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## ON THE FRINGE: BARRIERS TO PARTICIPATION IN THE NEW ECONOMY IN REGIONAL AREAS

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*Electronic commerce offers tools which potentially support the development and re-invigoration of regional economies because of their ability to link enterprises and labour markets in networks across dispersed geographical areas. However, the evidence that regional areas of Australia benefit from this development in accordance with optimistic forecasts of the potential is, at best, mixed. This paper examines the constraints on the development of IT-based activity in regional areas and identifies barriers to full participation of those areas in Australia. It argues that regional areas are unlikely to benefit from the 'new economy' without a major changes in government thinking about regional development.*

### INTRODUCTION

The development of information and communication technologies (ICTs) has altered the nature of the global economy. Many writers<sup>1</sup> have noted the power of these technologies to overcome the physical limitations of time and space. The effect has been the growth of a global economic network, increasingly less constrained by the need to organise productive processes around locally available resources (including labour supply) or by national jurisdictions.<sup>2</sup> The term 'Information Highway' (which has now, mercifully, lapsed into disuse) points up the significance of telecommunications as a new mechanism of connecting social and economic activity, freed of limitations of bitumen, jet lag and other inconveniences of the physical world. The 'highway', which can go anywhere that cables or satellites permit, ought to open up development opportunities for areas on the physical periphery of major centres of population and economic activity. In theory, ICTs could be a major advantage for regional economies.

Electronic commerce (or eCommerce) provides a range of practical methods for using the capacity of ICTs for economic development. These methods include:

- support and promotion of the local

economy, linking residents and businesses via Internet-based applications, to focus more economic activity in the area rather than dissipating demand to outside sellers of goods and services

- electronic communications to support supply chains for 'exporting' goods to central markets, gaining competitive advantage and cost savings from streamlined processes, improved delivery mechanisms and quality assurance
- participation in electronic markets (for example, produce markets) for finding buyers of goods produced in the region
- establishment of IT-based industry (for example, call centres) in the region, linked to customers nationwide or worldwide through telecommunications
- promotion of IT capability in the region (for example, software development) particularly through the development of 'clusters' of technological expertise, drawing customers from outside the region.

With good telecommunications infrastructure, regional areas could overcome many of their competitive disadvantages (primarily a function of distance) and

capitalise on their advantages including the lower costs of land and labour.<sup>1</sup> If the new economy (that is, economic activity based on or significantly facilitated by IT) has winners, surely those areas which gain most by overcoming time and space should be among them.

This paper examines eCommerce development and the economic and social sustainability of regional areas in Australia. Firstly, we examine assumptions behind the optimistic forecasts of eCommerce for regional areas and then consider the factors which contribute to the slow diffusion of eCommerce development in regional Australia.

#### OPTIMISM ON eCommerce FOR REGIONAL DEVELOPMENT

Current views and models of eCommerce for regions in developed nations are generally optimistic. In Australia, the main policy leadership has been taken by the Department of Communication, Information, Technology and the Arts (DCITA) and the National Office of the Information Economy (NOIE). Through various research and development projects, most notably the Networking the Nation (NTN) scheme, these bodies have sought to encourage ICT-based development schemes and accelerate the provision of telecommunications infrastructure throughout the regional, rural and remote areas of the country. State governments have also variously promoted ICT development and eCommerce through a range of programs.

Overall, the underlying philosophy is that eCommerce is good for business and what is good for business is good for the economy and for the regions. We can identify five basic assumptions about the benefits of eCommerce to businesses within regions that have been drawn from the DFAT study, *Driving Forces on the*

*New Silk Road* study,<sup>4</sup> the National Office for the Information Economy (NOIE) studies<sup>5</sup> and the OECD (1999) study.<sup>6</sup>

1. Technology will **remove the barriers** previously imposed by distance and provide increased access of regional enterprises to global markets.<sup>7</sup> Small and regional firms have much to gain from greater access to markets in capital cities and enhanced opportunities for export. Distance is no longer seen as an obstacle for outside investment or the relocation of businesses into the region.
2. Innovative use of eCommerce can assist in establishment of **regional identity**, presenting a regional image and focal point<sup>8</sup> for use in the expansion of markets and marketing of the region to potential firms wishing to locate in the area.
3. Regions can achieve **productivity gains** through more efficient procurement and sales.
4. eCommerce can foster the development of **new products and services**, especially those connected with IT and attendant services.<sup>9</sup>
5. eCommerce can produce a '**catalytic effect**' by facilitating the diffusion and adoption of a range of other changes such as globalisation and market liberalisation.<sup>10</sup>

If these assumptions are well-founded, it would appear that regional areas generally have much to gain and little to lose. It is not surprising that most governments actively support the adoption of eCommerce in the economy overall and in regional areas in particular.

