, similar to the World Investment Report by the United Nations (UNCTDA, 2005), we calculate simple average of three ratios of foreign sales, foreign assets, and foreign employees each divided by its respective total figures. These ratios parallel the three levels of markets identified by Buckley and Ghauri (2004). We suggest the inclusion of an additional item to this measure. The ability to tap into global finance is one of the advantages of internationalization of the firm. International business research (e.g., Agmon and Lessard, 1977: 1,049) indicates that MNCs have an advantage relative to single-country firms because of their ability to financially diversify. This diversification is the result of financial market imperfection. Global financial market offers opportunities that would not be available to domestic firms. Also, as Teece (1981) mentioned, exploiting internal markets (markets for intermediate products, know-how, and capital) is one of the motives for internationalization, and international capital market is one of the three categories that MNCs internalize. Therefore, the inclusion of foreign debt ratio could improve the explanatory power of the measure. The following is a discussion on the logical choice of these four measures.

The first indication of a firm's involvement in international business is the portion of total sales that is attributed to foreign sales. The larger this portion the more the firm has business

commitment to markets other than its home market. However, there is a caveat with the use of sales figures. As Ghemawat and Ghadar have mentioned (2006: 603-604), it would be extremely useful to have data on value-added and use it as an alternative to sales figure. The current financial reporting standards such as IFRS does not require value-added reporting and multinational corporations do not see any reason to go through expenses of producing this additional information. Therefore, in this paper in the absence of value-added data, a ratio of foreign sales to total sales is an appropriate logical choice for inclusion in the measure:

1. Foreign sales to total sales, which is the ratio of international sales divided by the total sales.

Internationalization of the firm has a range that starts with the simplest form of import/export, and ends up with the most complex form, FDI. The simple forms of international business do not require maintaining assets in foreign countries. Investment commitment to foreign markets signifies deeper involvement in foreign markets and a higher degree of internationalization, therefore, the following ratio:

2. Foreign assets to total assets, which is the ratio of assets employed outside of the home country of the firm divided by the firm's total assets.

Usually, the number of employees is a reasonable measure of the size of a firm. Of course, industry characteristics have an influence on this figure. For example, a heavy reliance on capital equipment and technology may reduce the need for more employees. However, in most cases industry characteristics should impact both domestic and foreign operations of a firm similarly. Consequently, the use of a ratio extirpates concerns about the effect of industry characteristics. Therefore, the number of employees outside the home market could be a proxy measure of internationalization. On that basis, the ratio of foreign employees to total employee is the next ratio:

3. Foreign employment to total employment, which is the ratio of number of employees outside of the home country divided by total number of the firm's employees .

Borrowing from institutions outside the country when foreign financing is cheaper provides an MNC with the added advantage and flexibility. However, we should keep in mind that usually MNCs finance their operations more from domestic sources. Following this line of reasoning, it appears that foreign debt could be a differentiating factors and a sign of internationalization. Therefore, as the last ratio, we suggest the addition of foreign debt ratio to the measure:

4. Foreign debt to total debt, which is the ratio of financing from global sources divided by the firm's total debt.

Understandably, in the above measure the profitability of international operations as compared to the total profitability of the firm, as a measure of internationalization is avoided. Seemingly this could be interpreted as the implication for international taxation, which due to tax holidays and other favorable taxing, could skew the comparability measure. Besides, in this discussion, no suggestion is made about the differences in profitability of firms operations in various geographic locations.

The above measure is expressed in percentage. The closer this measure is to 100 the more financially internationalized is the firm. This measure is a partial measure of internationalization. It does not include information about the extent of firm's international market involvement. To construct a meaningful measure for measuring the degree of internationalization we suggest the addition of another measure. We call this market engagement or market presence measure.

## **MARKET ENGAGEMENT OR PRESENCE**

Financial data provide a partial measure of internationalization of firm. It is an indication of finances related to operational involvement of firm outside its own home market. It does not explain how truly internationalized is the firm. This measure only indicates that the firm does have a significant amount of business transactions in other countries. It is possible that the firm is not operating in many markets. It could only be operating just in one market besides its own home market. Let assume a U.S. firm also conduct half of its business transactions in Canada, but has no presence elsewhere. Using all of the above measures may indicate a high degree of internationalization for this firm. This is not so. Such a firm could be considered less internationalized than the one that has businesses in many countries. As Rugman and Verbeke (2004) have suggested, the ultimate test to assess whether MNCs are global is their actual penetration of markets across the globe. Therefore, we should have an additional way of differentiating between the two firms. In effect, we need information on how many markets a firm is involved in. However, this information should be in a form that could be combined with the financial measure.

