

International diversification, industrial diversification and firm performance of Hong Kong MNCs

CHUN-CHEONG WAN

*Department of Management, Faculty of Business Administration,
The Chinese University of Hong Kong, Shatin, N.T., Hong Kong*

Although multinational corporations (MNCs) are not new to business research, Asian MNCs and their performance have yet to be widely studied. This study investigates the relationship between international diversification, industrial diversification and firm performance of MNCs from Hong Kong. In contrast to previous findings, the results show that Hong Kong MNCs are more internationally diversified, but do not perform better, than domestic firms. Also, among Hong Kong MNCs, international diversification has a positive impact on profitability stability and sales growth, but not on profitability. Industrial diversification also enhances profitability stability but reduces profitability significantly. Neither the hypothesized inverted U-shaped relationship between international diversification and performance nor the interaction effect from both international and industrial diversification strategies on performance can be validated. Implications are discussed with reference to the local context.

Keywords: MNC, international diversification, industrial diversification.

1. INTRODUCTION

Multinational corporations (MNCs) have been the focus of economics and international business research for a long time. Although MNCs from developed countries have been well researched, increasing attention is now being paid to Asian MNCs as these firms are becoming important players in the capitalist global economy (Yeung 1994).

Through international diversification, the literature has shown that MNCs may gain from economies of scale, extension of core skills and exploitation of comparative advantages of different international regions (e.g., Kogut 1985; Rugman 1979, 1981), leading to an improvement in firm performance (e.g., Caves 1982; Kim *et al.* 1989). Although the relationship between international diversification and firm performance has been widely investigated in developed countries (e.g., Grant *et al.* 1988; Kim *et al.* 1989), it is yet to be examined in the Asian context.

In examining the effect of international diversification, product or industrial diversification is often included because these two diversification strategies may interact with each other in affecting firm performance (Hitt *et al.* 1994; Tallman and Li 1996).

Although much research has been carried out on the relationship between product diversification and firm performance, the results are still inconclusive (Hoskisson and Hitt 1990). Markides and Williamson (1996) use the concept of strategic assets, based on the resource-based perspective, to indicate that, if relatedness is properly measured, related diversification should be superior to other diversification strategies. From a sample of large firms in New Zealand, Hamilton and Shergill (1993) also found that related diversified firms outperform other firms. However, the experience of Singaporean firms is different. Lim and Tan (1995) show that related diversification is not superior to unrelated diversification strategy in performance among Singaporean firms. Although Lim and Tan's (1995) results are in doubt since the industry effect was not controlled for, their effort indicates that corporate strategies as well as the performance implications of Asian firms have yet to be discerned.

Whether Asian MNCs behave and perform differently from their counterparts in developed countries is not only of academic value, but also important to local managers who are formulating strategies from year to year. Moreover, managers of MNCs from other regions also benefit from such an understanding when they are planning to operate in this region.

The empirical evidence of this study is drawn from a sample of large firms from Hong Kong. As a typical emerging market in the Asia-Pacific region, Hong Kong is under the strong influence of oriental culture. Not only because Hong Kong is a place of oriental culture, which is deemed different from the Western culture, but also its strong economic performance (average GDP growth of about 6.7% from 1980 to 1992, compared to that of about 2.7% in both U.S.A. and U.K.) and well established stock market (often ranked among the top five in the world) can provide information for strategy research and valuable implications for corporate managers from an Asian context. In the next section, the hypotheses of this study are introduced. A description of the sample and measures will then follow. Lastly, the results as well as the discussion and conclusion will be presented.

2. HYPOTHESES

In general, MNCs often have a strong core business and they then extend their core operation competence overseas. Literature has shown that MNCs have the advantage over other firms in that they can improve their performance through internationalisation. The sources of such an advantage include foreign market opportunities and greater firm growth (Buhner 1987; Dunning 1988; Rugman 1979, 1981), economies of scale and scope (Grant *et al.* 1988; Kogut 1985), internalisation (Rugman 1981), a comparative advantage through locating operations in less costly regions as well as a competitive advantage in market development (Kogut 1985), and so on.