In fact, a wide variety of regional areas in Australia have used ICTs to propel local economic development and have developed eCommerce, for example:

- *Bendigo Calling* strategy by the Greater Bendigo Council;<sup>11</sup>

- Cairns Region Economic Development Corporation industry cluster strategy;<sup>12</sup>
- Hunter Regional Economic Strategy<sup>13</sup>
- Warrnambool City Council's 'Warrnambool on the Web';<sup>14</sup>
- Rockhampton Community Informatics (COIN);<sup>15</sup>
- North East Telecommunications Cooperative;<sup>16</sup>

Such approaches are both commendable and necessary'.<sup>17</sup> However, the success of these programs must be considered over the longer term.

#### MEASURES OF eCOMMERCE SUCCESS IN REGIONAL AREAS

Despite the initial optimism for ICT-based regional development in Australia, there are serious questions about whether the anticipated benefits are materialising. The analysis by Birrell and O'Connor indicated that employment in 'new economy' occupations, especially business services was lagging in regional centres.<sup>18</sup> This suggests that regional areas were deriving less from IT development than metropolitan areas, a trend which would widen rather than narrow the gaps between metropolitan and regional areas. That analysis suggested that ICT may be consolidating the economic advantages of urban Australia and that regional and rural areas are struggling to take advantage of these technologies that in principle offer them so much.

There are very few studies that specifically address the impact and adoption of eCommerce in regional areas. For example, the 1999 OECD study of the economic and social impact of eCommerce does not discuss any regional effects of eCommerce.<sup>19</sup> It is known, however, that in Australia the adoption of eCommerce by SMEs is slower than larger businesses and slower than government wishes.<sup>20</sup>

Because regional Australia has a disproportionate number of smaller business in comparison to metropolitan Australia, we would expect that the uptake in rural areas will be slow.

There are also a few clues from studies commissioned by NOIE that eCommerce may not benefit all regions, or areas within regions equally.<sup>21</sup> For example, a recent NOIE study, *E-Commerce Across Australia*,<sup>22</sup> presents data which suggest that over 40 per cent of regions across Australia may face a decline in employment as a result of eCommerce disintermediation (that is, linking producer and consumer directly, bypassing the intermediaries). The report notes this potential decline in employment but believes that an 'offsetting factor is that the lower prices for goods and services would stimulate demand in other areas and increase their demand for labour'.<sup>23</sup> The report concluded that 'the dislocation involved in the greater use of e-commerce is expected to be largest in regions that have most to gain from the change, particularly in terms of employment. This means that as long as people upgrade their skills to meet changes in demand in the labour market, they should be able to cope by changing jobs while living in the same area'.<sup>24</sup> It seems unlikely that increased demand for labour will magically appear in regional Australia; much more likely is that it will result in further migration to the capital cities. In the future, the displaced regional worker could have no new job to change to and no place to upgrade their skills.

Employment is not the only issue which raises doubts. The *New Silk Road Study*<sup>25</sup> suggested a link between economic decline in regional areas and the delivery of services online. Regional economies may face difficulties if external providers of goods and services via the Internet

out-compete local businesses to a significant extent.<sup>26</sup> This is an issue with both the business-to-consumer and business-to-business eCommerce.

