The Indonesian Journal of Geography Vol. 21, No. 61, June 1991, pp. 75 - 89

# FACTORS LIMITING INDUSTRIAL DEVELOPMENT IN PERIPHERAL REGIONS OF DEVELOPING COUNTRIES: A CASE STUDY OF KEDAH STATE, PENINSULAR MALAYSIA

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### ABSTRACT

Many developing countries, Malaysia included, have relied quite heavily on the policy of industrial decentralization to uplift the lagging economies of their peripheral regions. In Malaysia, the Malaysian Industrial Development Authorithy (MIDA) - a federal agency - plays a major role in persuading foreign enterprises to locate in the periphery. In addition to MIDA there are plethora of state agencies which implement state industrial policy. Development officials, in their effort to attract more industries to their respective regions, work on the premise that certain locational factors are critical to investors locational decision- making process. Obviously, development officials have their own perceptions of the attractions and disadvantages of the periphery. This paper (a) examines whether the officials have a good grasp of the industrialists dominant motives for selecting Kedah as production location, and (b) discusses the implications for industrial development if officials assumptions do not concur with industrialists real reasons for selecting Kedah location.

## INTRODUCTION

Morshidi (1988, 1991) has argued that behavioural perspective offers a deeper understanding of the underlying causes of regional inequality. This approach, in addition to the traditional economic explanations, would greatly contribute to regional economic planners attempts to devise appropriate measures to the problems of accelerating industrial development in problem

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regions of developing countries. Industrialists perceptions of economic opportunities in one peripheral region of Malaysia - the state of Kedah - has been investigated (see Morshidi, 1988, 1991). However, in those studies, the discussion has focused only on the attitudes of the Kedah space economy. However, what must not be forgotten is that regional development officials play a key role in the implementation of regional policy, and that they, too, have perceptions of the attractions and disadvantages of the periphery. It is therefore very important, and this is the main purpose of this paper, to consider the attitudes of this group of officials. Their perceptions, particularly their beliefs relating to industrialists reasons for choosing Kedah locations, require closer examination. In this context, it is necessary to examine whether the officials have a good grasp of industrialists dominant motives for selecting Kedah as production location. Misjudging industrialists assessment of the strenghts and weaknesses of Kedah as production location could easily resulted in mis-directed policy measures.

## RESEARCH METHODOLOGY

A questionnaire survey was undertaken to explore industrialists reasons for starting production in Kedah. Individuals (highest executive officers or in some instances other senior officers) possessing a thorough understanding of the motivations underlying their firms decision-making processes were requested to evaluate nine criteria relating to locational decision-making (Table 1). The list represents a combination of possible factors that may have influenced both foreign multinational companies and indigenous businesses in their decision-making processes. Small indigenous firms, for example, may have been strongly influenced by market access. For foreign-owned firms, it is often argued that investment in developing countries has been greatly influenced by three considerations: the need to obtain access to raw materials, to protect and/or to develop a share of production in internal (or regional) markets, and to take advantage of factor costs (notably labour costs) by setting up assembly and processing operations (ILO, 1985, p:2). All these points are covered by factors selected. In addition to inviting industrialists to consider specific factors, the list includes an "other factors" category. This was added for three reasons. Firstly, there is the obvious danger that any predetermined list will not included all relevant factors. Secondly, it was hoped that under this heading firms might mention factors specific to the Kedah periphery; this might provided an indication of the perceived specific advantages of Kedah, relative to other parts of the Malaysian periphery. Thirdly, it was intended that firms should be allowed to mention regional incentives if they wished to do so. This approach, it was felt, would be preferable to including incentives as a separate item in the list of factors; such an inclusion might well have invited firms to react favourably to

incentives in order to encourage their retention by a government decreasingly committed to regional aid.

TABLE 1. LIST OF REASONS FOR INITIATING PRODUCTION IN KEDAH

To increase sales in present markets

To explore new markets

To improve accessibility to new sources of raw material inputs

To improve accessibility to present sources of raw material inputs

Availability of business/specialist services

Availability of cheap industrial land

Availability of semi-skilled and skilled labour

Availability of female labour

Other reasons

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Of a total of 74 manufacturing establishments in active production at the four main industries estates in Kedah at the time of survey, 64 were successfully interviewed (Table 2). The area under investigation is shown in figure 1. In view of high response rate the data has not been treated as a sample survey requiring the application of statistical testings.