Although MNCs are no longer new to business research in developed countries, increasing attention is being paid to MNCs from Asian developing countries as these firms

are becoming a serious force in the capitalist global economy (Yeung 1994). It has been found that MNCs from developing countries are different from their counterparts from developed countries in ownership patterns, size of investment, market entry strategies, source of funding, and the influence of the home country (Lall 1983; Wells 1983; Yeung 1994). However, past studies on MNCs from developing countries are mainly focused on the firms' economic and social characteristics. The performance of these emerging firms has yet to be investigated.

As most studies on the relationship between MNCs (as well as international diversification) and firm performance have been carried out in developed countries (such as U.S.A., U.K. and former West Germany), there is little information on the performance implications of Asian MNCs as an effect of their choice to be internationally diversified. It can be argued that firms in developing countries, particularly in high growth countries, may choose not to internationalise because they enjoy high domestic market growth as well as high economic returns. It is obvious that high growth regions often provide plenty of opportunities for business. On the other hand, as most Asian MNCs are inexperienced in dealing with international affairs, they may suffer from the uncertainty in exploring overseas markets and thus bear heavy coordination costs which may not be offset by the benefits derived. Therefore, Asian domestic firms which are focused on domestic opportunities may perform better than Asian MNCs which are seeking benefits from overseas markets.

It is, however, noted that the emphasis on the lack of international experience is arbitrary. It is hard to define how long and how much experience is adequate. Also, the differences between MNCs from developing countries and those from developed countries are expected to be less and less explicit as different domestic economies grow together (Dickens 1992). Asian MNCs with adequate international experience may exploit the same advantages of internationalisation as their counterparts from developed countries.

In this study, the sample is comprised of large firms from Hong Kong. In addition to the international experience of this city, large firms also find it easier to gain access to international markets than small firms in terms of financial and managerial capability. Therefore, the sampled MNCs should be compatible with MNCs from developed countries in exploiting the advantage of internationalisation. It is hypothesised that:

Hypothesis 1 On average, locally incorporated MNCs outperform domestic firms in Hong Kong.

Earlier studies have already shown that international diversification has a positive impact on performance (e.g., Hirsch and Lev 1971; Miller and Pras 1980). Later studies, using different measures of performance, including profitability and its stability, consistently support the notion that performance can be improved by international diversification (e.g., Kim *et al.* 1989; Olusoga 1993). Simply put, firms would gain from economy of scale through overseas sales. Firms would also gain higher profit stability by relying less on a

few markets. This is in line with the conventional wisdom: 'don't put all your eggs in one basket'. Moreover, as MNCs can explore market opportunities in other regions, their sales growth may benefit from the diversification of geographic regions.

Although many recent studies have found that international diversification is positively related to firm performance (e.g., Kim *et al.* 1993; Qian 1997), some other studies have not. Using regression analysis, Tallman and Li (1996) did not find any significant (within 5% level) relationship between international diversification (measured in terms of multinationality and country scope) and firm performance. The mixed results might have been caused by the non-linear nature of the relationship. The relationship between international diversification and firm performance may be inverted U-shaped instead (e.g., Geringer *et al.* 1989; Hitt *et al.* 1997). It is argued that international diversification is complex and difficult to manage (Roth 1992). As a firm continues to diversify internationally, the costs incurred may not be covered by the benefits if a certain threshold is exceeded (Geringer *et al.* 1989). In other words, the firm's performance is positively related to international diversification up to a certain limit. Beyond that limit, the relationship will level off and then become negative.

Considering that the focus of this study is on Hong Kong MNCs, some of these firms are highly diversified internationally. The concern of the threshold should not be ignored. Therefore, it is hypothesized that:

Hypothesis 2 For MNCs from Hong Kong, the relationship between international diversification and firm performance is nonlinear and inverted U-shaped.

Besides international diversification, product diversification is another major strategic concern of a firm. Developed from Rumelt's (1974) thoughts on diversification that related diversification, benefited from exploiting core resources, leads to higher performance than unrelated conglomerate diversification, a number of studies have supported the notion that product diversification is negatively related to performance (e.g., Bettis 1981; Christensen and Montgomery 1981) although a few studies have reported no significant relationship between the two variables (e.g., Lloyd and Jahera 1994). The inconclusive findings are mainly due to theoretical and methodological confusion (Hoskisson and Hitt 1990). Recently, a series of studies have attempted to re-define and re-operationalize the concept of relatedness from the view of strategic assets which is derived from the resource-based perspective (Farjoun 1994; Markides and Williamson 1994, 1996; Robins and Wiersema 1995). These studies argue that a related diversifier can enhance its performance only when its businesses obtain preferential access to the firm's strategic assets which are valuable and costly to imitate in the market.

