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Promoting E-Commerce among SMEs through Community-Based Portals: An Analysis of Three West Australian Cases

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Abstract

In Western Australia, efforts to increase SME e-commerce adoption have been integrated with some regional community portals in order to access greater levels of government funding. This paper examines three such cases. Results indicate that although the enablement of e-commerce was intended to be the driving force behind these portals, it is the traffic generated from online community activity and community support of the portals that have helped sustain them. While e-commerce economic benefits from the portals have been slow to materialise, the portals have produced benefits in the form of increased online community participation and e-commerce awareness.

Keywords

E-Commerce, Community Portals, SMEs, Costs, Benefits, Evaluation

INTRODUCTION

As part of the effort to bridge the digital divide in the late 1990s between regional and suburban Australia and between SMEs (Small and Medium Enterprises) and their larger counterparts (Curtin 2001; Small Enterprise Telecommunications Limited (Setel) 2001), a number of government-funded IT projects were targeted at increasing access to and adoption of IT and e-commerce in the regional and SME communities. Many of these projects were developed at the local level through local community-based programs. This reflected the federal government's view that "the best and most workable solutions and ideas emerge from the grass roots, rather than being delivered, fully-formed, from on high [as] community and non-profit groups and local-government authorities are attuned to the pulse of their communities [and] are best placed to know what their own needs and circumstances are" (Williams 2004).

In Western Australia (WA), some regional portals were developed with the dual focus of bringing local communities online and enabling e-commerce among the regions' SMEs. The e-commerce focus of the portals enabled the receipt of government funding under programs like ITOL (Information Technology On Line) (http://www.dcita.gov.au/ie/about/previous_itol_rounds). While these portals had different e-commerce models and owner arrangements, most had some level of local community participation.

However, while these portals have helped raise the online participation of regional communities and the e-commerce awareness of regional SMEs, they have yet to produce the kind of economic e-commerce benefits that would make them profitable or even self-sustainable in the short term. As a result, using these portals to promote e-commerce uptake by regional SMEs has required more government funding than was initially envisaged. It is our contention that such portals should be viewed as community assets and regional e-commerce development tools and should therefore be funded and planned for as such. Indeed the use of regional portals in WA to promote Internet trading was viewed as a way to provide SMEs a test bed to experience online trading in an inexpensive and trusted environment. As such, the success of such platforms should therefore be measured *not* in terms of viability (Clarke III and Flaherty 2003), profitability or self-sustainability (Damsgaard 2002) of the portals themselves, especially in the short term, but in terms of the ability of the community and region to build upon the experience acquired on the portals to adequately compete in the online environment.

This paper evaluates three regional portals (one in Suburban WA which failed and was discontinued and two in regional WA which continue to operate), in an effort to determine the costs and benefits of such initiatives and the factors that facilitate the use of these portals to promote e-commerce among SMEs. Findings indicate that the trust-embeddedness (Steinfeld and Whitten 1999) arising from the high level of community participation in the

development and governance of the two portals in regional WA have contributed to their continued existence. However, for these portals to be effectively used to encourage uptake of e-commerce by regional SMEs they need to be integrated with other efforts like training, one-on-one e-business/IT consultancy for regional communities and the provision of adequate telecommunications infrastructures and power supplies. Our study shows that funding needs to be considered not just for the provision of the portal technology but also for training and to enable the monitoring and measurement of the outcomes of such initiatives. We also found that community and regional benefits like increased online participation, e-commerce awareness and collaboration are the first benefits to be realised. The small number of SMEs who are beginning to see some economic benefits from participation on the portals are mainly involved in providing niche products and services (eg. accommodation, tourism and agriculture) for which the region is renowned and that are aimed at buyers outside the region.

This paper progresses as follows: we first look at the literature on community portals/Internet trading platforms, and government-supported Internet trading platforms for SMEs. We then provide details of the three cases and the methodology used in our study. The data is then analysed in the light of the preceding theoretical areas and conclusions are made about the role that regional portals can play in increasing e-commerce activity among SMEs and the costs and benefits of such initiatives.

THEORETICAL PERSPECTIVES USED IN THIS STUDY

Virtual communities, portals and Internet trading platforms

Armstrong and Hagel III (1996) distinguish four types of virtual community as communities of relationship, communities of interest, communities of transaction and communities of fantasy. While some virtual or online communities on the Internet were spawned purely in cyberspace and have members across international boundaries, others were formed by creating Internet-based community portals for existing geographically based communities encouraged by successes like the Blacksburg Electronic Village (BEV) project (<http://www.bev.net>). These types of community portals grew out of the need to engage regional or rural communities in the online environment through the provision of free or subsidised Internet access to the portal and targeted education in Internet use. They were viewed as community assets and were not income-generating business models. According to Otis and Johanson (2004) building effective online regional community networks is similar to normal community development: it is not a short-term process and therefore requires substantial resources, there is a need to engage community members and the longer established a community network, the greater are the chances of survival. Other types of non-commercial virtual communities (which may not require the input of significant resources to develop) are online gaming communities, communities of practice in certain sectors (like education) and other communities of interest.

