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Abstract

Regional e-marketplaces (REMs) and B2B portals for SMEs are one type of initiative introduced by local governments and regional consortiums in Australia to improve uptake of e-commerce by small and medium enterprises (SMEs). However, a number of them have failed or are floundering. This paper examines a failed REM in Western Australia from a motivation-ability perspective. Results indicate the need for REM sponsors to match motivation for REM development with resources and to seek strategic partnering to meet resource shortfalls. Matching motivation and resource capabilities can lead to better focused REMs/portals and may improve their chances of success.

Keywords

Regional e-marketplaces, B2B portals, SMEs, motivation, ability, case study, resource-based theory, interorganizational relationships.

INTRODUCTION

At the height of the dot.com boom, many governments feared a growing divide in the uptake of e-commerce by SMEs and their larger counterparts. This resulted in the introduction of a number of initiatives like web sites dedicated to providing information to SMEs on the benefits of e-commerce and "how-to" sites advising SMEs on becoming e-commerce enabled. However despite these efforts, many studies showed that despite growing levels of awareness and enthusiasm for e-commerce, only a small proportion of SMEs were realising substantial benefits from the Internet (Daniel et al. 2002; Poon and Swatman 1997; Walzuch et al. 2000). This led some authorities to believe that a more direct approach of intervention was required. In Australia, the federal government provided funding to regional governments, councils and multi-stakeholder consortiums to develop and manage business and community portals and regional e-marketplaces (REMs), with a focus on increasing e-commerce uptake of SMEs in the respective regions. However, some of these portals and REMs have failed or are floundering due, we believe, to a gross underestimation of the resources required to develop and manage such portals or REMs and a mismatch between the owners' motivation and the business models chosen.

This paper uses resource-based theory (RBT) and interorganizational relationships (IORs) to examine the failure of TwinTowns, a REM in Western Australia. The study examines how resource constraints and a lack of strategic partnering impacted unfavourably on the success of the initiative. Results indicate the need for realistic goal setting and the need to match motivations or scope/focus with resource capabilities. In the absence of adequate resources, sponsors of such initiatives should consider narrower scopes or alternatively consider strategic partnering to meet resource shortfalls. The study also indicates that B2B portals and REMs are more complex than initially envisaged and may require a longer time and a greater level of resources to produce results.

THEORETICAL PERSPECTIVES

Resource-Based Theory (RBT)

RBT revolves around the use of assets and resources of a firm to attain sustainable competitive business advantage. In RBT core-competences or unique attributes of a firm, which are difficult or costly to copy, need to be exploited. RBT views IT/IS as one of the resources that can be used to achieve competitive advantage depending on how it is managed. Feeny and Willcocks (1998) concentrate on the capability of the IT function and define nine core IT/IS capabilities, some of which are IT/IS leadership, business systems thinking and vendor development. In a study of attributes of IT, Mata et al. (1995) concluded that managerial IT skills can provide sustainable advantage. REMs and B2B portals are interorganizational information systems (IOIS) that demand good managerial IT skills of the market maker. As they are relatively new concepts in IS and as SMEs are typically further along the adoption curve than bigger firms, REMs and B2B portals for SMEs need to be properly evaluated at the outset to determine costs, benefits, stakeholder-needs and resources necessary to develop and manage them. This has led some researchers to view REMs and B2B portals as large imprecise information systems which could benefit from a staged or phased approach to ensure that development keeps pace with e-commerce sophistication of SMEs and allows for proper needs analysis and evaluation at every stage (Gengatharen and Standing 2003a).