TABLE 2. NUMBER OF MANUFACTURING FIRMS IN KEDAH INDUSTRIAL ESTATES

Product type	No. surveyed	(%)	Not surveyed
Electronics/electrical goods	8	12.5	1
Textiles and garments	4	6.3	1
Processed and canned food	6	9.	4
Rubber-based industries	10	15.6	
Timber/wood-based industries	6	9.4	1
Metal products	4	6.3	
Plastics products	6	9.4	1
Chemical products	5	7.8	1
Paper products	4	3.1	
Machinery/motor and bicycle parts	7	10.9	1
Others	6	9.4	
Total	64	100	6

In so far as data collection for official attitude assessment is concerned, it is important to note that officers and departments chosen for investigations are, at the time of survey, actively engaged in industrial promotion and

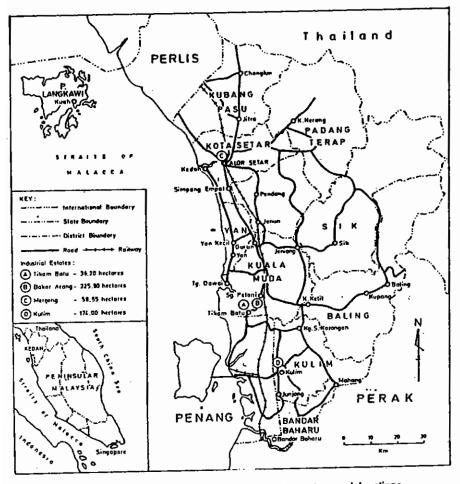


Figure 1. Kedah : road infrastructure, rail infrastructure and locations of industrial estates

development. The government department selected for in-depth interviews were the Property and Land Division of the Kedah State Economic Development Corporations (SEDC), the Satte Economic Planning Unit (Development Section), the Malaysian Industrial Development Authority, Northern Baranch (MIDA) and the Kedah Regional Development Authority (KEDA). Officers from these agencies have a thorough understanding of industrial development issues in the kedah state.

Prior to actual interviews numerous visits were made to establish rapport with them. Consequently, it proved possible to conduct interviews in cordial atmosphere, and it is believed that in most instances it was possible to elicit frank answers.

This paper explores the issue highlighted earlier in the paper by comparing the viewpoints of two sets of respondents: the 12 officials engaged in promoting regional industrial development in Kedah and representatives of the 64 firms operating on the industrial estates in Kedah. Comparison of the views held by these two groups focuses on the 9 factors (Table 1) which were adapted to established in general terms the reasons underpinning industrialists choice of Kedah as a location. The evaluation process involved a semantic scale, and respondents were asked to specify whether factors were of major, minor or no significance in the locational decision-making process.

The results of the analysis based on the nine factors are presented in two groups. The first offers an insight into the aggregate views of industrialists and is essentially a profile of the considerations which appear to have exerted substantial or little influence over locational decisions. It is of interset in its own right, but it also provides the foundation for the second group of results, in which direct comparisons are drawn between the perceptions of officials and the views of industrialists.

It is necessary to recognise that industrialists response to the 9 factors may have been closely related to the attribute of firms such as ownership structure, status of operation, scale of operation, and types of product. However, the selecting Kedah is not discussed in greater detail in this paper because, space limitation aside, the primary objective is to ascertain the accuracy of officials perceptions of the motivations of industrialists as a whole. Even so, firms attributes are not ignored entirely in the discussion since, at a number of points it is helpful to refer to them to further the argument.

#### INDUSTRIALISTS REASONS FOR SELECTING A LOCATION IN KEDAII

From table 3 it is apparent that five factors were considered major by 25 per cent of industrialists or less, and these factors therefore certainly were not dominant influences. These factors were: the availability of cheap land; the availability of business/specialist services; improved accessibility to new raw

materials; and the development of new market. Moreover, it is evident that two of these factors - the availability of cheap land and the availability of business services - were considered particularly unimportant by the respondents. Almost three-quaters of the firms indicated that business service availability was not considered in the decision-making process, while 91 per cent of firms discounted the availability of cheap land. This last finding supports the conclusion reached by Zehender et al. (1978, p:26) that industrial site costs are not an effective incentive for industrialists to locate in the periphery. Four factors stand out as the most influential in the table and therefore some elaboration is appropriate. These are the availability of semi-skilled or skilled labour; other factors; the availability of female labour; and the aim of increasing sales in existing markets.