#### **eCOMMERCE AND REGIONAL 'NEW ECONOMY' DEVELOPMENT**

The underpinning rationale for all these optimistic forecasts and regional strategies appears to be that making the technology available will help businesses adopt eCommerce. This will increase their ability to compete in markets both within and outside their region. Such a rationale assumes that once equivalent technological infrastructure is available in regional areas, it will produce a level playing field between metropolitan and regional areas. eCommerce adoption within regional areas is portrayed in the same terms as its adoption in metropolitan areas. The impact of eCommerce is seen primarily in terms of greater business efficiencies and increased access to markets. Such an approach can be considered a 'regional free trade' policy and can be questioned on the same grounds as global free trade policy. This begs the question of whether the social and economic structures of regions on the periphery can compete against developed nations.<sup>27</sup>

A closer look at the dynamics of eCommerce in regional areas provides some insights about the issues highlighted in the NOIE and DFAT reports. Despite optimism and 'success stories' discussed above, difficulties in developing active and successful eCommerce appear to be typical rather than unusual. Regional Australia's potential for exploiting eCommerce and participating in the 'new economy' is closely linked with its social, political and economic structures. Our experience with regional councils and businesses suggests that many are trying

to achieve benefits from ICT and the development spin-offs. Lack of immediate success is not the result of business skills or lack of will. The factors derive from economic and social circumstances beyond their control. Their experiences highlight the difficulties involved in exploiting IT and eCommerce for regional sustainability.

Understanding the complex issues surrounding eCommerce and strategic ICT development in regional Australia requires a more detailed account of how the businesses, governments and citizens approach this technology and, particularly, what they experience as the barriers to adoption and successful development. For example, the NOIE *Taking the Plunge 2000* study<sup>28</sup> of eCommerce adoption and resistance by SMEs included interviews with seventeen people from businesses in Wagga Wagga to identify the views of rural and regional businesses. Businesses saw the major benefits of the eCommerce as selling outside their regions and gaining a greater profile for their business. The main barriers to adoption appeared to be the lack of good quality technical and strategic advice. The main disadvantages identified were the effects of disintermediation and changing supply and service arrangements that have served them well in the past. Intermediaries such as stock and station agents, travel agents and newsagents were most worried about their continued viability. Unfortunately, the small sample size and lack of systematic analysis in that study limit its utility, but raises some interesting questions.

We have drawn together a variety of material from our research on the development of eCommerce in regional Victoria to provide a deeper understanding of the issues faced by businesses and governments in those areas.

## EXPERIENCES ON THE GROUND: IMPEDIMENTS TO REGIONAL DEVELOPMENT THROUGH eCOMMERCE

### I. Cluster development in the regions

Recent regional economic planning has stressed the importance of industry clusters.<sup>29</sup> Cluster development as a regional strategy was first popularised by Porter<sup>30</sup> who argued that economic growth occurred within identifiable clusters where firms were closely interlocked. They shared a human resource pool, had close inter-business relations, traded with each other and embarked on joint ventures.<sup>31</sup> Cluster development is typically seen as forming part of the new economy, either directly through the clustering of information and communications technology such as Silicon Valley or indirectly through the development of other specialist high value adding industry clusters such as the Emilia-Romagna and Baden Wurttemberg regions in Europe. eCommerce and the development of ICT infrastructure is often seen as one approach to remove the impediments of distance and to facilitate the development of industry clusters in regional Australia.<sup>32</sup>

There have been a number of Australian regional initiatives to develop clusters based on or facilitated by ICT. Several of these initiatives have had significant success, although to our knowledge a systematic evaluation has not yet been conducted. Despite some positive signs, our review of the conditions for cluster development suggests that Australian regions are generally in a weak position for clusters to emerge. Cluster development requires:

- A regional export focus. Australian regions' production activities typically revolve around primary industry with some small-scale manufacturing and tourism. However, the bulk of the

businesses within regional centres exist to service the needs of the primary industry sector and are not oriented to wider markets. The SMEs in these areas are not typically positioned to sell into metropolitan markets, let alone into international ones.

- The existence of a range of firms that could potentially cluster or attract other companies to the region. Such firms would share a common skilled labour force, be linked across the value chain and see the advantages of co-location and potential collaboration and networking. In regional Australia there are few industry groupings with sufficient 'critical mass' to form viable clusters.
- Sufficient resources. Clusters flourish on a concentration of resources, but few of Australia's regional areas can reach the required level. Sparse settlement patterns exacerbate the resource problems. By contrast in the USA there is a generally higher density of non-metropolitan population, medium-size towns and the associated infrastructure (including public facilities such as universities and defence establishments).<sup>33</sup> Australian regional areas typically have a lower resource base and a diminished likelihood of cluster development.
- Strong civic, business and political leadership. Regional development policy in the USA and Europe has emphasised the role of strong leadership in the development of clusters.<sup>34</sup> Our interviews with businesses in a number of regional centres in Victoria found that strong business associations and leadership for regional growth is often lacking.<sup>35</sup> Other writers have indicated that lack of leadership is a problem in Europe as well.<sup>36</sup>