However, virtual communities and portals also represent e-commerce opportunities where they can generate enough value to either the community members (who will be willing to pay for the services offered by the portal) or to advertisers (who view the considerable traffic and wide reach of the portal as a marketing haven). Internet business community portals provide business subscribers with standardized access to other subscribers, resources and functions (Fisher and Craig 2005) and can cater for B2C (business to consumer) or B2B (business to business) relationships or both. B2B web portals are becoming increasingly popular because they are viewed as an “effective way to improve customer service, communicate between managers, reduce training costs, streamline expenses, and serve as alternative transaction locations” (Clarke III and Flaherty 2003). Damsgaard (2002) proposes a four-stage process for the successful development of portals. The stages are: attraction, contagion, entrenchment and defence.

Internet-based business community portals that provide buying and selling functions are one type of Internet-trading platform. Some of these platforms take the form of e-marketplaces, procurement hubs, e-malls or catalogue aggregations. Some definitions of e-marketplaces appear to encompass many types of Internet trading platforms eg. “a virtual online market where buyers, suppliers, distributors and sellers find and exchange information, conduct trade, and collaborate with each other via an aggregation of information portals, trading exchanges and collaboration tools” (PRIME Faraday Technology Watch 2001). The critical success factors for Internet trading platforms like eMarketplaces identified in both the business and academic literature are critical mass or liquidity (Brunn et al. 2002; Raisch 2001), strategic partnering (Lenz et al. 2002), identification and recruitment of key players to create a bandwagon effect (Grewal et al. 2001), provision of value-added services (Ordanini 2003), perceived relative advantage (Koch 2004), provision of revenue streams, trust and privacy.

Government Supported Internet Trading Platforms for SMEs

Despite a number of government policies to encourage uptake of e-commerce and business use of the Internet, some studies at the start of this century indicated that SMEs were still lagging behind large companies in this

area (E-Business Policy Group 2002; Walczuch et al. 2000). The response from the governments in countries like Australia and in Europe was to introduce policies to directly support projects which promoted Internet trading platforms for SMEs (E-Business Policy Group 2002, pp. 82-93; Gengatharen and Standing 2003). These projects were designed to provide SMEs with an inexpensive introduction to Internet trading in a 'trusted' environment as Internet trading platforms (especially of the B2B type) were considered the principal gateway to e-business for SMEs. This was because the trading platforms could facilitate the internal reorganisation of companies, offering the possibility of reducing operational costs and raising productivity through the integration of ICT into internal business processes (Commission of the European Communities 2003). The governments felt that there was a need to directly assist SMEs to participate on Internet trading platforms as one of the barriers to SME participation in e-marketplaces is the market-makers' lack of understanding or recognition of the specific needs of SMEs (Stockdale and Standing 2004) like training and mentoring.

In Europe, the view is that such projects are usually aimed at creating the infrastructure and providing basic services to SMEs. They should have only limited lifetime as publicly supported initiatives and "once they reach an end, they should, where possible and appropriate, be turned into self-sustainable solutions, building upon the content and experience acquired during the lifetime of the projects" (E-Business Policy Group 2002, p. 35). However, the need for such projects to be adequately resourced is acknowledged as is the need for the monitoring and evaluation of project results against pre-defined targets. There does not appear to be any standard timeframe for completion of projects, not is there a pre-determined maximum amount available for funding.

In Australia, funding for such projects like Internet trading platforms for SMEs (up to 50% of the cost of the project subject to a maximum of A\$200,000) is available under the Government's ITOL (Information Technology On Line) program. Applications for funding must be supported by a consortium of at least three organisations which are able to demonstrate broad-based industry support for the project. Some of the other conditions are that the project needs to be completed in 12 months and there is the need to demonstrate how the application meets the market criteria of sustaining or commercialising the project when grant funding ceases.

From the literature it would appear that the development of regional community portals aimed at e-inclusion of community inhabitants within a geographical location is itself a complex initiative requiring significant planning, resources and evaluation. Given the nurturing and scaffolding role of government-supported Internet trading platforms for SMEs, we can expect that their effective development will require resources not just for technical developments but also for training and consultancy. Planning should also provide for the proper evaluation of such projects. Therefore, combining such trading platforms within regional community portals means that the portals will have two customer communities as a focus, the SME community and the social community. These two groups have very different needs; require different support and need different training. Content generation will be required for the social community and may be required for each of the types of e-commerce supported on the portal (B2C, B2B). It is in this light that we examine and evaluate the three regional portals in WA.