We suggest the ratio of the number of countries in which the firm operates over the total number of countries expressed in percentages. The latest data on the United Nations membership records (2012) indicated a total of 193 member counties. This number could be used as a denominator for constructing the operational ratio. Constructing a ratio based on the number of countries in which the firm operates is particularly meaningful considering that there are newer multinational firms called born global that from the inception take to the global stage. They seek superior international business performance in multiple countries (Knight and Cavusgil, 2004). Born global firms are those that progress to internationalization rather rapidly. The period from domestic establishment to initial foreign market entry is often less than three years (Autio et al., 2000; McDougall and Oviatt, 2000). These firms begin with a global view of their markets, and develop the capabilities needed to achieve their international goals (Knight and Cavusgil, 2004). Of course, both developments, the geographic expansion and financial performance, take place

gradually (Johanson and Vahlne, 1977; Kedia, and Mukherji, 1999). Let's call this a market engagement ratio. It indicates involvement of firm in multiple markets that necessitates dealing with diversity in cultural, political, economic, and legal issues. The closer this ratio to 100 the higher level of market engagement.

## **THE MEASURE OF INTERNATIONALIZATION**

The final step is creating an internationalization measure. This is done by the average of the summation of both the financial measure and the market engagement measure. A value closer to 100 for this measure could be regarded as a higher level of internationalization.

## **CONCLUSION**

This paper was an attempt toward construction of a measure of internationalization. Such information is useful to MNC as a measure of internationalization progress. It is a road map directing the firm in its pursuit of expansion into global markets. The benefits of the measure are four folds. First, it generates an understating about the present position of the firm, and points out the needed changes, either in operational aspect or managerial mentality. Second, it also identifies market opportunities that could be exploited. Third, if the firm is not sufficiently internationalized, as the suggested measures could indicate, by further internationalization it provides tremendous hedge in economic down turn. Companies like Nestle, HSBC and Royal Dutch Shell are earning between 60 to 70 percent of their revenue outside of Europe and not affected measurably by the Europe economic downturn. Finally, the information for populating the index is generally available on companies' enterprise systems (ES), which could be utilized as suggested here.

A discrepancy between the two ratios (financial and market engagement) implies performance problems. A low market engagement ratio and a high financial ratio could be interpreted as less visionary management. While firm's financial performance in foreign markets are good, the firm has not sufficiently expanded into other markets. The reverse could be either the firm is unnecessarily spreading its operations into too many markets, or there are operational problems that require management attention.

Often, a question is posed about the international standing of a firm, either by the managers inside the firm or by others outside. Almost always, the answer to such a question is an opinion and a guess. This paper is an attempt in providing a more objective answer to such a question. By constructing an internationalization measure for the firm, such a question can be answered objectively. Of course, no claim is made that this measure is perfect. Including value-added numbers into this index would demand additional cost of generating this information which may not be justified by the potential benefits from such information. However, the proposed index is



an attempt toward taking the guesswork out of answering a relevant question. We anticipate, indeed we recommend, that other researchers provide improvements for this measure. We suggest that improvements can be made in expanding upon both components of the measure, namely financial and market engagement measures. Additionally, we suggest using performance data and market engagement data from multinational corporations to test the measure.

## REFERENCES

- Agmon, T. and Lessard, D. 1977. Investor recognition of corporate international diversification. *The Journal of Finance*, September, 32(4).
- Author. 2008. This section is based on the author's published material.
- Autio, E., Espinoza, H., and Almeida, J. 2000. Effects of age at entry, knowledge intensity, and imitability on international growth, *Academy of Management Journal*, 43(5): 909-924.
- Bagozzi, R. P., Youjae, Y. and Phillips, L. 1991. Assessing validity in organizational research, *Administrative Science Quarterly*, 36: 421-58.
- Buckley, P.J. and Ghauri, P.N. 2004. Globalisation, economic geography and the strategy of multinational enterprises, *Journal of International Business Studies*, 35(2), 81-98.
- Campbell, D. and Fiske, D. 1959. Convergent and discriminant validation by multitrait-multimethod matrix, *Psychological Bulletin*, 56: 81-105.
- Daniel, J. D. and Bracker, J. 1989. Profit performance: Do foreign operations make a difference? *Management International Review*, 29(1), 46-56.
- Dechow, P. M. 1994. Accounting earnings and cash flow as measures of firm performance: The role of accounting accrual, *Journal of Accounting & Economics*, 18, 3-42.
- Dunning, J. H. 1980. Toward an eclectic theory of international production: Some empirical test, *Journal of International Business Studies*, 11(1), 9-31.
- Dunning, J. H. 1998. Location and multinational enterprise: A neglected factor? *Journal of International Business Studies*, 29(1), 45-66.
- Ericsson, A. and Herbert, A. 1980. Verbal reports as data. *Psychological Review*, 2: 215-51.
- Geringer, J. M., Beamish, P. W. and daCosta, R. C. 1989. Diversification strategy and internationalization: Implications for MNE performance. *Strategic Management Journal*, 10(2), 109-19.
- Ghemawat, P. and Ghadar, F. 2006. Global integration  $\neq$  global concentration, *Industrial and Corporate Change*, 15(4): 595-623.