- The existence of research universities and centres. Most successful clustering of high technology industries occurs within or near research establishments. Silicon Valley, once part of the Stanford University research park and adjacent to a range of US defence research establishments, is the most celebrated example. It is unlikely that Australia's regional universities can provide a similar impetus to that of the major US or European universities.<sup>17</sup>

Given these issues, it would seem highly unlikely that most Australian regions can utilise eCommerce and ICT infrastructure to form new economy industry clusters without substantial external assistance.

## 2. Access to markets via the web

The World Wide Web is a unique technology for dispersing information including marketing and promotional material. No longer constrained by small local markets, some Australian companies have used the Web to market and sell their products to the world. However, there are a number of problematic issues here. Regional companies face a number of dilemmas concerning the positioning of their websites. Simply 'hanging out a shingle' by having a web page will not be sufficient to attract customers. A number of strategies are available. Firstly, they may choose a regionally-based address or link their site to a regional 'portal'.<sup>18</sup> However, this has the disadvantage of reducing potential 'export' outside the regional area. A user from outside may not think to explore a regional website when sourcing a product or service. In addition, a regional address may, as shall be discussed below, work against the company's profile in the wider context. Alternatively, a company may position its

website within industry-level associations. This certainly has advantages for some manufacturers and suppliers, but appropriate industry-level websites are not always available. Furthermore they may be fragmented or fail to provide an effective position from which to launch Internet commerce.

The final option available appears to be to separate the eCommerce aspect of the business from its regional base by undertaking joint website collaboration with other businesses that provide associated products (for example, a furniture retailer may jointly develop a site with a white goods retailer, a home goods retailer and a curtain and blinds retailer) to create a 'virtual mega-shop' or work with other furniture retailers across the Australia. There are problems with this option for a regionally based firm including the difficulty in organising the joint venture over distance as well as arranging the delivery of the goods requested.

## 3. Limitations for individual SMEs

One of the richest sources of insight comes from a project in western Victoria working with a group of local SMEs to develop eCommerce awareness and provide assistance with the development of individual business strategies for dealing with the challenge of eCommerce. This diverse group included tourist services, manufacturing companies, retailers, business service providers and wholesalers. Although local government and business organisations were actively promoting eCommerce in the area, there was considerable ambivalence about adopting eCommerce among local businesses. The 30 organisations which participated in the project exemplify the issues that confront SMEs considering whether or not to adopt eCommerce. Most were reasonably

knowledgeable about the principles of domestic and business computing (including the Internet), but had little knowledge about how these technologies could be used to meet their business objectives. They were uncertain how they could gain access to reliable information and advice to help them develop eCommerce if they chose to do so. In that respect, they are very like small businesses elsewhere in Australia.<sup>19</sup>

We identified three main orientations to eCommerce among the participants in the project (bearing in mind that the participants had already expressed an interest by coming to the program and could thus be assumed to have a higher level of interest than the general population or the bulk of businesses in the region). A few participants were **committed** to developing and using eCommerce strategically to advance their businesses. For those SMEs the benefits of eCommerce were clear — as were the threats to their businesses if they did not exploit its potential to expand their customer base and improve service to their existing customers. For this group, the eCommerce impediments were purely operational.

The second (and largest) group of SME owners were identified as **ambivalent**. This is perhaps the most interesting orientation to eCommerce because it demonstrates well the kinds of dilemmas faced by business owners for whom the benefits of new technologies do not clearly outweigh the risks and the time and money required for a viable venture. This response was particularly interesting because the discussion of eCommerce raised problems, not only associated with business planning, but with broader life choices. While businesses in this group could see the potential advantages of adopting eCommerce, they could only

realise these advantages if they made major changes in their general business operations and often in their personal or family lives. These changes often involved a significant investment outlay of family funds and more work stress. For example, one small business owner saw that acquiring eCommerce capability would allow her to expand her business. But were she to do so, it would require appointing additional staff and managing a second outlet in a neighbouring town. The resulting increase in travelling time, management complexities and staff supervision would put greater pressure on her time, already stretched between work and family. On the other hand, unless such moves were made, there was always a danger that a competitor (or several) could move into the area, perhaps one which uses eCommerce effectively.