Research on the relationship between product diversification and firm performance in regions outside USA and Western Europe is quite rare and the findings are also inconclusive. Based on a sample of large firms in New Zealand, Hamilton and Shergill (1993) found that related diversified firms outperform other firms. However, using a

sample of Singaporean firms, Lim and Tan (1995) showed that related diversification is not superior in performance to unrelated diversification strategy. Regional differences, such as economic development, ownership structure, culture, and state policy, may influence a firm's strategic choice as well as its performance. However, it is also observed that, in Lim and Tan's study, the missing control for industry effect may confuse the results as large Asian conglomerates often gain high profits from local regulated industries.

Most studies have used profitability to measure firm performance. Other measures, however, would generate different results. For instance, conglomerates are characterized by lower variability of profitability than non-diversified firms (Amit and Livnat 1988). Firms may intentionally diversify into different businesses for the stability of profitability. Sales growth is often another reason for diversification. In some cases, diversification fails to generate extra profitability because growth rather than profitability may be the principal motivator of diversification (Grant *et al.* 1988; Marris 1967).

In this study, there are problems in examining the relatedness. As the sample is drawn from the listed firms in Hong Kong, the investigation into the relatedness is hindered because only the information at the broad industry level, but not the product level, is available publicly in Hong Kong under the present legislation requirements. Product diversification, therefore, can be only measured by the dispersion of operations in different industries. 'Industrial diversification' is used instead of 'product diversification' to reflect the nature of the measure. So, concerning the relationship between industrial diversification and different measures of firm performance among MNCs from Hong Kong, it is hypothesized that:

Hypothesis 3(a) For MNCs from Hong Kong, industrial diversification is negatively related to profitability.

Hypothesis 3(b) For MNCs from Hong Kong, industrial diversification is positively related to the stability of profitability.

Hypothesis 3(c) For MNCs from Hong Kong, industrial diversification is positively related to sales growth.

In addition to the main effects of both international and industrial diversification on firm performance, the interaction effects of these two diversification components have received increasing attention. Kim *et al.* (1989) show that international diversification can improve the lower profitability of conglomerates as compared to related diversifiers. Recent studies also indicate the existence of interaction effects (Hitt *et al.* 1997; Tallman and Li 1996). Interaction effects, as well as the effect of internationalization mentioned earlier, however, have not been explored in the Asian context. Following Hitt and his colleagues' (1997) argument, it is hypothesized that:

Hypothesis 4 For MNCs from Hong Kong, industrial diversification positively moderates the nonlinear relationship between international diversification and firm performance.

3. SAMPLE

The sample of this study is drawn from a set of the largest corporations in Hong Kong, a developing economy which has maintained high economic growth since the 1950s. The initial sample consisted of the largest 120 firms listed on the Stock Exchange of Hong Kong in terms of market capitalisation as at the end of 1990. Excluding utilities, banks and investment firms, firms delisted after 1990, and firms without sufficient information, 81 firms are available for this study. The annual reports and the Pacific-Basin Capital Markets Databases (PACAP) provide the necessary business and financial information for this study.

As required by the legislation, all listed firms in Hong Kong must announce every significant transaction (i.e., 3% or more of the total assets) in public. In this study, a firm is classified as an MNC if it had reported having significant investment outside Hong Kong during 1990 and 1991. However, investment in Mainland China is not counted as an overseas investment because the cultural orientation between the two places is considered similar and the effort required in managing operations in China is much less than that in other regions. This argument is reinforced by a series of discussions with local businessmen managing operations in both China and Hong Kong. As a result, 47 out of the 81 sampled firms are classified as MNCs. The profile of the sample for this study is shown in Table 1.

4. MEASURES

INTERNATIONAL DIVERSIFICATION (GEO)

International diversification is measured by the entropy measure, a continuous measure based on the concept developed by Jacquemin and Berry (1979) and Palepu (1985). The

Table 1 Industry profile of the sample

Industry	All	MNC
Property	36	17
Manufacturing	14	11
Hospitality (hotels, restaurants, etc.)	11	5
Wholesaling and retailing	14	10
Transport	3	3
Communications	3	1
Total	81	47

use of the entropy measure for measuring diversification has been recently validated (Hoskisson *et al.* 1993). The measure of international diversification can be described as:

$$GEO = \sum_{i=1}^m P_i \ln \left(\frac{1}{P_i} \right)$$

where m is the number of international regions in which a firm has business, and P_i is the proportion of a firm's sales in the i th region to a firm's total sales. The average of the diversification in 1990 and 1991 is used for analysis.

