

# **REGIONAL EXPORTERS IN UNFAVOURABLE ECONOMIC CONDITIONS: A CASE STUDY OF THE SHOALHAVEN 2001 AND 2007**

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## **INTRODUCTION**

There is now a substantial, if still somewhat inconclusive, literature which explains regional performance in terms of dynamic externalities or spill-over of new knowledge among firms in regional industrial clusters or urban centres. This has evolved into a debate on the relative importance of externalities of specialization versus those of diversity. Most of the empirical research on this topic has occurred in highly developed regions with large urban centres, particularly in European Union countries. This paper examines whether these dynamic externalities are also significant in peripheral regions.

It uses as a case study the Shoalhaven 'region' in NSW, Australia. The Shoalhaven, although administratively a local government area, functions relatively autonomously of the rest of the Illawarra Region. It recorded employment and population growth above the NSW State average, but has a dispersed population with no major urban centre and no identifiable industrial clusters. Thus the obvious bases for location externalities as a cause of this growth are not present. The Shoalhaven has a number of innovative small firms which export niche market products throughout the world and provide good examples of regional entrepreneurial behaviour. As exporters their performance will be influenced by external economic conditions as well as business relationships. Australian economic conditions have not been conducive to value-added exports in recent years due to an appreciating exchange rate associated with the current 'resources boom', which provokes illusions to the so-called *Dutch Disease* phenomenon.

This case study analyses the business responses of innovative regional entrepreneurs to testing economic conditions. From these responses, the relative importance of the different types of location externalities is extracted and related to regional development outcomes. In doing so, it synthesises three areas of analysis: agglomeration economies, small business entrepreneurship and regional trade theory. This enriches the understanding of regional growth and decline in peripheral regions and indicates whether they should be considered as a separate topic or can be incorporated into a more general externalities approach to regional analysis.

## **LITERATURE REVIEW**

### *Agglomeration Economies and Competition*

Regional economic development when discussed as an endogenous process emphasises the role of agglomeration economies, and specifically the positive benefits or externalities which flow from the interaction of firms. As discussed below, these location externalities take various forms involving inter-firm cooperation either intentional collaborations or as a by-product of transactions between firms; are analysed in both static and dynamic formats, and in relation to both specialisation and

diversity in regional economic structure. Within this literature there is a secondary debate regarding the role of competition on regional development.

Static location externalities are categorised into localization and urbanization economies which explain the clustering of firms in particular locations. Localisation economies arise from the exploitation of a natural resource base, an available labour supply or other comparative advantage factors and historical accident. They explain clusters in the form of concentrations of firms in the same industry that utilize these resources, together with their suppliers and associated service firms, and include industrial districts. Firms in industrial clusters benefit from backward and forward input-output linkages or supply chains and from access to specialised labour markets. Urbanization economies accrue to all local firms and arise from strong local demand, increased market size or positions on major transport routes. They explain urban development associated with the co-location of firms from different industries which benefit from economies of scale and scope arising from shared infrastructure and access to large procurement and consumer markets. Location externalities explain the current urban pattern and industrial structure of a regional system, however they do not explain regional growth and development (Markusen, et al. 1986, Davelaar 1991, Glaeser, et al. 1992, Malecki 1997, Scott and Storper 2003, Bun and Makhloufi 2007). Localization and urbanization economies have been incorporated into cluster analysis and are considered particularly important in explaining the role of small and medium enterprises in regional development (Baptista and Swann 1998, Schmitz and Nadvi 1999, Gordon and McCann 2000).

Dynamic externalities involve interactions between firms in an industrial or urban cluster whereby technical or marketing innovations by one firm will spillover into associated firms providing them with unpriced benefits that augment the recipient firm's productivity and profitability. Knowledge spillovers occur when ideas and information associated with innovations or improvements initiated in one firm are spread among firms, and so increase productivity throughout that region. These benefits may occur when the affected firms operate in the same industry, where they are known as Marshall-Arrow-Romer<sup>1</sup> (MAR) externalities or economies of specialisation. MAR externalities arise from the movement of key personnel among local firms, pecuniary advantages and technical or knowledge spill-overs among firms, and are associated with industrial clusters. When knowledge spill-overs occur among firms in different industries, they are referred to as Jacobs<sup>2</sup> externalities or economies of diversity, and are usually associated with urbanization. (Greunz 2004, Panne 2004, Bun and Makhloufi 2007).