THE CASES

Table 1 gives the details of three cases of regional community portals in WA that have been used to promote E-Commerce among SMEs. (Note: Pseudonyms have been used)

	TwinTowns.com	RegWa.net	CountryWA.com
Year Initiative First Conceived & by Whom	1999. Mooted by the Business Enterprise Centre of one of the towns, supported by some people in the two local governments.	1999. Committee of a few people in the chamber of commerce of the largest town in the region, resident web site developers and Internet Service Providers, a couple of the larger businesses in the region.	1999, Consortium of representatives from IBM, the Office of Information and Communication of the State Government, the regional development commission, the Business Enterprise Centre of the largest local town in the region, a local University and a major IT company.
Ownership Structure	Not for Profit Organization comprising Local Governments of 2 neighbouring towns, their Business Associations and a University in the region	The Camber of Commerce of the largest town. In June 2003, purchased by the Regional Development Commission. Not-for-profit organization formed to own it.	In 2001, the portal became a cooperative under the West Australian Cooperatives Board with locals owning shares, overseen by a Board of community representatives.
Details of the area served by the Community	Two neighbouring towns in metropolitan Western Australia covering 900 km ² , having about 220,000 residents and 7000	A regional area of Western Australia covering 24,000 km ² , having a population of 132,000 and 10,500 small businesses.	A regional area of Western Australia covering 44,000 km ² , having a population of 53,000 and approximately 4800 small

	TwinTowns.com	RegWa.net	CountryWA.com
Portal	small businesses. Major industries: manufacturing, agriculture, retail trade, services, tourism.	Major industries: manufacturing, mining, agriculture, retail trade, services, tourism.	businesses. Major industries: agriculture & livestock farming, viticulture, horticulture, timber plantations, retail, manufacturing, wholesaling, construction, services, tourism.
Funding 1999/2000	A\$ 20,000 (State government) A\$ 90,660 (Federal government -Regional Assistance Program)	A\$6,000 (regional development corp.) A\$30,000 (State government)	A\$75,000 (ITOL)
2001/2002	A\$ 108,000 (Local governments of the two towns & University) A\$ 92,000 (State government- for training SMEs)	A\$75,000 (ITOL) A\$126,000 (State government)	A\$100,000 (Federal Government under the Networking the Nation Program)
2003/2004	A\$50,000 (Local governments of the towns). *Request for further federal & state government funding declined in 2001/2002.	A\$2,200,000 (State government, only a portion of this will be directly for the portal; other use will be for training SMEs etc.)	A\$68,500 (ITOL - part of A\$174,000 awarded to a joint consortia to develop an intelligent e-business search system for SMEs in the region)
TOTAL	A\$360,660	A\$2,437,000	A\$243,500 (An ITOL application for A\$50,000 for SME e-business training and use of the portal is pending. If approved, a regional consortium will inject A\$71,000 of its own)
Technical development	Outsourced for A\$70,000	The portal developer was a local IT company who hosted RegWa.net without any charge. Exact amount paid for the initial development of the portal not available. Development of Regional e-marketplace (REM) about A\$30,000. A\$200,000 paid for upgrade in 2004.	Total estimated amount spent on technical development to date A\$100,000
Portal and E-Commerce Features	<ul style="list-style-type: none"> Internet based community portal catering for B2B, B2C, B2G (business to government) and C2C (consumer to consumer) activity REM with business directory. Request-for-quote (RFQ) mechanism. Quotes can only be received by registered users. Notification of quote by e-mail, fax or SMS but user has to log onto system to retrieve quote and reply. Community groups can have information listed for free. Businesses listed for free but pay A\$199 p.a. for RFQ-enabled REM link and an additional A\$99 for a flyer page. Live links to user's websites if registered & paying. Corporate sponsorship of site is available. 	<ul style="list-style-type: none"> Internet based community portal catering for B2B, B2C, B2G and C2C activity REM with business directory. RFQ mechanism. Quotes can only be received by registered users. Notification and RFQ sent by e-mail, fax or SMS. User does not have to log onto the system to retrieve the quote. Community groups can have information listed for free. Businesses listed for free but members pay A\$22 p.a. for an e-mail link A\$66 p.a. for e-mail/web link A\$150 p.a. for preferential listing (shuffled up the page in a search) A\$199 p.a. for e-mail, web and 5 page website template (additional A\$11 p.a. to be listed in more than one business category). A\$250 p.a. for e-commerce solution (shopping cart) Corporate sponsorship of site is available. Monthly e-newsletter containing community & business information, competitions etc. 	<ul style="list-style-type: none"> Internet based community portal catering for B2B, B2C, B2G and C2C activity Business Listings (Members and non members) and Members Listing (businesses and other organizations like schools etc.). No RFQs Community groups can have information listed for free. Businesses listed (via free link to the online directory of the Chamber of Commerce [CCI]of the largest town in the region) but participants pay: (with discounts for shareholders) A\$77 p.a. for a premium listing (with live e-mail & web link, listing under both business and member listings, listing under up to 3 product/service categories and one town or topic category. A\$198 p.a. for premium listing and 1 fully editable web page (A\$220 p.a. to include shopping cart /Order Form) A\$605 p.a. for premium listing and 5 fully editable web pages (A\$880 p.a. to include shopping cart/Order Form). A\$990 p.a. for premium listing and 10 fully editable