INDUSTRIAL DIVERSIFICATION (DIV)

Similar to the measurement of international diversification, industrial diversification is also measured by an entropy measure, described as:

$$DIV = \sum_{i=1}^n P_i \ln \left(\frac{1}{P_i} \right)$$

where n is the number of industries a firm has business with, and P_i is the proportion of a firm's sales in the i th industry to a firm's total sales. The average of the diversification in 1990 and 1991 is used for analysis.

INTERACTION OF INTERNATIONAL AND INDUSTRIAL DIVERSIFICATION

As the relationship between international diversification and firm performance is hypothesised as inverted U-shaped, the quadratic term of international diversification is employed in the regression analysis. The interaction of international and industrial diversification is measured by the product of $DIV \times GEO^2$.

FIRM PERFORMANCE

Firm performance is measured by profitability, stability of profitability, and sales growth. The average of the return on total equity (ROE) for 1990, 1991 and 1992 is used as a lagged measure of profitability. The standard deviation of ROE (SDROE) over the same period is used as the measure of the variability of profitability (an opposite measure of the stability of profitability). The average of the ratios of the change in sales (or turnover) to the sales in the previous year for the periods from 1990 to 1991 and from 1991 to 1992 is used as the measure of sales growth (SALEG). Using lagged averages to measure a firm's performance can reduce the influence of short-term factors and capture the long-term effect of strategy.

All performance measures are adjusted by subtracting the average performance of all firms in the industry. The reason for using adjusted performance or performance premium is that some firms may outperform others just because their industries are more profitable than others during the period of the study. The use of performance premium can help control the industry effect (Michel and Hambrick 1992).

CONTROL VARIABLES

Industry and firm size are controlled in this study. The control for industry effect is incorporated in the performance measures as only the performance premium is used for measuring a firm's performance. The effect of another control variable, firm size, is measured by the natural logarithm of sales. The use of natural logarithm of sales can rectify the distribution of the firm size from skewing to the larger side.

5. RESULTS

The descriptive statistics of the data and the results of *t*-tests are shown in Tables 2 and 3, respectively. The results of *t*-tests indicate that Hong Kong MNCs have greater international diversification than domestic firms. That is consistent with the notion that MNCs should be more internationalized than domestic firms. Also, it is found that Hong Kong MNCs have no less industrial diversification than domestic firms. This implies that

Table 2 Descriptive statistics of the full sample and MNCs studied

Full sample: <i>N</i> = 81							
	Mean(SD)	Correlation Coefficients					
		SIZE	DIVN	GEO	ROE	SDROE	
SIZE	14.27(1.20)						
DIV	.68(.47)	.01					
GEO	.37(.42)	.15	.15				
ROE	-.01(.13)	.17	-.38**	-.15			
SDROE	-.05(.08)	.07	-.25*	-.36**	.74**		
SALEG	-.60(3.86)	.10	.02	.10	-.03	-.02	
MNC sample: <i>N</i> = 47							
	Mean(SD)	Correlation Coefficients					
		SIZE	DIVN	GEO	ROE	SDROE	
SIZE	14.49(1.25)						
DIV	.74(.46)	-.13					
GEO	.54(.44)	.15	.06				
ROE	-.01(.15)	.16	-.46**	-.16			
SDROE	-.05(.09)	.10	-.37*	-.44**	.77**		
SALEG	-.81(1.16)	.22	-.01	.41**	-.12	-.29*	

* $p < .05$

** $p < .01$

Table 3 Results of *t*-tests

Mean (SD)	MNC	Domestic	<i>t</i> value
GEO	.54(.44)	.14(.23)	5.46**
DIV	.74(.46)	.60(.48)	1.28
ROE	-.01(.15)	-.01(.10)	-.01
SDROE	-.05(.09)	-.04(.06)	-.56
SALEG	-.81(1.16)	-.31(5.84)	-.57
N	47	34	

* $p < .05$ ** $p < .01$

Hong Kong MNCs not only extend their business overseas, but are also as diversified as domestic firms.