Within the analysis of agglomeration economies there is a clear presumption that spatial agglomeration is needed to benefit from these externalities, as complex information and trust building both require frequent face to face communication to yield positive benefits. External benefits are seen to decline rapidly with spatial distance. Spatial concentration, it is argued, continues to be significant despite declining transport and communications costs and the rise of broadband

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<sup>1</sup> A. Marshall (1890), *Principles of Economics*, Macmillan, London; K.J. Arrow (1962), "The economic implications of learning by doing", *Review of Economic Studies*, Vol. 29, pp. 155-173, P.M. Romer (1986), "Increasing return and long run growth", *Journal of Political Economy*, Vol.94, pp. 1002-1037.

<sup>2</sup> J. Jacobs (1969), *The Economy of Cities*, Vintage, New York.

communications technologies that allow the rapid transmission of complex information around the globe. Spatial concentration still yields benefits when the knowledge involves small scale, non-routine, ambiguous or tacit information which requires face-to-face contact for effective transmission, and where markets are characterised by continuous innovation, product differentiation and uncertainty. Thus, they form the basis of regional development theory, and particularly apply to analyses of large industrial and metropolitan regions. Agglomeration analysis places the policy focus on endogenous or internal regional capacities as the basis for regional development, and particularly emphasise the capacities of local entrepreneurs to organise and utilise the resources required for their firm's development and growth (Feldman and Audretsch 1999, Scott and Storper 2003, Panne 2004, Groot, et al. 2007).

A further line of inquiry has related to the economic environment in which the firm operates and how this impacts on the performance of regional firms. The regional environment may form a 'creative milieu' or knowledge base which feeds the innovation of local firms, supporting them to develop world leading products. Firms operate within local and external networks. Through external networks they access new industrial knowledge which supports their innovation activities. Through local networks, this knowledge is spread throughout the local region to benefit other local firms. Networking activities are thus complementary to and inter-related with regional agglomeration economies. Networking also facilitates inter-firm collaborations, partnerships and alliances which are intensive generators of regional agglomeration economies (Simmie 1997, 2001, Maillat 1997, Todtling 1990, 1994).

Within this analysis, there is an underlying tension regarding the role of competition. The MAR approach argues that local monopoly will favour innovation as it restricts the flow of ideas to others and maximizes rents from innovation. Jacobs externalities are considered to be associated with beneficial impacts from local competition as this induces faster transmission of new ideas, information and technologies among local firms, encouraging new innovations. Positive effects arising from local competition are also known as Porter<sup>3</sup> externalities. However, when externalities from specialisation are present, local competition may deter innovation as this can stimulate imitation and price competitive strategies (Panne 2004, Bun and Makhloufi 2007, Desrochers and Hospers 2007).

There has been extensive empirical testing of these ideas. Indeed, Groot, et al. (2007) identified 322 such studies in a recent review. Most studies still cautiously conclude that the evidence on the relative importance of specialisation versus diversified local production structures is inconclusive, with evidence to support both types of externalities being found under different circumstances. Nevertheless, there is a broad tendency to agree that there is more evidence to support the positive effects of diversity and competition (Jacobs externalities) on growth, while the effects of specialisation (MAR externalities) are less conclusive (Groot, et al. 2007, Desrochers and Hospers 2007). However, studies in less densely urbanised countries such as Finland or the Netherlands found more evidence to support specialisation (Panne 2004, Makkala 2004). The results of a study by Greunz (2004), while generally

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<sup>3</sup> M. Porter (1990), *The Competitive Advantage of Nations*, Free Press, New York.

supporting diversity, also found MAR externalities to be more dominant for lower technology intensive sectors.

### *Entrepreneurship and Business Strategies*

Thus modern spatial economic theory places a strong emphasis on agglomeration economies and networking in explaining variations in regional performance associated with innovation and information transmission. These factors have become increasingly significant in differentiated product markets and where the traditional factors of regional differences in production and transport costs are becoming less relevant to explaining location decisions. Regional performance also relates to the capacity of local firms to generate income from outside the region. An earlier interest in inter-regional trade has now moved towards international trade performance, and the capacity of the regional environment to support the internationalisation of its firms. A substantial international business literature has developed around this aspect of economic growth. Two broadly accepted frameworks that are relevant to export performance are the entrepreneurial focused resource-based theory, pioneered by Penrose (1959) and advanced by Wernerfelt (1984) and Barney (1991) and the networked focused industrial organisation theory developed by Baumol (1968), Hofer (1975), and Porter (1980, 1990). These approaches are discussed below.