	TwinTowns.com	RegWa.net	CountryWA.com
			<p>web pages (A\$1650 p.a. to include shopping cart /Order Form.</p> <ul style="list-style-type: none"> Corporate sponsorship of site is available. Regular e-newsletter.
Date portal/ E-Commerce Features launched	December 2002 portal & REM (with business directory) launched simultaneously (soft launch due to prevailing technical issues). December 2003 development on the social community and B2C part of the portal abandoned to concentrate on B2G, B2B.	Regional portal & Business directory launched March 2000. REM page launched November 2002 (business listings with the ability to send RFQs to participants who have the facility). Technical Upgrade & shopping cart facility in November 2004. REM page removed. Instead, the shopping-cart link lists goods from participants with shopping cart facilities provided by the portal. RFQ forms now appear under some business categories where participants have signed up for this facility.	Regional portal launched May 2000. Shopping Mall page (collection of businesses with shopping cart facilities provided by the portal) launched in 2003. At the end of 2003, there were 4 merchants on the Mall. In 2004, the Shopping Mall page was removed.
Marketing Efforts	A few seminars prior to development; a handful of newspaper write-ups in local community newspapers, employment of a marketing manager only in late 2003 (previous marketing efforts were by the project manager)	It was (and still is) promoted to the community via television and newspaper advertising. Sales personnel were hired when it was launched. Seminars and talks given to both the business and social communities.	Promoted to the community via television (for free in exchange for a live link on the portal to the television station's daily programming page), seminars and talks. One of the board members is currently the part-time sales consultant for participation and advertising space on the portal
<u>Statistics</u> Business Listings	<u>(April 2004)</u> Approx. 1000 (of which 219 had REM links but only 157 were paying participants)	<u>(June 2004)</u> 9800. (1790 paying participants of whom 273 had full e-mail/web & REM links)	<u>(May 2005)</u> Approx. 1500 (Figure yet to be obtained for the current number of paying participants. In 2001, 165 paying businesses and organisations listed on the portal. Currently 230 cooperative members who pay a minimum of \$50 each)
Community Listings	Total not available but 35 had web pages	1770 of which 1155 had Web/e-mail links.	Approximately 100 of which 4 are members
Government Listings	Not Available	142 of which 69 had Web/e-mail links.	Approximately 15 of which 9 are members. 28 towns and 15 schools listed
Portal Hits	Monthly Average 500	Monthly Average 7000	Monthly Average 1.2 million
RFQs	Monthly Average of 11 (based on 2 months activity before operations ceased)	Monthly Average 33	N/A. No statistics available on business channeled to participants via the portal
Operating Costs	A\$4000 per month (by this time there was only one staff and only the REM was focused on)	Ongoing monthly operating costs A\$28000 (for the whole portal including training costs)	Ongoing monthly operating costs approximately A\$5000
Direct Income	A\$600 per month from participation fees	A\$7000 per month from participation fees (no details on sponsorship income)	Slightly less than A\$5000 per month from all sources
Current Status	Ceased operations in mid 2004 and wound up in October 2004	Continues to operate. Upgrade to new technological platform has commenced with shopping cart facilities and clustering in specialty goods.	Continues to operate. Hopes to provide e-commerce training and facilities for an additional 90 SMEs if request for ITOL funding is approved.

Table 1: Case Details

DATA COLLECTION AND RESEARCH METHODOLOGY

Informal data for TwinTowns.com was collected over a one and a half year period beginning early 2003 from a variety of sources including the REM website, historical documents, minutes of meetings, internal memos, e-mail communications, meetings with REM staff and via observation by attendance at REM board meetings.

Informal data collected from RegWa.net and CountryWa.com was from the REM/portal website and published documents.

Constructs from the literature on SME adoption of IT/eCommerce/eMarketplace trading, community portals and IS evaluation were used to design a case protocol for the gathering of formal data. This involved semi-structured interviews of 1 to 1½ hours duration with 9 REM owner representatives and 9 SME participants of Twin Towns.com between February and August of 2004. The interviews were audio-taped, transcribed and transcripts were shared with participants to omit errors and to validate interpretations of the participants' views (Klein and Myers 1999). Field notes and transcripts were made within 24 hours of each interview. All project and case data was maintained in a database, was coded according to the constructs identified in the literature and was checked by another researcher. The data was then analysed and additional constructs were added or existing ones modified as new themes emerged from the analysis and from the extant literature (Carroll and Swatman 2000). The revised conceptual framework was then used to collect data by way of in-depth interviews between August 2004 and November 2004 with 4 owner representatives of RegWa.net and 6 RegWa.net SME participants. The data was analysed and the conceptual framework updated. Shorter interviews were then conducted via telephone with 14 SME participants in June 2005. Formal data collection on CountryWa.com was done via in-depth telephone interviews and e-mail communications with 4 portal Board members and shorter telephone interviews with 20 SME participants between May and June of 2005. A comparative analysis of the data from the three portals was then conducted.