TABLE 3. INDUSTRIALISTS REASONS FOR INITIATING PRODUCTION IN KEDAH

	No Minor part part (percentage)		Major part
Reasons in rank order			
Availability of semi-skilled and skilled labour	15.6	26.6	57.8
Other reasons	-	-	54.7
Availability of female fabour	28.1	17.2	53.1
To increase sales in present markets	43.8	17.2	39.0
To explore new markets	54.7	20.3	25.0
To improve accessibility to new sources of raw material inputs	56.3	29.7	14.0
To improve accessibility to present sources of raw material inputs	54.7	29.7	14.0
Availability of business/specialist services	73.4	14.1	12.5
Availability of cheap industrial land	90.6		7.8 <sup>*)</sup>

Note: "Does not total 100 per cent because "Not Applicable" category is excluded.

Investment to expand in existing markets was particularly associated with electronics and electrical firms and, to a certain extent, rubber-based industries. Electronics firms are keen to satisfy expanding demands for integrated circuits within the Asian regional markets, chiefly because Asian NICS are becoming important end-users. For rubber-based industries, particularly those involved in the production of surgical gloves, there was a sudden increase in world demand for this product in the mid- 1980s; this reflect concern about the spread of AIDS.

While the maintenance of markets was a moderately important factor in eyes of industrialists, it was exceeded in importance by labour related factors and by other factors. Labour considerations stand out distinctively as being of major importance in influencing locational decision-making. No less than 58

percent of respondents cited the availability of semi-skilled and skilled labour, and another 53 per cent mentioned the availability of female labour. Analysis by firms organisational characteristics revealed that irrespective of product type, ownership structure and status of operation, at least 50 per cent of firms acknowledged labour factors to be of major significance. Even so, the influence exarted by labour supply considerations must not be overstressed. Fifty-eight per cent of firms may have considered the availability of skilled and semi-skilled labour to be a major factor in their decision-making but this is, after all, no more than a small majority. Moreover, 60 per cent of firms established prior to 1976 stated that female labour availability was of no importance, primarily because a substantial majority of firms in this category have small numbers of employees and their production processes require no unskilled female workers.

Under the other factors heading, four reasons were cited as having a significant influence in the least one of the four (Table 3). Firstly, small, wholly Malaysian-owned firms tended to cite personal reasons. These firms mainly started up production close to, or in, the owners home area, so that their location in Kedah was largely a process based on chance. Secondly, in a number of instances firms indicated that they were directed to locations in Kedah by decision-makers in the political system. These firms were established as joint-ventures with Kedah state agencies, with the latter being the major shareholder. In return for allowing themselves to be persuaded to adopt peripheral locations, the minority private-sector shareholders would received favourable considerations in their future ventures. Thus a tacit understanding was reached that federal and state governments would substantially relax planning and other restrictions for these investors. It is interesting to note however, that the consensus of opinion among the managers of these firms was that, in purely business terms, Kedah has not proved to be at all appropriate as a location, considering the nature of activity they are engaged in.

Thirdly, large, foreign-owned firms typically considered that MIDA has played a leading role in swaying the decision towards investment in a development area. Kedah was well promoted as a potential investment location, and the consensus of opinion was that, through MIDA, the application procedure for manufacturing licences has been substantially reduced. Industrialists were impressed with the personal attention given by MIDA's officer responsible for Kedah, and in their view such a reception helps in dispelling doubts and uncertainties relating to initiating production in a less-developed region. This observation echoes that of Stafford (1974, p:180), who demonstrated that personal contacts played an important role in the location decision-making process. It should also be related to the work of Burgess (1982) since it confirms the importance of, to use Burgess's term, selling places. The key benefits identified with respect to MIDA were that the agency made it possible for industrialists to decide on a location quickly and to

start production without delay. Other comments made by these emphased, however, that the existence of one highly effective agency does not guarantee that other agencies will be equally effective and influential in locational decision-making. In this connection, the SEDC for Kedah was frequently mentioned by respondents. The general feeling among industrialists was that, had their initial contact been with SEDC, a substantial majority of industrialists would not have invested in Kedah. In their opinion the Kedah SEDC was tactless in dealing with foreign industrialists who are very concerned about equity participation, about restrictions on the employment of foreign expatriates and about ethnic quotas in employment. Industrialists acknowledged the fact that these regulations are central government policy, but in their opinion planners in Kedah state could have made greater efforts to present them as acceptable restrictions which would not undermine firms activities. Comments such as these are very damaging in the context of policies to stimulate peripheral industrialisation because, as Watts (1987, p:133) argues, negative images may be critical: in the long run, once a view is established it becomes very difficult to change. Industrialists need a good reason to put aside their prejudices (Burgess, 1982, p:12); simply being told that their image of the periphery and the state government machinery are incorrrect is insufficient. Taken together, these comments made by industrialists about the Kedah SEDC and MIDA provide the strongest indication that decisions could be strongly influenced by factors specific to this part of the periphery.