The resource-based view (RBV) of export performance has an inward orientation, in which the achievement of superior export performance is dependent on the ability of the firm to create a sustainable competitive advantage. The firm's success depends on an entrepreneurial team which can accumulate a sufficient level of knowledge, capabilities and resources to create a sustainable competitive advantage within differentiated product markets. Wernerfelt (1984, p. 172) describes resources as "those tangible and intangible assets which are semi-permanently tied to the firm". As described by Barney (1991), if the firm possesses assets that are valuable, rare, imperfectly imitable, and unable to be perfectly substituted, it is more likely to improve its performance relative to that of competitors. However, under this theory a sustainable competitive advantage is only expected to occur when a firm's internal resources surpass its competitors under the same external conditions (Dhanaraj and Beamish, 2003).

In this approach, the innovative capacities of the firm's entrepreneur are crucial to its success and the firm is generally conceived as a small business. With limited resources, innovators predominantly build upon prior knowledge and are influenced by the culture and habits of their surrounding regional environment (Nelson and Winter 1982, Werker and Athreye 2004). The entrepreneurial focus in the resource-based view of the firm is on the creation of competitive advantage over rivals through internal resource capabilities. It emphasizes the capacity to keep innovations private to prevent imitation. Such firms thus tend to operate in isolation from other firms in their region or industry. It is inferred that they would rely on their internal capacities to support exporting and thus predominantly utilize direct exporting or foreign investment modes.

The industrial organisation approach suggests that entrepreneurs seek a competitive advantage through interactions with the market place in which they operate. Market related assets are most commonly categorised as intellectual assets and relational assets (Srivastava, 1998). Intellectual assets occur through the accrual of knowledge.

However, it is crucial to recognise that firms require both access to knowledge and an absorptive capacity to accept and implement the knowledge into the culture of the firm (Thorpe et al., 2005; Audretsch and Lehmann, 2006). Relational assets are more likely to occur through interaction with other operators in the market. Therefore it is important for firm to understand that shifting trends in a market provide opportunities, and the ability of the firm to continually modify strategies is instrumental in retaining a competitive advantage. Entrepreneurs recognise and act upon new economic opportunities. In this approach, the entrepreneur has an important role in creating and transmitting new knowledge throughout their region via local networks, thus facilitating diversity (Audretsch and Keilbach 2004).

The industrial organisation approach is more consistent with the agglomeration regional analysis than the RVB in that it emphasises the role of inter-firm collaboration in both accessing new information and market expansion. Whilst this view incorporates the role of the external product market in determining export performance, it does not provide an understanding of what internal resources the firm requires to take advantage of these opportunities. Networking is viewed as one method that a smaller firm can use to access the resources and information needed to support international market expansion. Export success also depends on economic conditions in these export markets and the capacity of the firm to recognise and adjust to changing conditions.

#### *Exogenous Economic Conditions and Regional Exports*

Foreign competitors' prices, domestic input prices and the real effective exchange rate impact on the international competitiveness of a firm and its region. Exchange rate fluctuations that result in favourable conditions for the exporter occur through a depreciation of the domestic currency, thus increasing the international competitiveness of a firm and its region by increasing both export intensity and export volume. Uncertainty in the international business arena is often linked to volatile fluctuations in the exchange rate. This volatility effectively deters further commitment of resources to the export market, often dampening export performance even in favourable conditions (Bernard and Jensen, 2004; Campa, 2004; Edwards and Alves, 2006).

Inflation within the domestic economy impacts the real effective exchange rate and thus, the foreign price of domestic goods. Inflation is also pivotal in increasing intermediate product prices and wage inflation. This causes an increase in the unit labour cost of production and has a dominant effect on the ability to produce exports, particularly product ranges that are labour intensive (Liu and Shu, 2003). Edwards and Alves (2006) indicate that a rise in the domestic price index will decrease the profitability of the export sector relative to the domestic sector, constraining supply and causing a shift in production away from export markets.

Changes in foreign income and the role of export demand has been stressed in the international trade literature, despite being regarded as relatively less important than the ability to produce viable exports (Edwards and Alves, 2006; Salomon and Shaver, 2005). Entrepreneurs need to be aware of conditions in the external product markets and countries in which they operate in order to retain their competitive advantage. Knowledge of these external markets allows the entrepreneur to shift the operations of the firm into higher growth markets and realise increased export performance. The

inability to adapt to changing conditions within an external product market may result in a loss of export performance and competitive advantage.