CASE ANALYSIS AND DISCUSSION

Motivation and Ownership Structure

In all three cases, the motivation behind the creation of the portals was for regional development via delivery of online services and by encouraging e-commerce adoption by SMEs. This was in response to funding opportunities available from the federal government for locally developed and managed collaborative e-business solutions especially for SMEs. In order to qualify for such funding, coalitions and consortiums had to be forged with eligible consortium members being companies, tertiary institutions, industry/business associations, government agencies, educational institutions and other not for profit organisations. While the broad stakeholder base for the projects can mean greater access to resources, conflicts can also arise from such consortiums. It is vital to ensure that all consortium members have the same vision for the portal and that they have complementary resources that can be used for the collective good of the project. It is thus necessary to consider the institutional factors behind the formation of such interorganisational relationships (Oliver 1990).

Although the broad specifications of the three portals claimed to be the inclusion of the general community in the online environment, in actual fact it was the e-commerce side that was to be the principal driver of the portals especially given the involvement of the local chambers of commerce, business enterprise centres and business associations in the consortiums.

"It was borne out of a pure business process, originally it was just for business to buy local & that was the main focus. It was a business portal for the [Region]. I think as part of the funding...to make the application for funding more attractive, what we started saying was we needed to do some community stuff as well" (E-Commerce Manager, RegWa.com).

"right the way through I've basically seen this as a business tool. The community is a secondary thing" (Board Member, TwinTowns.com and representative of one of the business associations).

However, in the case of CountryWa.com, the Portal manager (a local resident) had the vision that the portal would be owned by the community and be developed for the community but there was evidence that the e-commerce agenda was pushed through by the Steering Committee comprising representatives of the consortium

"There were problems with the implementation of [the e-commerce component] from the outset. Firstly, it was asking far too much too quickly of the Project to attempt this component in the region. Businesses were barely adopting e-mail and web sites as a functionality of their businesses, let alone having the idea or ability to become "e-commerce up". Members [of the consortia], who tended to come down here in their advisory capacity with theory and postulation, pushed this..." (Excerpt from the Journal Entry of the Original Portal Manager, CountryWa.com)

It appears that there seems to have been some conflicting views about the purpose of the portals and this could have impacted on a lack of understanding about the resources required to develop and maintain both a community portal and an Internet trading platform for the SMEs of the region.

Funding

There was also evidence that there was a great strain on resources in trying to combine the community portal with e-commerce offerings in a short space of time, given the limited amount of funding available. In TwinTowns.com and CountryWa.com, the project team consisted of only one full time project member and no paid part-time members. RegWa.net had a paid part-time portal administrator and commission-only marketing personnel prior to receiving the A\$2.2 million additional funding from the State government in 2003. While RegWa.net and CountryWa.com managed to get by on the spirit of volunteerism exhibited by community-minded individuals who viewed the portal as a community asset and contributed their time to help develop the portals, this was entirely absent in TwinTowns.com which eventually ran out of resources and had to close.

However, despite the support of the community, without the additional funding in 2003, RegWa.net would not have been able to take the portal to the next stage of development (providing one-on-one e-business consultancy for SMEs, offering shopping cart facilities). CountryWa.com is now seeking further ITOL funding for this purpose in an effort to energise the e-commerce side of the portal. At the moment, CountryWa.com does not have sufficient funding to provide statistics on traffic directed by the portal to individual participants' websites (if they are not hosted by the portal) and some SMEs have no idea if their participation is generating any business.

From these cases, it would appear that funding of up to A\$360,000 (the highest amount of funding received by any of the portals prior to the injection of the A\$2.2 million into RegWa.net by the State government) is still insufficient to deliver the full benefits of both a regional community portal and an Internet trading platform for SMEs in a single project. The lack of resources is further compounded when the trading platform is a horizontal one catering for all types of business relationships across various industry types. In contrast some of the more successful public-funded Internet trading platform projects for SMEs in Europe appear to be either better funded or more targeted or both (E-Business Policy Group 2002). Perhaps the lack of proper evaluation of the actual resource needs and outcomes in a number of Australian projects like the ones in our study is symptomatic of “the public funding paradigm that favours relatively quick results and easily measured outputs” (Otis and Johanson 2004).