Fourthly, other reasons for locating in Kedah included the attraction of industrial incentives. Thirty-four firms had received this form of government assistance, whereas the remaining 30 failed to qualify for aid because they were not engaged in export-oriented activity and/or their capital outlays and numbers of employees were substantially below the pre-set level. Of those which had benefited from incentives, 68 per cent considered their availability had a major influence on the location decision. Firms that appear to have been influenced strongly by incentives were in the rubber-based, electronics and electrical, textiles and garments and machinery sectors. While it is apparent that incentives must be considered a significant force, however, two considerations point to the conclusion that their role in the economic restructuring of Kedah should not be over-emphased. Firstly, the incentives available in this state are no different to those offered by states in other parts of the periphery. Incentives do not, therefore, explain any preference for Kedah. Secondly, it is necessary to recognise that - in absolute terms - only 23 firms out of a total of 64 in the survey believed that incentives exerted a major influence over the locational decision. Viewed from this perspective, the finding on incentives appear to reinforce the conclusions of other studies conducted elsewhere in Malaysia (Karunaratne and Abdullah, 1978, p:265; SERU, 1982, p:32; Singh, 1976, p:193). These found that substantial tax concessions were generally considered

to be a bonus and were only seen as major influences on the location decision by a minority of firms. In most instances, favourable regulations concerning the repatriation of profits and capital were considerably more important. Consequently here, as in other developing countries, it may now be inappropriate to view tax concesion incentives as substantial catalysts for regional development (Singh, 1976, p:192).

At this juncture it is necessary to explore whether the picture painted so far changes substantially when factors which had a minor influence are added to those which were considered to have been of major importance. To assess this, following Herron (1981, p:16), the rangkings which factors had when only major influences were considered have been compared with the rangkings that emerge when major and minor influences are combined. From table 4, it is evident that the introduction of minor influences makes almost no difference to the interpretation of results. The only real exeption to this generalisation is with respect to other reasons which drops 2 ranks. This latter point seems to indicate that other reasons, if they are influential at all, tend to be very influential.

TABLE 4. RANK ORDER OF INDUSTRIALISTS REASONS FOR CHOOSING A KEDAH LOCATION

Reasons	Major part (rank)	Major and minor part (rank)	Deviati- ons bet- ween rankings
Availability of semi-skilled and skilled labour	1	1	0
Other reasons	2	4	-2
Availability of female labour	3	2	+1
To increase sales in present markets	4	3	+1
To explore new markets	5	5	0
To improve accessibility to new sources of raw material inputs	6	6	0
To improve accessibility to present sources of raw material inputs	6	6	0
Availability of business/specialist services	8	8	0
Availability of cheap industrial land	9	9	0

## DEVELOPMENT OFFICIALS PERCEPTIONS OF THE REASONS

With respect to officials perceptions, the same set of 9 factors were again adopted; and, for the same reasons noted earlier, the list included an other factors category. As was indicated earlier, the 12 officials included in the survey were those most directly involved in the promotion of industrial development in

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Kedah, and they were not, therefore, selected by a sampling procedure. It is also important to note that, because the group of officials was small, the results must be interpreted with caution and care summarised in table 5, three aspects of require examination. Firstly, when factors which played no part, or only a minor part are taken together, only 2 factors (female labour and cheap land) were thought unimportant by the large majority (no less than 80 per cent) of respondents. Secondly, substantial minorities of officials thought that opportunities to increase sales in present markets and other reasons were of major importance. So far as pther reasons were concerned, the officials were dominantly thinking of government incentives and infrastructural investments. They were convinced that regional incentives had compensated industrialists for higher development costs in the periphery, and they justified the country's considerable loss in revenue caused by tax exemptions by arguing that revenue forgone would eventually be recovered through the promotion of new investment.