In comparing the performance, Table 3 shows that domestic firms perform no worse than MNCs in either profitability, stability of profitability, or sales growth. Therefore, H1 is rejected. Unlike their counterparts from developed countries, Hong Kong MNCs do not seem able to capture the benefits of internationalization.

Table 4 shows the results of multiple hierarchical regressions which help highlight the effect of the quadratic term as well as the interaction term in addition to the main variables. Among the 47 Hong Kong MNCs examined in this study, after controlling for the size effect, the regression results show that international diversification has no impact

Table 4 Results of hierarchical regression (β coefficient): All firms and MNCs

Dep. variable:	All firms			MNCs		
	ROE	SDROE	SALEG	ROE	SDROE	SALEG
Independent variable:						
Size	0.17	0.07	0.10	0.16	0.10	0.22
ΔR^2	0.03	0.00	0.01	0.03	0.01	0.05
DIV	-0.36**	-0.20 [†]	0.00	-0.43**	-0.33*	-0.01
GEO	-0.13	-0.35**	0.08	-0.16	-0.44**	0.39**
ΔR^2	0.16**	0.18**	0.01	0.22**	0.32**	0.15*
GEO ²	-0.17	-0.48	-0.34	-0.24	-0.37	-0.13
ΔR^2	0.00	0.02	0.01	0.01	0.01	0.00
DIV \times GEO	0.14	-0.15	0.01	0.40	0.04	-0.15
ΔR^2	0.01	0.01	0.00	0.04	0.00	0.01
Total R ²	0.20	0.22	0.03	0.29	0.34	0.20
Adj. R ²	0.14	0.16	-0.04	0.21	0.26	0.10
F	3.64**	4.12**	0.46	3.41*	4.27**	2.07 [†]
N	81	81	81	47	47	47

† $p < .10$ * $p < .05$ ** $p < .01$

on profitability but a significant positive impact on both stability of profitability (i.e., negative on the variability) and sales growth. On the other hand, industrial diversification has a significant negative impact on profitability and a significant positive impact on its stability (i.e., negative on the variability), but no impact on sales growth. However, neither the quadratic term of international diversification nor its interaction with industrial diversification has any impact on any measure of performance. Regression analyses without using the quadratic term of international diversification were also carried out. The results remain the same. Therefore, H2, H3(c) and H4 are rejected while H3(a) and H3(b) are supported.

Table 4 also shows the regression results of using all firms in the sample. The results are similar to those of using MNCs alone, except for the impact on sales growth. For all firms, sales growth is not affected by any variable used in this study. However, if considering MNCs only, it is positively related to international diversification. Hong Kong MNCs are successful in increasing their sales volume through internationalization but do not gain economic value from it.

Moreover, the results show that firm size has no impact on firm performance at all among either MNCs or all firms in the sample. The reason is probably that the sample of this study is made up of large firms only. The variance in size may not be great enough to generate any explicit effect.

The results of this study are summarised in Table 5.

Table 5 Results of hypothesis testing

	Key variables	Hypothesized relationship	Result
H1	Performance	MNCs > Domestic firms	No
For MNCs only:			
H2	GEO and Performance	Nonlinear, inverted U-shaped	No
H3(a)	DIV and ROE	Negative	Yes
H3(b)	DIV and SDROE	Positive (or negative on variability)	Yes
H3(c)	DIV and SALEG	Positive	No
H4	DIV × GEO ² and Performance	Significant	No

6. DISCUSSION AND CONCLUSION

This study was designed to postulate the relationship between international diversification, industrial diversification and firm performance of MNCs from Hong Kong. It is found that Hong Kong MNCs are more internationalized than, but industrially as diversified as domestic firms. In contrast to previous studies carried out in the West, although Hong Kong MNCs are more internationalised than domestic firms, they do not perform better. Domestic firms in Hong Kong can perform well by focusing on local businesses rather than exploiting business opportunities overseas.

It may be argued that, unlike their counterparts in the West, Hong Kong MNCs do not show superior performance because they are too diversified or at least they do not have a lower industrial diversification than domestic firms. The diversified businesses may distract the management of MNCs from fully capturing the benefits of overseas operations. However, the analysis shows that the interaction of international and industrial diversification has no effect on performance at all. The influence of industrial diversification on the relationship between international diversification and firm performance cannot be established.