- Hsu, C-C and Boggs, D. 2003. Internationalization and Performance: Traditional Measures and Their Decomposition, *The Multinational Business Review*, Vol. 11 (3), pp. 23-49.
- Letto-Gillies, G. 1998. Different conceptual frameworks for the assessment of the degree of internationalization: An empirical analysis of various indices for the top 100 transnational corporations, in *Transnational corporations*, 7(1), 17-39.
- International Monetary Fund. 2001. *International financial statistic yearbook* (Vol. 54), Washington, D.C. Author.
- Johanson, J. and Vahlne, J.E. 1977. The internationalization process of the firm- a model of knowledge development and increasing market commitments, *Journal of International Business Studies*, 8(1), 23-32.
- Kedia, Ben L. and Mukherji, A. 1999. Global managers: Developing a mindset for global competitiveness, *Journal of World Business*, 34(3), 230-251.
- Knight, G. A., Cavusgil, S. T. 2004. Innovation, organizational capabilities, and the born-global firm, *Journal of International Business Studies*, Vol 35 No 2, pp.124-141
- Langendijk, H., Hagman, M. and Unlu, Y. 2000. The optimal degree of multinationality: An empirical research of Fortune Global Top 500 firms, *Primavera Working Paper 2000-10*, Univeriteit van Amsterdam.
- Lenn, G. and Ramaswamy, K. 1999. An empirical examination of the form of the relationship between multinationality and performance. *Journal of International Business Studies*, 30(1), 173-88.
- McDougal, P., and Oviatt, B. 2000. International entrepreneurship: The intersection of two research paths, *Academy of Management Journal*, 43(5): 902-906.
- Ramaswamy, K., Kroeck, K., and Renforth, W. 1996. Measuring the Degree of Internationalization of a Firm: A Comment, *Journal of International Business Studies*, Vol. 27 (1), pp. 167-177.
- Rugman, A. M. and Verbeke, A. 2004. A perspective on regional and global strategies of multinational enterprises, *Journal of International Business Studies*, 35(1), 3-18.
- Schoenfeldt, L. F. 1984. Psychometric properties of organizational research instruments, in T. S. Bateman and G. G. Ferris (ed.), *Method and analysis in organizational research*, Reston, VA.: Reston Publishing Company.
- Sethi, D. and Guisinger, S. 2002. Liability of foreignness to competitive advantage: How multinational enterprises cope with the international business environment, *Journal of International Management*, 8(3), 223-240.

- Sethi, D. Gusinger, S.E.; Phelan, S.E.; and Berg, D.M. 2003. Trends in foreign direct investment flows: A theoretical and empirical analysis, *Journal of International Business Studies*, 34(4), 315-326.
- Smith, M., Sagafi-nejad, T. and K. Wang. 2008. Going international: Accounting and auditing standards, *Internal Auditing*, 23(4): 3-12.
- Stopford, J. M. and Dunning, J. H. 1983. *The world directory of multinational enterprises 1982-83*. Detroit, Michigan: Gail Research Company.
- Stopford, J. M. and Wells, L. T. 1972. *Managing the multinational enterprise*. New York: Basic Books.
- Stewart, G. B. III. 1991. *The Quest for Value*. Harper Collins.
- Sullivan, D. 1994. Measuring the degree of internationalization of a firm, *Journal of International Business Studies*, 2<sup>nd</sup> quarter, 326-342.
- Teece, D. J. 1981. The multinational enterprise: Market failure and market power considerations, *Sloan Management Review*, 22(3), 3-17.
- United Nations Conference on Trade and Development, *World investment report*, 2005. Geneva and New York: UNCTAD, 2005.
- United Nations:  
[http://search.un.org/search?ie=utf8&site=un\\_org&output=xml\\_no\\_dtd&client=UN\\_Website\\_en&num=10&lr=lang\\_en&proxystylesheet=UN\\_Website\\_en&oe=UTF-8&q=number%20member%20states&Submit=Go&ip=157.150.186.42&access=p&sort=date%3AD%3AL%3Ad1&entqr=3&ud=1](http://search.un.org/search?ie=utf8&site=un_org&output=xml_no_dtd&client=UN_Website_en&num=10&lr=lang_en&proxystylesheet=UN_Website_en&oe=UTF-8&q=number%20member%20states&Submit=Go&ip=157.150.186.42&access=p&sort=date%3AD%3AL%3Ad1&entqr=3&ud=1) (Last search 04/23/2012)