Interorganizational Relationships (IORs) and RBT

In examining the motivations behind the formation of IORs, Oliver (1990) arrived at a set of six determinants. They are: necessity, asymmetry, reciprocity, efficiency, stability and legitimacy. Oliver's framework can be used to examine IORs in REMs and B2B portals from three perspectives. It can be used as a basis for understanding why SMEs may choose to join a REM or B2B portal, why sponsors and owners form consortiums to own and manage REMs and portals and why REMs may need to consider strategic alliances with other service providers to offer a wider range of value-added services. Gengatharen and Standing (2004) examined the literature on e-marketplaces and extant theories on IT/IS/e-commerce adoption by SMEs to arrive at an integrated theoretical framework to assess the facilitators and inhibitors of REM success. The framework utilises constructs from RBT (among others) to determine market-makers' characteristics (eg. motivation/focus, ownership structure, competences like IS/Project Management skills, and financial resources), participants' characteristics (eg. top management commitment/innovativeness, internal IT/IS/e-business readiness, size of firm, financial resources/ROI), REM characteristics (eg. value-added services, perceived benefit) and external or environmental factors that could impact on REM success. RBT thus gives us a common theoretical basis for examining REMs from various stakeholder perspectives. Our research indicates that taking a resource-based view of REM and B2B portal creation and management allows for realistic goal setting and an awareness of the opportunities presented by strategic partnering at various levels.

RESEARCH METHODOLOGY

Research Design

This research is part of a wider on-going longitudinal study to assess the success and evaluate the benefits of REMs. The research area is relatively new and REM success and benefits may be viewed from multiple stakeholder perspectives (owners/sponsors, SME participants, intermediaries, the region). The research approach is a structured case study with an embedded design. This approach is appropriate as the "research and theory are at their early formative stages" (Benbasat et al. 1987, p. 369) and rich explanations to 'how' and 'why' questions are sought from multiple sources (Yin 1984). The embedded design denotes the level of analysis of several separate units of evaluation (in this case the stakeholder categories) to consider each unit's view and role in the context to be studied (the success and benefits of the REM). The structured case study method (Carroll and Swatman 2000) is used to plan, collect data, perform analysis and reflect on each phase of data gathering before moving on to the next to capture "the ongoing refinement of the initial research question and constructs, and the continuing comparison of data with emergent themes, the literature and outside expertise" (Carroll and Swatman 2000, p. 236).

Data Gathering

Data was collected over a one and a half year period beginning early 2003 from a variety of sources viz. 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. The data from these sources and from the extant literature on e-marketplaces, SME adoption of IS/IT/e-commerce and e-commerce evaluation was used as inputs to form a conceptual framework of constructs with which to examine REM success or lack thereof (Gengatharen and Standing 2004). This framework was used to design the next stage of data gathering, which involved semi-structured interviews of 1 to 1½ hours duration with 9 REM owner representatives and 7 SME participants between February and April of 2004. The interviews were audio-taped, transcribed and transcripts were confirmed by participants. Field notes and transcripts were made within 24 hours of each interview. All case data was maintained in a database and was coded according to the constructs in the conceptual framework. The data was coded and analysed after each interview and additional constructs were added or existing ones modified as new themes emerged from the analysis. The new themes and constructs were then also explored in subsequent interviews. The main research question posed in this paper is "Can constructs of RBT be used to examine the failure of TwinTowns?"

The Case

TwinTowns is a portal incorporating community content and a REM set up by a consortium of stakeholders in two neighbouring towns in Western Australia. The idea was first conceived in 1999 with the main objective of developing the area into a 'smart region' through the use of the Internet to network the region by delivering e-procurement and marketing solutions for business, local government and education organizations and community sites for communities and individuals in the region. The key motivations for development of the REM were increasing e-commerce adoption by SMEs, improving business efficiency and increasing trade within the locality, expansion into new markets and development of the region generally. The scope of the TwinTowns portal was therefore wide, expecting to impact on regional B2B, B2C, B2G and C2C relationships in order to be successful. The owners of TwinTowns were towns T1, T2, their business associations BAT1, BAT2, and two higher education institutes HEI1, HEI2 in the region. A not-for-profit organization, NFPO1, was formed to own the project, its members comprising representatives of the afore-mentioned stakeholders.