As domestic firms are usually familiar with the local environment, the costs involved in their operation development should be less than those incurred in MNCs, which often bear a heavy burden of international co-ordination. The cost concern is further echoed by the findings that Hong Kong MNCs can increase their sales growth, but not their profitability, through internationalization. The intensive international competition and the costs associated with international co-ordination may depress the profit margin so much that even an increase in sales cannot compensate for this. Moreover, Hong Kong MNCs do not have a more stable profitability than domestic firms because the former may not be experienced enough to reduce the international risk when they expand their business across borders.

On the other hand, it may be true that, in high growth regions such as most developing countries in Asia, there should be ample domestic opportunities for a firm to enhance its performance. As the local economy is not yet saturated, domestic firms can utilize their established local connections for further expansion and hence profits. Whether this speculation can be applied to other high growth regions is an interesting research question.

Although the results show that Hong Kong MNCs do not outperform domestic firms in profitability, stability of profitability and sales growth, international diversification still has a positive impact on profitability stability (for both MNCs and the full sample) and sales growth (for MNCs only). However, the hypothesized nonlinear inverted U-shaped relationship between international diversification and firm performance is not supported as found in previous studies using different samples of Western firms. It is possible that Hong Kong MNCs are not internationalised enough to reach the threshold of international diversification.

The relationship between industrial diversification and firm performance of Hong Kong MNCs is consistent with the findings in the West. But such a relationship may not hold in other developing countries. Although Lim and Tan's (1995) study in Singapore, showing that related diversification does not outperform unrelated diversification, is queried due to the lack of consideration of the industry effect, the generalization of the relationship between industrial diversification and firm performance in developing countries requires further study.

Limitations do exist in this study. The sample of this study consists of large listed firms in Hong Kong only. In developing regions, small and entrepreneurial firms may be more flexible and thus more able than large firms to realise overseas opportunities. A

further study with a sample of smaller firms will definitely help to confirm the robustness of the findings of this study. Another limitation is the time horizon of this study. A longer time frame may help in understanding more about the relationship between diversification and firm performance as well as the impact of the macro environment on such a relationship, especially when the macro environment often fluctuates over time in developing regions. Future studies with firms located in different international regions with different levels of economic growth will enhance the generalization of the relationship between diversification and firm performance.

ACKNOWLEDGEMENTS

I would like to thank Michael Hitt, two anonymous reviewers and participants at the APJM Conference on The Asia Multinational Corporation and Government Business Relations in Asia for their very helpful comments and constructive suggestions. Financial support received from the Hong Kong Research Grant Council (RGC Grant no. CUHK 170/96H) is gratefully acknowledged.

REFERENCES

- Amit, R. and Livnat, J. 1988. Diversity strategies, business cycles and economic performance. *Strategic Management Journal*, **9**: 99–100.
- Bettis, R.A. 1981. Performance differences between related and unrelated diversified firms. *Strategic Management Journal*, **2**: 379–383.
- Buhner, R. 1987. Assessing international diversification of West German corporations. *Strategic Management Journal*, **8**: 25–37.
- Caves, R.E. 1982. *Multinational Enterprise and Economic Analysis*. Cambridge: Cambridge University Press.
- Christensen, H.K. and Montgomery, C.A. 1981. Corporate economic performance: diversification strategy versus market structure. *Strategic Management Journal*, **2**: 327–343.
- Dickens, P. 1992. *Global Shift: The Internationalization of Economic Activity*. Second edition. London: Paul Chapman.
- Dunning, J.H. 1988. *Explaining International Production*. London: Unwin Hyman.
- Farjoun, M. 1994. Beyond industry boundaries: Human expertise, diversification and resource-related industry groups. *Organization Science*, **5**: 185–199.
- Geringer, J.M., Beamish, A.P. and da Costa, R.C. 1989. Diversification strategy and internationalization: Implications for MNE performance. *Strategic Management Journal*, **10**: 109–119.
- Grant, R.M., Jammine, A.P. and Thomas, H. 1988. Diversity, diversification, and profitability among British manufacturing companies, 1972–1984. *Academy of Management Journal*, **31**: 771–801.
- Hamilton, R.T. and Shergill, G.S. 1993. Extent of diversification and company performance: the New Zealand evidence. *Managerial and Decision Economics*, **14**: 47–52.
- Hirsch, S. and Lev, B. 1971. Sales stabilization through export diversification. *Review of Economics and Statistics*, **53**(3): 258–266.
- Hitt, M.A., Hoskisson, R.E. and Ireland, R.D. 1994. A mid-range theory of the interactive effects of international and product diversity on innovation and performance. *Journal of Management*, **20**: 297–326.