Explanations of regional economic growth thus need to synthesise spatial agglomeration analyses with an understanding of entrepreneurial behaviour within a context of international economic conditions. Dynamic externalities explain growth in terms of the creation of innovations and the transmission of this new knowledge throughout the region. The transmission of knowledge can occur within industrial clusters resulting in MAR externalities from specialisation or within urban centres resulting in Jacobs externalities from diversity. The role of the small business entrepreneur is seen as crucial within this process, both in terms of their preference to operate within specialised or diverse networks and in terms of their capacity to identify and capitalise on new opportunities as they arise in external markets.

The relative importance of these two types of externalities is debated as is the relative importance of competition and local monopoly on innovation and growth. A substantial number of empirical studies have been undertaken on this topic. However, often from data convenience reasons, the majority of these have focused on dense urbanised regions. This study extends this area of research by examining the roles of agglomeration externalities and entrepreneurship in a rural, diversified region, Shoalhaven, NSW, Australia. It also explicitly includes an analysis of changing external market conditions as a way of highlighting entrepreneurial reactions and the role of externalities on innovation in such regions. For the purposes of this study, export performance is used as a proxy for innovation, as will be justified below.

## **THE STUDY**

The Shoalhaven is a local government area within the Illawarra Region of New South Wales, Australia located on the eastern coast approximately two hundred kilometres south of Sydney. Originally settled as a forestry and dairy farming area, it attracted a diversified range of manufacturing activities as part of a decentralisation program in the 1980s. While most of these firms are located in the main urban centre of Nowra, industrial activity is scattered throughout the area. Not densely populated by European standards, the Shoalhaven has achieved population and employment growth above NSW State averages and commensurate with the national level (Atkin 2008).

The Economic Development Office of the local council encouraged local firms to develop an export capacity during the mid to late 1990s. In 2001-02, a survey was conducted of exporters to measure their performance and determine the business strategies being used. At that time, Australia had completed a process of opening its markets to international competition supported by industry policies to improve labour skills and technology within local firms. Economic conditions at that time supported exporting, with a relatively low exchange rate and depressed national demand (Hodgkinson, et al. 2003). By 2007, economic conditions had changed considerably involving a substantial appreciation of the exchange rate, strong domestic demand from the 'Asian resources boom', and a *laissez-faire* approach to industrial development, although substantial programs to support R&D and new start exports remain in place. It was decided to resurvey in the area, to assess how these changed conditions had impacted on regional exporters.

The 2007 survey collected data from 24 exporters in the Shoalhaven local government area identified by the local representatives. Data on sales, employment and exports were collected for the period 2000/01 to 2006/7. This allowed a direct comparison of values and growth for these performance indicators with the earlier survey which collected data for the 1996/7 to 2000/1 period. Data was also collected on corporate, production, research and development, marketing and exporting strategies. This allowed a comparison with results from the earlier survey to show whether business strategy had changed over the two periods. In addition, firms were queried about how the changing economic environment had impacted on their business and what measures that they had adapted to combat these effects.

Using data from the two surveys will highlight changes in economic and export performance and business strategies in this LGA, thus relating economic growth to theories of entrepreneurial behaviour. It also highlights changes in innovation and information transmission behaviours among these entrepreneurs, thus allowing the relative importance of different types of externalities to be identified and related to economic performance. Due to different economic conditions prevailing in the two time periods, the results regarding the relative importance of externalities can be related to entrepreneurial capacity to adapt to new market opportunities and its impact on economic performance.

The majority of firms in both surveys were small businesses using Australian Bureau of Statistics (ABS) categories based on employment (65%) and export value (70%), although a majority would be categorised as medium sized based on sales turnover (61%)<sup>4</sup>. Comparison of the different measures of business size suggests that exporters in the Shoalhaven are pushed into higher brackets of business size due to their sales turnover. It appears that small exporters in the Shoalhaven have become involved in niche markets that generate relatively high sales values where they can achieve greater dollar turnover per worker. There had been a considerable turnover in exporters between the two surveys. A number of larger exporters had ceased exporting and in many cases had closed down in the interim. These had been replaced by new, smaller firms. The majority of exporters were manufacturers (65%). However, these were highly diversified by sector and in both surveys no evidence of industry clusters found among exporters.

## **RESULTS**

### *Sales Turnover and Export Performance*

A summary of performance indicators for the two survey periods is shown in the following table. Sales values and growth were very similar over the two periods. However, there were significant differences in export performances. Average export intensity and export growth were considerably lower in the five years to 2007 compared with 2001. Current exporters were much more cautious about entering exports, and tended to focus on developing their domestic markets first whereas in the earlier period the 'born global' concept had been more prevalent. Exports also tended to be opportunistic rather than based on a long term business strategy. Most firms indicated that they were only partially satisfied with their export performance in the

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<sup>4</sup> Small firms are categorised as having 1 to 19 employees and less than \$A1 million in export value or sales turnover. Medium firms are categorized as having 20 to 199 employees and between \$A1m and \$A20m in sales turnover and export value (ABS 2006).