TABLE 5. OFFICIALS PERCEPTIONS OF INDUSTRIALISTS REASONS FOR INITIATING PRODUCTION IN KEDAH

	No part (r	Minor part percentaç	Major part je)
Reasons in rank order			
To improve accessibility to present sources of raw material inputs	16.7	25.0	58.3
To explore new markets	25.0	25.0	50.0
To improve accessibility to new sources of raw material inputs	25.0	25.0	50.0
Availability of business/specialist services	8.3	41.7	50.0
Availability of semi-skilled and skilled labour	8.3	41.7	50.0
To increase sales in present markets	41.7	16.6	41.7
Other reasons			41.6
Availability of female labour	41.7	41.7	61.7
Availability of cheap industrial land	91.7	-	8.3

Thirdly, a majority of respondents believed that no less than 5 factors had had a major influence on industrial investment in Kedah. Examination of table 5 reveals that this range of factors was diverse: present and new raw materials access, opportunities for new markets, availability of business/specialist services and supplies of semi-skilled and skilled labour. The size and diversity of this range strongly suggests that the officials had a favourable impression of the area for which they were responsible. Indeed, the implication that Kedah is seen to be highly attractive in a wide range of respects is strengthened by the fact that no factor was identified as being of overwhelming importance. However, it is

interesting to note that the factor awarded the greatest weight by the officials was access to business and specialist services, which was considered to be of major or minor significance by 92 per cent of respondents.

As in the previous section the analysis has been extended to established whether systematic comparison of major factor and minor factor ratings highlights significant additional result (Table 6). The changes are not dramatic but two aspects of the findings need closer examination. One is the deviation of +2 for female labour. This underlines officials tendency to regard this factor as being of widespread minor importance. The other is that the deviations of -2 emphasise there is a belief that accessibility to input sources and new markets exert a major, rather than a minor, influence.

TABLE 6. RANK ORDER OF DEVELOPMENT OFFICIALS PERCEPTIONS OF INDUSTRIALISTS REASONS FOR SELECTING A KEDAH LOCATION

Reasons	Major part (rank)	Major and minor part (rank)	Deviati- ons bet- ween rankings
To improve accessibility to present sources of raw material inputs	1	3	-2
To explore new markets	2	4	-2
To improve accessibility to new sources of raw material inputs	2	4	-2
Availability of business/specialist services	2	1	+1
Availability of semi-skilled and skilled labour	2	1	+1
To increase sales in present markets	6	7	-1
Other reasons	7	8	-1
Availability of female labour	8	6	+2
Availability of cheap industrial land	9	9	0

## A COMPARISON OF INDUSTRIALISTS AND OFFICIALS PERCEPTIONS

At this stage, it is necessary to draw together the two separate analyses above and assess the levels of agreement and disagreement between both sets of respondents. In this part of the paper major and minor influences on location decisions are analysed separately, using a technique of graphical comparison (Figure 2(a) and 2(b)).

It is immediately evident from the analysis of major influences that both sets of respondents were in agreement with respect to only three factors: the availability of cheap land, opportunities to increase sales in present markets and the availability of semi-skilled and skilled labour. Both sets of respondents attached great importance to the availability of semi-skilled and skilled labour

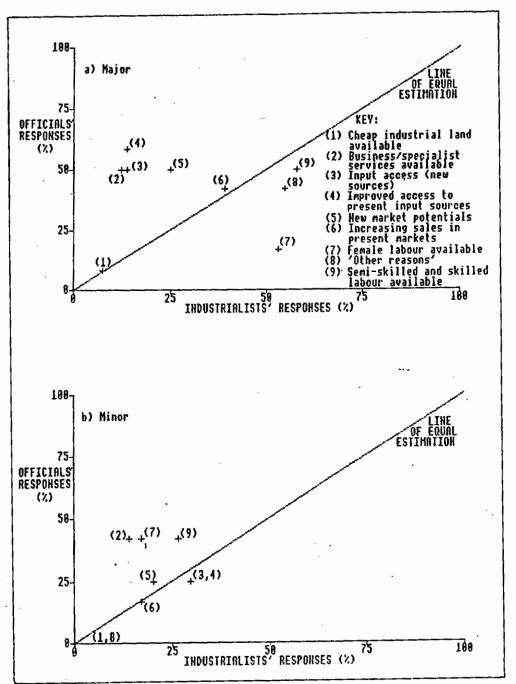


Figure 2. Industrialists and officials' perceptions of influences on location decision-making processes

but, conversely, less than 10 per cent thought that the availability of cheap land was a major influence.