Funding received for the project from external (State and Federal governments) and internal (T1, T2 and HEI1) sources totalled approximately A$ 360,000. The portal was based on a business model that would see it becoming self-sustainable within a year of launching, using income from participation fees, advertising fees and sponsorship. The TwinTowns REM comprises a business directory and a request for quote (RFQ) mechanism. Suppliers can receive quotes via e-mail, Fax or SMS. The portal development was outsourced but there were insufficient funds to purchase REM technology that could integrate with the procurement systems of T1, T2 and HEI1. It was decided that the REM would be a tool for only the discretionary purchasing of these major buyers. The portal went live with a soft launch in December 2002, with registered suppliers on the REM paying an annual fee of A$199 and an additional fee of A$99 for a business flyer page, while community groups could have content hosted free of charge on the portal.

The project underwent one change of founding members and three changes in project managers, the last (Project Manager C) resumed his position as economic development officer in T1 since June 2003 but ran the project by proxy. At that time the REM had 100 registered REM participants (not all were fee-paying) and 37 community groups; due to limited resources arising from a shortfall in funding anticipated from external sources, the community side of the portal was abandoned and only the REM became a priority. There were numerous problems with the technology and project delays and in October 2003, it was decided that the technology was stable enough to aggressively market the REM to the business community. However, there were problems trying to resolve the 'chicken and egg' situation of critical mass of buyers and suppliers and while the internal purchasers of T1 and T2 were willing to try the REM for discretionary purchasing, there were not enough registered suppliers for this method of procurement to efficiently replace existing methods. At this point the shortfall in funding put the REM in a precarious position of having to recruit 2 new participants each work day to just pay the marketing manager, who was now effectively running the REM on her own. The sales target was not met and the REM ceased operations in May 2004.

CASE FINDINGS AND ANALYSIS

The findings and analysis of the case will be examined from a resource-based view at three levels: market maker, REM/Portal and participant.

Market-Maker Perspective

The following conceptual framework was used to examine market maker's characteristics of TwinTowns:

Construct	Comments	Source
Motivation/focus	Determines market mechanism, services offered & benefits and the pay back period	Brunn et al. (2002), Grieger (2003), Gengatharen and Standing (2004)
Ownership structure	Single vs multiple stakeholders. Latter has potential for collaboration & larger funding but also for conflict	Brunn et al (2002), Gengatharen and Standing (2004)
Competences (IS/ Project management skills)	Critical factor. Has implications for issues like proper needs analysis and evaluation	Feeny and Willcocks (1998), Mata et al (1995)
Financial resources	Research shows large investments needed.	Brunn et al. (2002), Gengatharen and Standing (2003)

Table 1. REM Market Maker's Characteristics (Adapted from Gengatharen and Standing (2004))

According to Brunn et al. (2002 p. 289), an e-marketplace without a clear focus "runs the risk of trying to sell everything to everybody…[and is] …likely to result in selling nothing to anybody". In TwinTowns, there appears to have been a lack of focus, with the project expecting to impact on four distinct types of local relationships, B2B, B2C, B2G and C2C. The wide scope of the project was never altered even after a large portion of the external funding did not eventuate and the development of the portal continued to be based on this wide scope between 2001 and 2002. The funding shortfall was only partially met internally by the towns when a financial crisis was reached in early 2003 and it was at this time that the project scope was narrowed to concentrate on B2G first and possibly local SME supply to other local major purchasers. By this time the lack of funding meant that the original intention of streamlining the REM technology with that of major purchasers (T1, T2 and HEI1) had been discarded as it was too expensive and there were insufficient funds left for a marketing campaign that would promote the REM to the general public, effectively leaving B2C participants in the lurch. There was a fundamental flaw in basing an initiative with such a broad scope (and one that appeared to have a long payback period due to the underlying motives of improving SME uptake of e-commerce and regional economic development) on a business model that was to be self-sustainable in a short time. When queried about why this was so, the following response was obtained from a local government representative of TwinTowns:

> *" The problem is going to council or going to the state & saying 'I want you to fund this wonderful idea but you're going to have to fund that for at least 10 to 15 years'. The answer they are going to give is almost always No. So what you end up doing is asking for \$50K, \$100K upfront once off & we say 'we've done our business plan, we will be viable, cash flow positive within a couple of years & you won't have to do any more. It will be self-funding', knowing in your heart that it is certainly a difficult thing to achieve. So then you're hoping that the thing will become so energised, so attractive to the political masters that they will say 'OK, here's some more money' or 'I like the way this is going, I see the problems you have & I'll give you some more money'" (Chairman TwinTowns & CEO of T1)*

The undertaking of such a wide-scoped initiative with inadequate resources can be attributed to the 'bandwagon effect' and the socio-political motives underlying the creation of REMs and portals in Australia during the hubris surrounding the dot.com boom. In examining the diffusion of information policy, Spencer (2002) is of the opinion that where states compete for economic advantage, the competitive bandwagon effect of policy diffusion can be significant and is characterised by rapid adoption of policies with long term payback yet are adopted in a relatively short time. The bandwagon effect also offers a " theoretical basis for subsequent abandonment of innovation" (Spencer, 2002, p. 29), an analogy that can be used to describe the outcome of the TwinTowns initiative. As a result of trying to spread their thin resources to affect a wide scope of relationships (B2B, B2C, B2G, C2C), TwinTowns ended up not selling anything to anybody.

The results of the study also show that financial resources for REMs and B2B portals for SMEs need to be considered for maintenance and on-going support, not just for initial platform development:

> *"in reality these things take a long time to get established and become sustainable….However given the appropriate resources to roll this thing out & promote it & engage the business community involved, I think you can get those returns. I think it comes back to the initial comment I made about commitment by stakeholders to fund the platform but not the ongoing operations." (Project Manager C, Economic Development Officer, T1)*

However, Fisher and Craig (2004), found that in the case of a B2B portal in Victoria, despite providing for maintenance and support for the first two years, the portal had to be wound up after it failed to become self-sustainable within a year after launching. This was due to a one-year delay in plans to charge for participation on the portal, a shortfall which the sponsors could not continue to meet when participants refused to pay as they saw no value from the portal. In both cases it appears that the sponsors did not have the necessary resources to meet any contingencies and had unrealistic business plans.

In examining TwinTowns using Oliver's (1990) inter-organizational relationship types and critical contingencies of relationship formation, the ownership structure is closest to the 'Joint Programme' type of relationship. This type of relationship "may improve the agencies' abilities to convince government sources to provide funding, particularly if the program is a new initiative in the social service domain" (Oliver, 1990, p. 255). This is indeed one of the reasons for TwinTown's wide ownership base:

> *"If it [ownership base] had been smaller, we wouldn't have got the support & the resources" (Economic Development Manager, T1).*

However, we argue that REM/portal owners or sponsors need to carefully examine their partnering strategies to ensure that apart from sources of funding, partners have complementary resources that can and should be exploited for the benefit of the initiative, especially when financial resources are limited. In the case of TwinTowns, some of the blame for the failure was apportioned to the delays caused by technical problems with the REM/portal software and the management of the relationship with the software vendor. Fisher and Craig

(2004) also report on delays in the delivery of the technical solution. It appears that there were few attempts by the TwinTowns management to involve the in-house IT personnel of the individual sponsors in the project:

> *" We've been kept at arm's length & that's to say that it's not necessarily to do with the governance of the REM, but in some cases perhaps there may have been more suitable people that could have been involved. I think obviously at an earlier stage there could have been a bit more input from procurement or IT or probably both" (Procurement ManagerT2).*

> *"It's a part time board, we spent a couple of hours a month at meetings and we had no expertise on the Board…We did not have the dedicated staff & we did not have the money to do that. We try & do this on a shoestring… We were handicapped by a number of factors; changes to the Board, changes to the key REM officer during that time & we seconded [Project manager C] who did his best but probably did not have the in-depth experience of either a technical or marketing person, but he did his best." (CEO, T1)*