2001 to 2007 period. While they were more satisfied with export profitability, this was also often lower than had been expected.

**Table 1: Performance Indicators**

Export Performance Indicators	1996-97 to 2000-01	2001-02 to 2006-07
Average Sales turnover in year (\$m)	13.3 (2000/01)	12.5 (2005/06)
Average Sales growth (%)	4.6	4.5
Highest Total Annual Export Sales Value Achieved in year (\$m)	89.5 (2000/01)	48.1 (2005/06)
Total Export Sales Growth (%)	200	16
Average Export Sales Growth (%)	113	-42
Highest Annual Growth Rate of Total Export Sales Value in year (%)	54 (1998/99)	13 (2005/06)
Lowest Annual Growth Rate of Total Export Sales Value in year (%)	8 (2000/01)	-10 (2006/07)
Average Annual Growth Rate of Total Export Sales Value (%)	33	3
Average Export Intensity	36	26

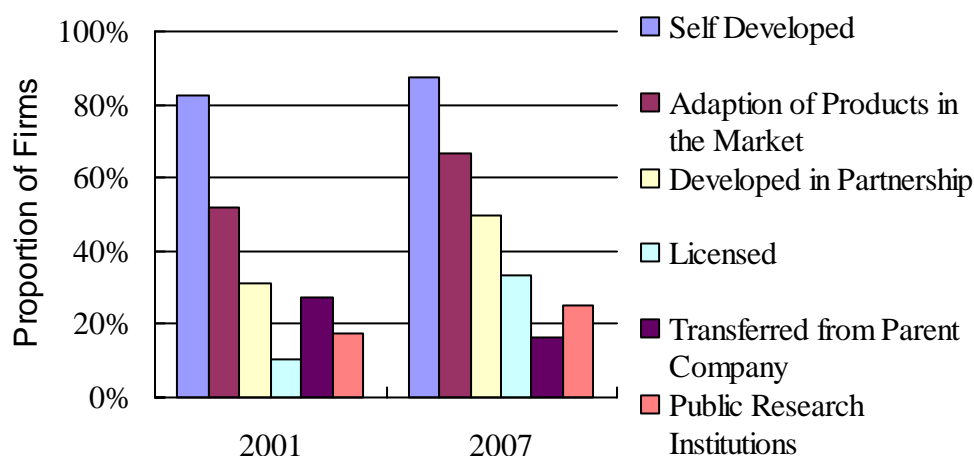
Source: 2007 Shoalhaven interview data and 2001 interview data from Hodgkinson et al. (2003).

### *Business Strategies*

In 2007, the main areas of competitive advantage identified by exporters were technical innovation and product differentiation supported by after sales and client service. Thus these firms were relatively innovative and exported new varieties of mainly lower technology intensive products aimed at the high end of niche markets (Atkin 2008). It is interesting to note that the 2007 firms recognised that price competitiveness had been important in 2001, when they had price advantages from a depreciated currency. However, the respondents to the 2001 survey did not see price competitiveness as an important determinant of their export sales at that time. Thus, while price competition associated with exchange rate changes does seem to be a significant determinant of export performance in the region, small niche-focused firms do not necessarily recognise this situation.

There had been a movement towards greater specialisation and flexibility in production strategies in 2007, with less emphasis on cost reductions than in 2001. This change in focus towards higher end and specialised product development and client service is probably wise for small firms, which are unlikely to be able to compete on cost in export markets. There had been more capital investment and investment in new technologies throughout 2001-2007, particularly associated with expanded capacity, which has helped overcome the capacity constraint identified in 2001. It is possible that the growth in domestic sales, which provides a more secure source of revenue, provided the confidence to undertake this new investment. In 2001, with a greater reliance on more risky exports for sales, firms were cautious about undertaking new investment and this often resulted in a capacity blockage against expanding export sales. Capacity constraints were not an important barrier to exports in 2007.