Disagreement between the percentions of industrialists and officials was therefore recorded for most factors, and substantial discrepancies emerged clearly. On the one hand, there was a strong tendency for officials to overestimate the importance which industrialists attached to 4 factors: the availability of business/specialist services, access to present and new sources of raw materials, and the potential for developing new markets. On the other hand, officials underestimated the influence of female labour availability and, to a much lesser extent, other reasons on industrialists location decisions.

When the nine factors are considered as minor influences, graphical comparison reveals a considerably higher level of agreement between industrialists and officials (Figure 2(b)). Agreement is recorded with respect to six factors. For two of them - the availability of cheap land and other reasons no respondents in either group thought that these factors were influential at this level. The four other factors on which there was agreement were the goal of increasing sales in existing markets; the development of new markets; the attractions of new raw material sources; and access to existing raw material sources. There were all believed to have been of minor importance by between 15 and 30 per cent of industrialists and officials.

While it is important to stress the relatively high level of agreement recorded with respect to minor influences, the fact that disagreement was also observable must not be overlooked. Disagreement was recorded with respect to three factors: the availability of semi-skilled and skilled labour, the female labour supply and the availability of business/specialist services. In all three instances, the trend was for officials to overestimate the number of firms likely to consider these factors to be of minor importance. This might of course, simply reflect a tendency for officials to underestimate the importance of these factors as major influences. Comparison of figures 2(a) and 2(b) show that in one instance - the female labour supply - this was in fact the case. Coversely, however, the role played by the attraction of business services was substantially overestimated by the officials in both cases. In this respect this factor is unique amongst those considered in this chapter, and it therefore underlines particularly clearly the importance of distinguishing between the perceptions of officials and the experiences of industrialists.

#### CONCLUSION

One immediate conclusion from the foregoing discussion is that officials tend to overestimate the importance which industrialists attach to a significant number of factors. In terms of market forces, officials believe that industrialists

The findings presented in this paper has serious implications for strategies intended to attract industry to the periphery. There is always the danger that, in their promotional materials, development officials will provide detailed and correct information on factor which they presume to be important, but which are in reality less significant for potential investors than other criteria.

In the academic sphere the investigations that have been presented highlight opportunities which exist to theorise about the relationships between perception and spatial investment processes. Ultimately, the goal should be to set the resulting concepts in the context of regional development theory. It would, however, be highly presumptuous to claim that the findings provide definitive answers to fundamental questions pertaining to inter-regional disequilibrium. The study reported in this paper has been essentially exploratory and its results provide many more questions than answers.

## REFERENCES

- Burgess, J.A., 1982. Selling places: environmental images for the executives. *Regional Studies*, 16, 1, pp. 1-17.
- Herron, F., 1981. Post Industry Act (1972) industrial movement into, and expansion in the Assisted Areas of Great Britain: some survey findings. Government Economic Services Working Paper, no.46.
- ILO, 1985. Employment effects of multinational enterprises in developing countries. Geneva: International Labour Office.

- Karunaraine, N.D., and Abdullah, M.B., 1978. Incentive scheme and foreign investment in the industrialization of Malaysia. *Asian Survey*, 17, 3, pp. 261-74.
- Kedah SEDC (n.d.). Investment in Kedah, Malaysia. Alor Setar: State Economic Development Corporation.
- Morshidi, S., 1988. Industrialists perceptions and the implications for peripheral area development: the case of Pulau Pinang and Kedah. Malaysian Journal of Tropical Geography, 18, December, pp. 35-45.
- Morshidi, S., 1991. Persepsi pelabur dan pembangunan industri di antara kawasankawasan pusat pinggir di negeri-negeri Pulau Pinang dan Kedah. (forthcoming in Kajian Malaysia).
- SERU, 1982. The locational survey of manufacturing firms. Overall report. Kuala Lumpur: Socio-economic Research Unit.
- Singh, M.S., 1977. Spatial and structural patterns of manufacturing in West Malaysia. Unpublished PhD. thesis, University of London.
- Stafford, H.A., 1974. The anatomy of the location decision: content analysis of ease studies, in Spatial perspectives on industrial organisation and decision-making, ed. F.E.I. Hamilton. New York: Wiley. pp. 169-187.
- Watts, H.D., 1987. Industrial Geography. Harlow: Longman Scientific and Technical.
- Zehender, W., Gerau, J., Heins, H., Kloke, A., and Koberstein, B., 1978. Industrial location behaviour of Malaysian and foreign investors the effectiveness of the Malaysian decentralization policy. Berlin: German Development Institute.