The third group is a varied group who apparently decided to **defer** any venture into eCommerce, many of them indefinitely. For some the benefits were simply not evident, given the nature of their businesses and their plans. But for others, the decision not to begin even a modest eCommerce venture seemed to fly in the face of compelling evidence of its benefits. Only by understanding the broader context of their businesses, their longer term plans and their relationships within the community can we appreciate their reluctance.

#### 4. Social context

One of the hallmarks of rural communities and the towns that define them is the strong set of social relationships which underpin them. Because residents in regional areas are not anonymous in their home communities, they have a web of social relationships which need to be managed more actively than in cities where family and friendship networks are

not necessarily connected with personal business associations.<sup>41</sup> Social structures of regional community life in Australia differ from metropolitan ones, not because the people are fundamentally different but because the social boundaries are more clearly drawn and patterns of association are more overlapping.<sup>41</sup>

Therefore, embarking on eCommerce for regional SMEs has additional dimensions which urban residents don't confront.

- What if one enters into a business arrangement with another person in the area and it doesn't succeed? How is that social relationship to be managed?
- What will be the implications of eCommerce for the landscape of local activities? Will a new venture disrupt current relationships and customers' expectations?
- How will new eCommerce ventures be interpreted, not just by business partners and customers but perhaps by other friends and associates in the region? What range of mutual obligations might be engendered? How will either success or failure be managed socially?

These may seem like frivolous issues to a city-dweller who has easy access to opportunities to develop new associations and networks. But the web of relationships in a country area is also a web of social dependence<sup>42</sup> and one needs to proceed cautiously about new ventures which might be disruptive.

Nowhere is the social network issue clearer than in the relationship between many regional retailers and their local customers. Regional retailers are rarely able to out-compete metropolitan or even international suppliers in terms of price or variety. The economies of the small

rural community prevent this. What they can offer is personalised service and hope for customer loyalty in return. These customers buy locally partly because of their longstanding loyalty to the local merchant. This may be supported by some sense of loyalty to 'buy locally'. But what happens if the face-to-face relationship is replaced, even partially, by Internet contact? How is local loyalty maintained? Will the retailer have to work harder to maintain this allegiance? Is the investment worth it if there is little hope of securing new customers from the city?

We should also acknowledge the potential effects of eCommerce development on the broader regional community. Going to town for people living around the regional cities serves a number of purposes. In addition to shopping, banking and attending to business affairs, such trips are often a welcome opportunity to socialise for people who are likely to be more socially isolated on a day-to-day basis than in the city. These issues are not unique to rural dwellers. Urbanites also have loyalties to retailers and go shopping as a social activity, but for most their alternative sources of supply and satisfaction are greater.<sup>43</sup> The concerns about disintermediation noted in the *Taking the Plunge* report<sup>44</sup> cannot simply be reduced to fear of competition or backward thinking. Such concerns strike at the heart of the viability of the regional community.

### **5. Cultural cringe: city snobbery**

Australia is something of a conundrum. Despite a traditional rhetoric extolling the virtues and importance of 'the bush' (drover's wives and stockmen holding a high position in the national iconography), there is also something of a 'cultural cringe' which privileges the

capital cities in commercial as well as social matters. It is difficult to find concrete direct evidence of this, but it has been suggested that businesses located in regional areas simply have less prestige in the metropolitan marketplace.

For those enterprises which specialise in goods or services clearly associated with rural activities (including the much celebrated Mick's Whips),<sup>45</sup> a country location is no disadvantage. However, where enterprises compete directly with urban suppliers, this can be a significant obstacle. An example of this was given by the owner of a small successful regional software development firm. He claimed he had little difficulty marketing his products to other regions within Victoria and to other states. But he had greater difficulty in marketing his product in the Melbourne metropolitan area. He believed that he had to fight against an urban attitude that a regional producer could not supply equivalent quality. He stated he did not have this difficulty in Sydney and Brisbane, not because of a different attitude prevailed in these capitals but because as far as his prospective clients were concerned, his regional town was 'probably a suburb of Melbourne'. To the extent that these attitudes prevail, it places one more obstacle in the way of regional development for individual businesses and for clusters.