**Figure 1: Source of New Technologies 2001 and 2007**



Source: 2007 Shoalhaven interview data and 2001 interview data from Hodgkinson et al. (2003)

Most of the 2007 firms had undertaken research and development (R & D) and workforce skills upgrading. R & D had predominantly involved developing their product range and small, continuous improvements in their production processes, which is consistent with the change in their product strategies. Most firms developed new technologies within their own firms. They also sourced technologies from a wider range of sources than in 2001 as shown in Figure 1 above with an increased use of technology partnerships, licensing of new technologies and cooperative research with public institutions. While technology cooperation had increased, none of these involved local partnerships. Skills training occurred most frequently within the firm itself, mainly as a strategy to keep the skills within the firm as a solution to the skills shortage, rather than allow workers to take their acquired skills elsewhere.

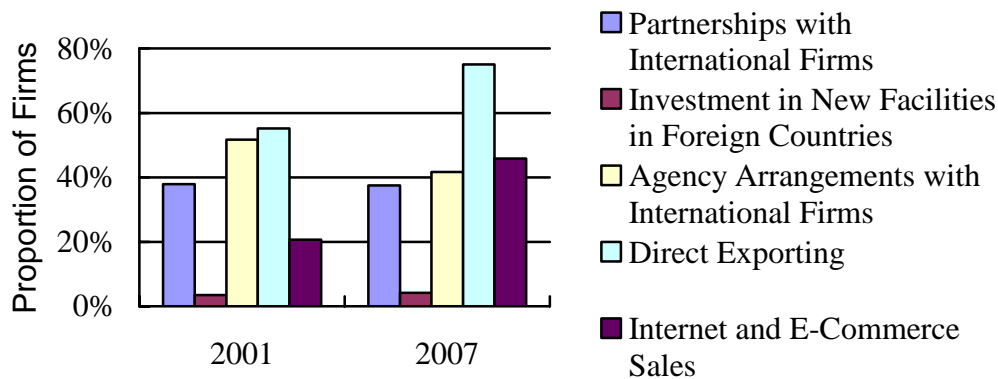
### *Export Strategies*

In 2007, the main reason for achieving exports was considered to be having a unique product or a higher quality product than competitors. Direct exporting from the Shoalhaven office was the preferred export mode. Export sales were often opportunistic responses to overseas demand rather than a concerted attempt to develop substantial new markets. New exporters had a cautious approach, starting with low export intensities and taking, on average, 13 years of business experience involving development of domestic markets, before starting to export. This change in attitude towards exporting was probably a reaction to the current unfavourable export environment, where a substantial appreciation of the \$US/\$A exchange rate had affected competitiveness.

As shown in Figure 2, there was a much heavier use of the internet and e-commerce in 2007 compared to 2001. The use of agency representatives was less popular, but seen as a necessity in Asian markets, particularly China. While only a small number of firms currently produced products overseas, a number of firms indicated that they may move offshore in the near future. The USA was the most common export destination, followed by the U.K. and New Zealand. These traditional markets were

seen as more reliable than China or the Middle East. However, interest in these new markets was growing.

**Figure 2: Modes of Export Expansion 2001 and 2007**

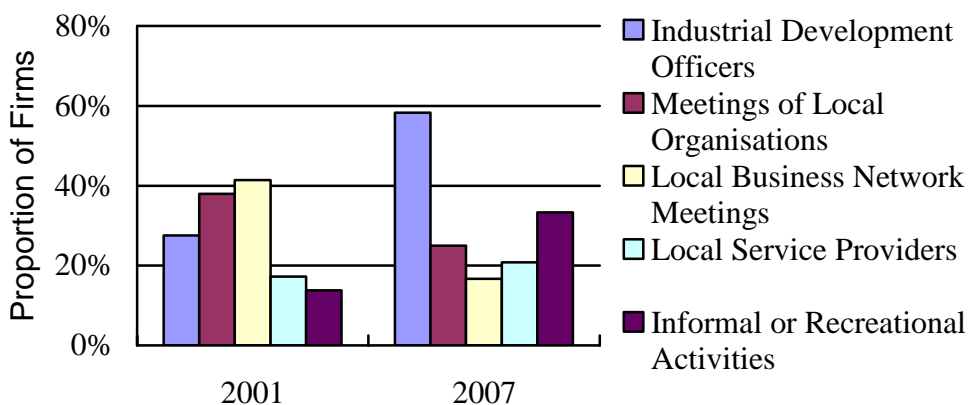


Source: 2007 Shoalhaven interview data and 2001 interview data from Hodgkinson et al. (2003)