This lack of involvement of internal IT personnel in the project was due to the fact that initially the local governments were not expected to play a major role in stimulating portal and REM transaction activity. It could also be because the project was owned by a separate entity and there was no real ownership by the individual stakeholders who may have only wanted to commit limited resources to the initiative. Whatever the reasons were for keeping the technical people at arm's length, by the time it was decided that the towns would be the primary purchasers on the REM to 'start the ball rolling' towards critical mass, their IT people had misgivings about the REM and portal systems:

> *"I think in terms of deployment, the people put in to deploy it were not the right skills-based people….. our [IT] guys see it as a way out of date technology. We don't want to be relying on it, patching it, having third parties involved…. We've got good technology systems here that are supported. They are from reputable companies. We would not buy in to the REM vendor or anything like that" (Strategic Development Manager T2)*

The REM sponsors therefore did not make full use of the resources (other than finance) that they owned to contribute to the project. However, research shows that even a lack of resources can be overcome with strategic partnering. In the case of the Regional Electronic Trade Facilitation Centre, a vertical REM in the agricultural sector in Victoria, although the sponsors did not have the requisite technical expertise or the necessary financial resources, strategic partnering contributed to the preliminary success of the initiative in encouraging uptake of e-commerce by SMEs. The application service provider was ready to invest in the proprietary software to be developed, an investment which neither the local councils nor producers could have afforded (Wilkins et al. 2003). In the Lonxanet, a vertical REM in the fisheries industry in Spain which also showed positive preliminary results, one of the partners of the REM sponsors was a logistics company (Dans and Freire 2002) who was a key player in the industry.

While there could have been a number of market-maker factors (or a combination of these) that contributed to the failure of TwinTowns, the most glaring shortcoming is the absence of good IS project management principles. Although the ubiquitous nature of the Internet and the socio-political reasons behind the portal creation could have clouded the sponsors' view of the IT artefact underlying the initiative, the fact remains that a portal or REM for SMEs is a novel or imprecise interorganizational information system (Gengatharen and Standing 2003a), especially fraught with uncertainties given that SMEs are usually further along the adoption curve of an innovation. The complexities of REM and portal creation and management are compounded by the fact that though local governments or councils in Australia provide the closest interactions with citizens, they are often resource-poor (Spencer 2002, p. 25). Thus the TwinTowns initiative should have been properly assessed at various stages against the available resources to determine scope, viability and partnering opportunities that could meet resource shortfalls. For example, the application of good project management principles should have sounded the alarm bells for the project in late 2001 when further federal funding was declined. Although the specifications of the REM technical functionality were altered (to not be streamlined with major suppliers' procurement software), the shortfall in funding did not signal the mismatch between the size of the project team (which has always been 1 full-time staff – the project manager prior to October 2003 and the marketing manager after that) and the scope of the project. Instead of which, some of the sponsors continue to blame the woes of TwinTowns on unrealised anticipated external funding:

> *"From the murmurings of the State & Federal governments we expected a lot more funding to come in but that wasn't happening. I don't even know where the State government's gone. They're just gone….in 1999 the first base plan was for a project manager, 2 admin people, a sales & marketing person etc….5 or six people minimum" (Economic Development Manager, T1).*

To some extent, the lack of internal project resources was also blamed on the delays caused by problems with the technology. A significant portion of the project manager's time (from mid 2002 to early 2003) was actually consumed in testing the software and liasing with the vendors on the technical problems, leaving little time for marketing (to suppliers, buyers, advertising sponsors, community groups), database and portal maintenance, administration, training etc. We argue, however, that all these functions should never have been expected to be handled by one person even if there were fewer technical problems to deal with. Good project management principles would also have signalled the need for technology champions in the towns and the business community and for the strong backing of the ultimate decision makers (the town councils) before the project proceeded.