Discussion with the participants in the eCommerce workshops lent support to the idea of a cultural cringe. Both in the pattern of survey responses and during informal discussions it became apparent that many people were reluctant to seek IT&T or eCommerce advice from within the region. While there were a number of reasons for this reluctance, including the availability of such advice, there was some indication that the participants believed consultants from Melbourne would be

more knowledgeable or up to date than those in the region.

Technically, access to metropolitan, national and international markets may be increasing with the Internet as a major tool to get wider exposure for regional enterprises. But it is unlikely that this will bring the hoped-for benefits to any significant degree. Our analysis suggests that for many regional enterprises, credibility in those markets will be difficult to achieve. Until a non-metropolitan address is widely regarded as irrelevant to quality for products and services not strongly associated with the country, the inducement to invest in eCommerce will not be as great for regional companies as for their city counterparts. This is an issue that needs more systematic investigation.

## CONCLUSION

The underlying philosophy of much public comment and government policy is that the provision of equivalent ICT infrastructure throughout the country will 'level the playing field' so that regional businesses can compete in new and existing markets. The hope is that the diffusion of this infrastructure, supported by advocacy and IT skills development, will lead to sustainable regional communities. Businesses in regional areas, assisted by the associated programs, are urged to adopt eCommerce and the economic benefits are expected to flow as a result.

This paper has explored some of the reasons for the disappointing eCommerce adoption rates and poorer growth of new economy activities in regional areas. Our reservations about regional Australia's ability to adopt eCommerce and use of ICTs to boost regional economic and social development, are linked to the different economic and social conditions which apply in regional areas. Regional structures and practices create a different

set of circumstances. The technological infrastructure cannot simply be grafted onto these circumstances to achieve the same outcomes.

We have identified a number of factors that make regional circumstances different:

- The development of crucial clusters of economic activity are more difficult in regional areas because of the lack of economic and political structures to underpin economic development.
- Difficulties arise in marketing regional products via the internet because of the lack of profile of regionally-based firms and their local focus. The competitiveness of these companies is undermined by their problems of logistical support and the difficulties they may face in managing relationships with business partners at a distance.
- Regional economies are dominated by SMEs which experience all the difficulties of SMEs everywhere in addition to the problems associated with their regional location.
- Regional towns and communities characterised by a number of different social dynamics. This often makes it

more difficult to develop business relationships to take advantage of eCommerce.

- Regionally-based businesses often find it difficult to break into urban markets because their location itself is often taken to indicate inferiority by urban markets, regardless of the quality of their products.

This analysis suggests that the strategies required for the development of eCommerce in regional areas need to focus on SMEs. These strategies must also include sustained government investment in the regional economies themselves, not just in the IT infrastructure to encourage private development of eCommerce. Joint government-business leadership and business forums will be essential to tackle the issues. In addition, it is likely that governments will need to foster private investment in regional economies through a system of incentives. This approach would run against the grain of the small-government philosophy that predominates, but ultimately the question is 'How important is it to support regional Australia — and what do we need to do to ensure its sustainability?'

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- <sup>39</sup> DFAT, op. cit., p. 35; NOIE, 2000c, op. cit.
- <sup>40</sup> E. Bott *Family and Social Network: Roles, Norms, and External Relationships in Ordinary Urban Families*, 2<sup>nd</sup> ed., Tavistock Publications, London, 1971
- <sup>41</sup> R. Wild, *Bradstow: A Study of Status, Class and Power in a Small Australian Town*, Angus and Robertson, Sydney, 1978; K. Dempsey, *Smalltown: A Study of Social Inequality, Cohesion and Belonging*, Oxford University Press, Melbourne, 1990
- <sup>42</sup> Dempsey, op. cit., p. 32
- <sup>43</sup> Those with limited mobility, such as the elderly, are likely to be more dependent on a narrower range of suppliers and to share some of the dependencies identified for regional residents.
- <sup>44</sup> NOIE, 2000c
- <sup>45</sup> Mick's Whips is a manufacturer of stockwhips and leathersgoods operating from the Northern Territory and sells via the internet. This company was singled out by the then-deputy-Prime Minister, Tim Fischer, in 1997 as a prime example of what internet commerce could achieve (<http://www.pecc.org/itsummit/reports97.cfm>). See the website for the company - <http://www.mickswhips.com.au/>