*Sources of Information*

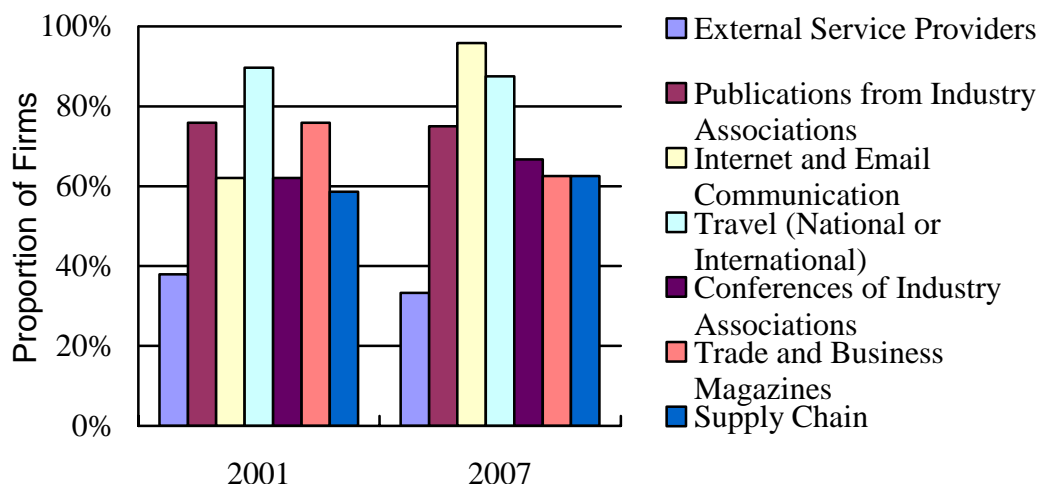
As shown in Figure 3, the only significant local sources of information used were local industrial development officers. The use of local officers had increased firms significantly since 2001, as had the use of informal or recreational activities for networking. There had been a fall in local business networking among exporters. Shoalhaven firms mainly sourced export market knowledge through external networks as shown in Figure 4. There had been significant increases in the use of the internet, attending industry association meetings in the capital city and suppliers to access market information. Most firms believed that they had adequate sources of market information. They also indicated that they preferred to interact with other firms in their industry rather than with unrelated local firms. Given that there were no functional industry clusters in the Shoalhaven, this required considerable travel and mainly occurred at trade shows and attendance at business meetings in Sydney.

**Figure 3: Sources of Information from the Local Region**



Source: 2007 Shoalhaven interview data and 2001 interview data from Hodgkinson et al. (2003)

**Figure 4: Sources of Information External to the Region**



Source: 2007 Shoalhaven interview data and 2001 interview data from Hodgkinson et al. (2003)

## IMPLICATIONS FOR REGIONAL ANALYSIS

The Shoalhaven is a relatively prosperous but highly diversified manufacturing area. The urban pattern consists of a number of medium and small sized centres. Exporters were typically small, entrepreneurial firms that develop new varieties of medium-level technology products sold in the higher value-added or quality segments of both national and international niche markets. This scenario does not fit neatly with an analysis of agglomeration economies. However, population and employment growth indicate that regional development is occurring, and an exploration of these firms' entrepreneurial and business strategies does suggest that agglomeration economies are relevant to understanding future prospects and policy recommendations for this area.

The diversified industrial structure might indicate that Jacob's externalities from diversity would be relevant. However, this was not the case. In part this was due to the lack of a large urban centre such that there were insufficient recipient innovators to take advantage of knowledge spill-over. Nevertheless, other factors inherent in entrepreneurial behaviour associated with the competitive environment and lack of trust among local business people were more relevant to this case. Innovators, consistent with the RBV of small business entrepreneurs, placed a high priority on keeping their business knowledge private both to retain key resources within their firm and to prevent activating potential competitors among non-exporting rivals. This was evidenced by the low and declining levels of local networking among Shoalhaven exporters. Very little local networking occurred in relation to sourcing new technologies, export marketing partnerships or sourcing market information.

Other empirical studies discussed above showed that MAR externalities were more prevalent in less densely populated countries and in lower technology intensive

sectors. Shoalhaven is to some degree consistent with this scenario. However, it lacked the industry clusters need to generate externalities from specialization. An analysis of responses from the Shoalhaven firms did indicate that these firms were looking for MAR externalities but, due to the lack of local clusters, sought them outside the local area. This was evidenced by increased use of partnerships and licensing to source new technologies, all involving external firms. The increase in collaboration with public research institutions did involve a local regional university (University of Wollongong), but this was obviously not a direct competitor. There was also a strong reliance on external sources of market information facilitated by increased use of ICT to access industry information and a small increase in attending meetings in the capital city, Sydney. Entrepreneurs also indicated that they found trade fairs a valuable means of interacting with others in their industry and accessing new information.