- Hitt, M.A., Hoskisson, R.E. and Kim, H. 1997. International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, **40**: 767–798.
- Hoskisson, R.E. and Hitt, M.A. 1990. Antecedents and performance outcomes of diversity: A review and critique of theoretical perspectives. *Journal of Management*, **16**: 461–509.
- Hoskisson, R.E., Hitt, M.A., Johnson, R.A. and Moesel, D.D. 1993. Construct validity of an objective (entropy) categorical measure of diversification strategy. *Strategic Management Journal*, **14**: 215–235.
- Jacquemin, A.P. and Berry, C.H. 1979. Entropy measure of diversification and corporate growth. *Journal of Industrial Economics*, **27**(4): 359–369.
- Kim, W.C., Hwang, P. and Burgers, W.P. 1989. Global diversity strategy and corporate profit performance. *Strategic Management Journal*, **10**: 45–57.
- Kogut, B. 1985. Designing global strategies: profiting from operational flexibility. *Sloan Management Review*, **26**: 27–38.
- Lall, S. 1983. *The New Multinationals: The Spread of Third World Enterprises*. Chichester: Wiley.
- Lim, G.E. and Tan, Y.T. 1995. Diversification strategies, firm characteristics and performance among Singapore firms. *International Journal of Management*, **12**(2): 223–233.
- Lloyd, W. and Jahera Jr., J. 1994. Firm-diversification effects on performance as measured by Tobin's q. *Managerial and Decision Economics*, **15**: 259–266.
- Markides, C.C. and Williamson, P.J. 1994. Related diversification, core competences and corporate performance. *Strategic Management Journal*, **15** (Special Issue): 149–165.
- Markides, C.C. and Williamson, P.J. 1996. Corporate diversification and organizational structure: A resource-based view. *Academy of Management Journal*, **39**: 340–367.
- Marris, R. 1967. *The Economic Theory of Managerial Capitalism*. London: MacMillan.
- Michel, J.C. and Hambrick, D.C. 1992. Diversification posture and top management team characteristics. *Academy of Management Journal*, **35**: 9–37.
- Miller, J.C. and Pras, B. 1980. The effects of multinational and export diversification on the profit stability of U.S. corporations. *Southern Economic Journal*, **46**: 792–805.
- Olusoga, S.A. 1993. Market concentration versus market diversification and internationalization: Implications for MNE performance. *International Marketing Review*, **10**: 40–59.
- Palepu, K. 1985. Diversification strategy, profit performance, and the entropy measure. *Strategic Management Journal*, **6**: 239–255.
- Qian, G. 1997. Assessing product-market diversification of U.S. firms. *Management International Review*, **37**: 127–149.
- Robins, J. and Wiersema, M.F. 1995. A resource-based approach to the multibusiness firm: Empirical analysis of portfolio interrelationships and corporate financial performance. *Strategic Management Journal*, **16**: 277–299.
- Roth, K. 1992. International configuration and coordination archetypes for medium-sized firms in global industries. *Journal of International Business Studies*, **23**: 533–549.
- Rugman, A.M. 1979. *International Diversity and the Multinational Enterprise*. Lexington, MA: Lexington Books.
- Rugman, A.M. 1981. *Inside the Multinationals: The Economics of International Markets*. London: Croom Helm.
- Rumelt, R.P. 1974. *Strategy, Structure, and Economic Performance*. Cambridge, MA: Harvard University Press.
- Tallman, S. and Li, J. 1996. Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal*, **39**: 179–196.
- Wells Jr., L.T. 1983. *Third World Multinationals: The Rise of Foreign Investment from Developing Countries*. Cambridge, Massachusetts: The MIT Press.
- Yeung, H.W.C. 1994. Transnational corporations from Asian developing countries: Their characteristics and competitive edge. *Journal of Asian Business*, **10**(4): 17–58.