Portal Development

In RegWa.net and CountryWa.com the portals were developed in stages. Although e-commerce was still the main driver in RegWa.net, by launching the community side of the portal and the business directory first, local community support for the portal made it an attractive advertising alternative. Moreover, the initial involvement in the project of the chamber of commerce, the local ISPs and other local businesses created strong institutional pressures for businesses to join the portal so that “*we won't be left out*” (SME participant in RegWa.net). The focus of CountryWa.com has been primarily on the general community. However, in making the portal a community asset and achieving an average of 1.2 million hits a month, the Board is looking to sell it for the advertising value that the traffic to the portal represents. In both cases, some form of liquidity was achieved on the portal before further (and more sophisticated) e-commerce opportunities were explored.

With TwinTowns.com however, it appears that the rush to introduce the community portal and the trading platform simultaneously (with a stronger focus on the e-commerce side) resulted in neither actually succeeding.

“The other thing I believe is that a lot of portals concentrated on how do they make it sustainable by looking at business models, ignoring the community role and for me community involvement has got to come first. If you've got the community involvement and lots of people accessing it to find out about things happening in the community, almost naturally business access will follow, because business will see the point of getting involved. I think in [TwinTowns.com] we got it the other way around. I used to go on there every couple of days to see what was happening on the site and there was never anything happening in the community. The original plan was to get right down in the community and get the hockey club, the local footy club involved; get it down to that level which would then feed up. But I think because there was that pressure to generate income to make it sustainable, they concentrated at the top so they were feeding businesses in but there was no one to feed the businesses” (Original Project Manager of TwinTowns.com and Current Advisory Committee Member of RegWa.net).

Many sources in the literature recommend a stage approach to the development of portals (Clarke III and Flaherty 2003; Damsgaard 2002; Fisher and Craig 2004), virtual communities (Lee et al. 2003) and electronic markets (Gengatharen and Standing 2003; Raisch 2001).

Regional Profile

In developing Internet trading platforms for SMEs, there is a need to first determine if the profile of the SMEs and the region are suitable for this type of initiative and can be leveraged to achieve adoption of Internet trading.

The profile of the SMEs and the region should thus determine the focus of the platform (will it be vertical, horizontal, part of a community portal?) and the motivation for its development (to raise e-commerce uptake by SMEs, to introduce cost effectiveness in strategic regional industries where SMEs are involved, to raise the general level of Internet use in the region?). RegWa.net and CountryWa.com serve regions that are renowned for their tourism and agricultural products, which are amenable to Internet trading especially to purchasers outside the region. Given that some studies show that government policies to encourage e-commerce adoption by SMEs are more effective in the early stages of an innovation (Chong 2004), new or smaller businesses in these sectors who have not yet embarked on their e-commerce journey could be targeted for recruitment and training on portal use for e-business purposes. Indeed the results of our interviews support these findings as the SMEs who consider RegWa.net and CountryWa.com successes are micro businesses in these industries who were first introduced to e-commerce by the portals.

The geographical location of the portal also needs to be considered. Both RegWa.net and CountryWa.com serve a more geographically dispersed area compared to TwinTowns.com. This could mean that a community portal could prove useful in bridging the physical distance between participants in regional WA while the physical distance of the nearest major competitors outside the region could have a positive effect on a buy local online campaign (although this could be negated by the face-to-face way of doing things in country town areas). In the geographical area served by TwinTowns.com, as with many suburban areas, the community ties between regional inhabitants are markedly weaker given the larger population, the very close proximity to vendors of goods and services outside the region and the fact that some people do not even work or study within the physical regional boundaries. Thus a community portal or a horizontal Internet trading platform for SMEs may not be what the region needs and that could have caused the failure of TwinTowns.com.

Costs and Benefits

As far as individual SME participants are concerned, the cost of participating on the three portals is not prohibitive provided they can see some benefits from their participation. In RegWa.net and CountryWa.com although some participants have yet to experience any economic benefits, they consider their money well spent as

“an additional advertising avenue” (SME on RegWa.net in the tourism industry),

“an experiment....I fully understand it now and I won't be entering into e-commerce again until I am totally set up and ready to go...but it's been nice and I've learnt from it” (SME on CountryWa.com supplying office machinery)

“the main thing that they offered a small business was the facility to take money by credit card. All the sales go through them and...they take a really small percentage off. But this is one of the things that had stopped me. The step that you had to take before you can market on the Internet is to be able to take money on a secure side and they did that and I thought it was a real advantage” (SME in RegWa.net providing specialty apparel).