These results indicated that Shoalhaven exporters were receptive to the type of activities suggested in the industrial organisation approach to access both intellectual and rational assets. Their capacity to obtain these MAR externalities was limited by the lack of spatial specialization and the competitive environment that prevented collaboration with other local firms in their industry which they viewed as potential rivals for their export markets. Their capacity to obtain these benefits outside the Shoalhaven was limited by spatial distance and business pressures which limited their capacity to travel to networking opportunities.

## **POLICY IMPLICATIONS AND CONCLUSIONS**

The Shoalhaven area had maintained good economic growth in the 2001 to 2007 period in line with a prosperous national economy. However, this result disguised a decline in innovative activity defined in terms of exports. There was a decided shift towards domestic sales as appreciating exchange rates eroded their positions in international markets. This does not necessarily mean that R&D activity declined and investment in new production capacity generated a base from which exports could be expanded if considered desirable.

It is argued here that if Shoalhaven exporters had been able to take advantage of agglomeration economies, the decline in exports would not have been so pronounced. There were opportunities to generate Jacob's externalities at least in marketing by sharing export market information with firms in other sectors that were not direct competitors through local business networking. Mechanisms to do this were recommended in the first survey report (Hodgkinson, et al. 2003). However, the 2007 results indicate that not only were these ideas ignored but local networking activity actually declined. This can be attributed to the strong competitive environment in the area and the lack of trust among local business people.

MAR externalities could be encouraged by facilitating travel by regional exporters to external networking activities, for example by increased subsidization of costs to participate in national and international trade fairs. Some strategies which may increase the level of local networking include:

- identification of people within the lower / younger levels of management in these firms which see benefits in networking as a supplementary means of channelling this knowledge into firms;

- invitation to ‘experts’ in different overseas markets and exporting strategies to attend meetings in the Shoalhaven, including video conferencing to outlying centres and video recording of these sessions for later viewing (as often this type of information is only absorbed when that firm is actively considering new options);
- video conferencing into the Shoalhaven some meetings of major business associations in Sydney and elsewhere when new export innovations are being discussed as part of local networking functions.
- Identification of a few areas of common interest in the Shoalhaven and developing local groups to develop solutions and responses to these issues. One topic that emerged within interviews with agricultural producers was problems associated with obtaining AQIS approvals for exports. Defence procurement was another area which affected several local businesses and might form the basis of a local action group. There were also a number of firms producing marine products which had common problems.

Given the increasing use of internet telecommunications by local businesses, opportunities for developing ‘virtual’ networks and clusters linking local firms into communities of similar firms throughout Australia, or even the world, could be investigated. This type of networking could ultimately increase the level of collaborations relating to exporting, production and technology development for Shoalhaven firms, all of which are considered to increase the rate of innovation and export market development for smaller firms.

The results from this survey indicated that local entrepreneurs did not understand how economic conditions could impact on their business performance. Further, many exporters had not formulated explicit strategies related to export and thus could not benchmark their outcomes against prior objectives. Thus, while they understood that changing economic conditions were impacting on their business particularly in terms of their capacity to attract new overseas clients, their responses to these situations were predominantly intuitive rather than strategic and had resulted in a withdrawal of managerial commitment from exporting (Atkin 2008). In all businesses, managerial commitment is one of the prime determinants of successful outcomes. In order to increase commitment to exporting it is necessary to increase their understanding of the impact of economic factors on export performance in general and to assist managers to develop export strategies consistent with changing economic circumstances.

This study highlights that location externalities are significant explanators of regional development in peripheral regions, although as much in the breach as in the practice. By primarily relying on their internal resources and entrepreneurial capacities, Shoalhaven exporters have lost opportunities to develop new markets and had reduced resilience to meet economic challenges. This resulted from a marked lack of interest in available externalities of diversity. A higher level of local networking and spill-over of marketing knowledge would have helped existing exporters to develop new export markets and encouraged other firms to begin exporting. Consistent with other studies of non-core regions, Shoalhaven firms showed interest in MAR externalities of specialization. Their capacity to utilize these was limited by the lack of local clusters and of trust among this business community. This result illustrates that a competitive regional culture can have a detrimental impact on potentially beneficial

externalities of specialization, even when other factors may be conducive to their development.

This paper analyses the relationship between agglomeration economies, business strategy and economic conditions in just one case study region. As such, it must be viewed as an exploratory analysis of this topic. The results are interesting enough to conclude that further studies of the role of location externalities and entrepreneurship in peripheral regions is worth pursuing.

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