Portal/REM Perspective

Taking a resource-based view of a portal or REM involves determining how the REM can offer participants a source of competitive advantage. In short, joining the REM should enable a participant to reduce costs, increase productivity or gain access to new markets, which would otherwise not have been achieved by the participant on their own. According to the literature, one of the critical success factors of e-marketplaces is the level of value-added services that is offered to participants (Brunn et al 2002; Grewal et al 2001; Ordanini, 2003). According to Gengatharen and Standing (2003b), some of the basic success metrics that can be used to evaluate the quality of value added services of REMs are trust, site intelligence (CRM), feedback mechanisms, relevant search facilities, calculators, tracking capabilities, helpdesk/set-up help, account maintenance, training (in conversion to e-business & system use), FAQ's. However, there is evidence to suggest that B2B exchanges which have survived the e-marketplace shake-up appear to be integrating more services (than just reducing transaction costs) in their offerings to impact participant firms' competitiveness (Ordanini, 2003). Research has also shown that strategic partnering with providers of intermediary services can help e-marketplaces achieve these value-added offerings (Le 2002; Lenz et al. 2002), especially where their own resources are inadequate.

In TwinTowns, the lack of adequate financial and human resources meant that even some basic value-added services were not provided to participants, as management was more interested in actually getting a basic working portal/REM model out to the market.

> *"…at the heart of it, if the core is not sound and not of interest, we can have the sexy bits but they won't be able to sustain the REM" (CEO, T1)*
>
> *"I see that [value-added services] as probably a second stage development of the REM" (President, BAT2)*

The lack of resources also meant that there was hardly any communication from the REM/portal to participants on what was happening to the initiative nor was any feedback collected from participants. In fact apart from a letter informing them that the Marketing Manager was taking over the running of the REM in October 2003, some of the participants who had been in the pilot group and had signed on in December 2002 had not had any other contact with the personnel or sponsors of TwinTowns.

> *"If the councils are genuine about their attempts to get it up and running they should contact the people who have shown interest in becoming involved by advising where we're at with it and what the plans are for the future. Any contact will be better than dumb silence" (fee-paying SME participant)*
>
> *"I was quite optimistic that something would come of it but having not had any contact since or anything else, or have anybody contact me, I sort of lost interest" (non fee-paying SME participant)*
>
> *"It comes back to the fact that I've had zero amount of contact in the sense of people checking on my services, so in that sense there is no value whatsoever. I still see a potential value in it" (fee-paying SME participant).*

Fisher and Craig (2004) also reported lack of communication with the portal sponsors as one of the major dissatisfactions of SME participants in the Victorian B2B portal. To some extent, the sponsors of TwinTowns did try to engender some trust between the portal sponsors and the business community by having the business associations as partners on the project. However, the question remains whether this was a strategic move given the membership of the associations:

> *"As at May 2003, [T1] had 3,400 businesses but only 300+ are members of BAT1. We therefore keep that representation in context. It is the peak body for business in the area. But we keep the representation in context so that it is not skewed…" (Project Manager C).*

Furthermore, it appears that while the local governments had visions of encouraging e-commerce uptake by SMEs to develop the region via B2B, B2C, and B2G business, the business associations could have viewed the initiative as something that would have legitimised their positions in the business community as they tried to jockey for a greater share of the towns' procurement spending. In response to a question on the initial motives of the portal creation, the following response was elicited from one of the business associations:

> *"Improving business opportunities to gain work from the councils and other government departments….right the way through I've basically seen this as a business tool. The community is a secondary thing….The opportunity to get quotes from the major players would be the main thing…" (Representative BAT1).*

While this particular representative bemoaned the lack of support for local SME suppliers by the towns who appeared to *" aggregate and go & buy from some big company & don't give the local person a chance"*, he was earlier dismissive of the concept that the REM may provide the opportunity of SMEs collaborating or aggregating to bid for large contracts *"aggregation, it's pie in the sky stuff. I think that would be so complex I wouldn't enter into it. If it was me & I had to deal with 5 or 6 other people to get a contract, the hassle that goes with it will be too great. So I would say business (I'm thinking of business from the business association point), very few of them would want to enter into it because they would be going into an unknown area, with unknown people & they wouldn't feel comfortable"*.