For the region, the owners of RegWa.net state that the additional funding of A\$2.2 million has allowed them to coordinate all e-commerce activities within the region and coordinate a register for the need for access to broadband for submission to the relevant telecommunications authorities. Equally importantly the additional funding has given them the opportunity to evaluate the initiative via e-business uptake surveys

“with all the statistical integrity & nightmarish stuff to get a baseline as to where [businesses in the region] stand in comparison to Australia....the whole idea is that adoption of e-business strategies will be taken up at a greater rate [here] than Australia on average. The early statistical data looks like that is the case. Because of all these incentives, that is the data to prove that the investment is worthwhile before getting businesses to take that next step” (E-Commerce manager, RegWa.net).

If success of portals and Internet trading platforms are measured in terms of financial benefits for members, self sustainability and profitability of the portals themselves, we may arrive at the conclusion that RegWa.net and Country.com are failures. We can arrive at the same conclusion if we measure them against the funding criteria set out in the ITOL program. However we contend that such initiatives have community and regional benefits to offer which should be measured in the shorter term by appropriate pre-determined benchmarks like increased levels of collaboration, increased awareness of e-commerce benefits, number of SMEs trained in e-business and increased levels of online participation. It would therefore be more appropriate to measure the outcome of such projects in terms of the sustainability of the experience and knowledge gained from them rather than the sustainability of the projects themselves. Even so, such initiatives need to be properly evaluated and planned to determine if they are the right solutions for a particular region and if so, to determine the time, resources and regional alliances that would be necessary to achieve those pre-determined benchmarks.

LIMITATIONS AND FURTHER RESEARCH

The analysis in the preceding sections shows that while there are non-economic benefits to be gained from government supported community portals and Internet trading platforms for SMEs, these initiatives may be suitable in only certain situations depending on the profile of the region and the availability of adequate resources to achieve those benefits. However, what the analysis does not do, is determine how long such portals and platforms should be perpetuated. There is evidence to suggest that even community portals designed to promote online participation by networking a geographical region may outlive their purpose after a certain period. They may become less important once members become more proficient with technology and interact with other members directly or join non-geographically defined virtual communities of interest. Alternatively, as costs of access to technology fall, the technology on the portals themselves may be superseded and there may not be a need to perpetuate them. In our study, after six years of operation, the community online discussion boards on CountryWa.com appear to be waning in popularity as people in the region become more familiar with the use of e-mail, MSN type chat facilities and online conferencing.

Perhaps as suggested by the E-Business Policy Group (2002) such portals and platforms should terminate as publicly funded initiatives once policy objectives are met. In which case, it will be up to each community or project sponsor to decide what those objectives are and in what timeframes they are to be achieved. Towards this end there is a need for further research in the area to guide the planning and development of such initiatives and to create the tools to evaluate them. There is also a need for further research on the outcomes of similar initiatives both in Australia and abroad.

CONCLUSION

Although regional Internet community portals have much to offer in terms of networking geographically dispersed areas or promoting online participation in remote or regional areas, developing and maintaining such portals can be complex and can require substantial resources. When they are also used as platforms to help SMEs trade on the Internet, there needs to be careful consideration of a number of factors. Some of these factors are: the regional profile, the ownership of the platforms, the timing or development process and the resources required not only to develop the platform but also to train both the general and SME communities and to monitor and evaluate the outcomes of these initiatives.

The very fact that these platforms are an intervention against unmet needs of certain sectors by regular market forces indicates that their outcomes should not be measured in the short term against traditional measures of success like economic gain, self sustainability and profitability. Instead of which they should be measured by the sustainability of the community and strategic regional benefits that they can offer or as the scaffolding they provide to promote knowledge sharing and innovation among the participants in the region.

REFERENCES

- Armstrong, A. and Hagel III, J. (1996). The Real Value of On-Line Communities. *Harvard Business Review*, 74(3), 134-141.
- Brunn, P., Jensen, M. and Skovgaard, J. (2002). eMarketplaces: Crafting A Winning Strategy. *European Management Journal*, 20(3), 286-298.
- Carroll, J. M. and Swatman, P. A. (2000). Structured-case: A Methodological Framework for Building Theory in Information Systems Research. *European Journal of Information Systems*, 9(4), 235-242.
- Chong, S. (2004). Electronic Commerce Adoption by Small-and-Medium-Sized Enterprises in Australia: An Empirical Study of Influencing Factors. *Proceedings of the 12th European Conference on Information Systems (The European IS Profession in the Global Networking Environment)*. Turku, Finland: Turku School of Economics and Business Administration.
- Clarke III, I. and Flaherty, T. B. (2003). Web-Based B2B Portals. *Industrial Marketing Management*, 32(1), 15-23.
- Commission of the European Communities. (2003). Report of the Expert Group on B2B Internet trading platforms - Final report. URL <http://europa.eu.int/comm/enterprise/ict/policy/b2b/wshop/fin-report.pdf>, Accessed 27 January 2004
- Curtin, J. (2001). A Digital Divide in Rural and Regional Australia? Current Issues Brief 1 2001-2002, Department of the Parliamentary Library, Information and Research Services. URL <http://www.aph.gov.au/library/pubs/CIB/2001-02/02cib01.pdf>, Accessed 10 May 2005 (latest access)

- Damsgaard, J. (2002). Managing an Internet portal. *Communications of the Association for Information Systems (CAIS)*, 9, 408-420.
- E-Business Policy Group. (2002). eEurope Go Digital: Benchmarking National and Regional e-Business Policies for SMEs. URL <http://europa.eu.int/comm/enterprise/ict/policy/benchmarking/final-report.pdf> , Accessed 7 May 2003
- Fisher, J. and Craig, A. (2004). From Websites to Portals: Success Factors for Business Community Portals. *Proceedings of the 12th European Conference on Information Systems (The European IS Profession in the Global Networking Environment)*. Turku, Finland: Turku School of Economics and Business Administration.
- Fisher, J. and Craig, A. (2005). Developing Business Community Portals for SMEs – Issues of Design, Development and Sustainability. *Electronic Markets*, 15(2), 135-145.
- Gengatharen, D. E. and Standing, C. (2003). A Conceptual Framework to Support the Development of Government-Sponsored Community-Portal Regional Electronic Marketplaces for SMEs: A Stage Approach. *Proceedings of the 14th Australasian Conference on Information Systems (ACIS)*. Perth, Western Australia: We-B Centre, Edith Cowan University.
- Grewal, R., Comer, J. M. and Mehta, R. (2001). An Investigation into the Antecedents of Organizational Participation in Business-to-Business Electronic Markets. *Journal of Marketing*, 65(3), 17-33.
- Klein, H. K. and Myers, M. D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, 23(1), 67-94.
- Koch, H. (2004). Business-to-Business Electronic Marketplace Characteristics Driving Use. *Proceedings of the Tenth Americas Conference on Information Systems (AMCIS)*. New York
- Lee, F., Vogel, D. and Limayem, M. (2003). Virtual Community Informatics: A Review and Research Agenda. *JITTA: Journal of Information Technology Theory and Application*, 5(1), 47-63.
- Lenz, M., Zimmerman, H.-D. and Heitman, M. (2002). Strategic Partnerships and Competitiveness of Business-to-Business E-Marketplaces: Preliminary Evidence from Europe. *Electronic Markets*, 12(2), 100-111.
- Oliver, C. (1990). Determinants of Interorganizational Relationships: Integration and Future Directions. *Academy of Management Review*, 15(2), 241-265.
- Ordanini, A. (2003). The Effects of Participation on B-to-B Exchanges: a Resource-Based View. Irvine: CRITO (Centre for Research on Information Technology and Organizations), University of California. URL <http://crito.uci.edu/publications/pdf/ordanini.pdf> , Accessed 21 January 2004
- Otis, N. and Johanson, G. (2004). Community Building and Information and Communications Technologies: Current Knowledge. *Australian Electronic Governance Conference*. Melbourne, Victoria: Centre for Public Policy, University of Melbourne. URL: http://www.public-policy.unimelb.edu.au/egovernance/papers/17_OtisJohanson.pdf , Accessed 7 July 2005
- PRIME Faraday Technology Watch. (2001). The Emergence and Impact of the E-marketplace on SME Supply Chain Efficiencies. Loughborough: PRIME Faraday Partnership. URL from <http://www.primetechnologywatch.org.uk> , Accessed 20 December 2003
- Raisch, W. D. (2001). *The eMarketplace. Strategies for Success in B2B Ecommerce*. New York: McGraw-Hill.
- Small Enterprise Telecommunications Limited (Setel). (2001). The Other Digital Divide: E-commerce and Australian Small Business. SETEL Position Paper No 3, *August 2001 (Revised)*. URL <http://www.setel.com.au/publications/public/papers/003.htm> , Accessed 10 May 2005
- Steinfeld, C. W. and Whitten, P. (1999). *Community Level Socio-Economic Impacts of Electronic Commerce*. White paper presented to the Telecommunications Policy Research Conference, Washington D.C., Sept. 25-27, 1999. URL <http://www.tprc.org/ABSTRACTS99/steinwhitepap.PDF> , Accessed 14 January 2005
- Stockdale, R. and Standing, C. (2004). Benefits and Barriers of E-marketplace Participation: an SME Perspective. *Journal of Enterprise Information Management*, 17(4), 301-311.
- Walczuch, R., Van Braven, G. and Lundgren, H. (2000). Internet Adoption Barriers for Small Firms in the Netherlands. *European Management Journal*, 18(5), 561-572.

Williams, D. (2004). Keynote Opening Address. Presented at the Connecting Up Conference, South Australia, May 3, 2004. URL http://www.dcita.gov.au/Article/0,,0_7-2_4011-4_118562,00.html , Accessed 10 May 2005

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