The results of the study also show that the potential benefits of the REM and portal were not properly articulated to the participants. The majority of SMEs perceived it as another platform for selling or marketing, but more importantly as a way of getting a foot in the door of the local government business. The perceived possibilities for cost savings were mainly in advertising and marketing while the benefit of networking referred to off-line networks as the REM sponsors tried to organize sundowners for existing and potential participants. However, the lack of resources for promotion of the REM negated even any advertising or marketing cost savings that some of the SMEs first thought possible. There also does not appear to have been any attempt to provide added value (or advantage) by building network externalities via on-line forums and discussion groups among the participants of TwinTowns. According to Ordanini (2003, p. 14), participating in a digital marketplace can create a networking competence even without the need for financial transactions. The example given is of 1city.biz, Italy's largest B2B on-line auctioneer which in addition to transactions, offers a virtual knowledge network on its exchange where purchase managers, academics and consultants can share knowledge without having to transact financially.

In the end, it could be said that the TwinTowns REM was being sold for benefits that could have been achieved off-line at a lower cost, for example via a number of "meet the local major buyers" functions organized by the towns or business associations. There were thus no benefits from REM participation, which was a tragedy given that some of the SMEs interviewed felt that even some pertinent local business news on the REM website at regular intervals would have mollified their lack of transactional activity pending the building of a critical mass of players. Some SMEs felt that it could still be used as a tool for promoting local regional business but that it needed to be given the time to prove itself and the necessary resources to achieve this.

Participant Perspective

A resource-based view of potential participants can help REM owners plan the development of the REM to ensure early liquidity or critical mass and ultimately success. Many SME IT uptake studies point to senior management commitment and owner innovativeness (eg. Thong and Yap 1995), internal IS/IT capabilities and e-readiness (Chau 2001) as having a positive effect on adoption. For REM developers, this signals a need to identify potential participants who have these characteristics and market the REM to them. REM owners and developers need an understanding of the extent to which the SMEs in the region are ready for e-marketplace trading. If they are not, there may be a need for one-on-one training and advice from neutral parties. Alternatively, the features of the REM may need to be rolled out in phases, to ensure that REM development progresses in tandem with e-sophistication of regional SMEs. In TwinTowns, an understanding of this factor could have demonstrated the need for either greater resources, staged development of the REM or the need for a longer period before the REM began to show some returns (further sustained investment). A survey of small businesses in the region carried out prior to inception of the idea for a portal and REM indicated that businesses in this region were at least as well advanced as average Australian businesses, and possibly more advanced in the areas of web page and on-line transactions (TwinTowns internal document). However we are not able to sight any evidence of detailed analysis like what these businesses were buying or selling, where and who their market was, and whether the REM could provide them some value that they could not already obtain from their own on-line activities.

As the size of a firm and the availability of its slack resources can affect adoption, this could have guided TwinTowns.com in planning its target market. Larger SMEs, which could afford to take the 'risk' involved in a new innovation, may be easier targets as potential REM participants. In TwinTowns the majority of participants were businesses with less than 10 full time staff. Some of the B2B SMEs interviewed were only interested in selling on the REM (mostly to major regional buyers) but did not have the capacity to provide volume discounts, and only one of the SMEs interviewed indicated they would use the REM for purchases "if there was a need". Typical SME responses to purchasing via the REM were:

"No. I have no need to. We have our established suppliers."

"I won't be going out to people asking for quotes because I don't have a great need. My suppliers are locked in".

It appears that in the case of TwinTowns, there was a lack of a proper analysis of the SME businesses in the region to determine how best a REM/portal could benefit them. By taking a resource-based view of potential REM participants, market makers may be able to recruit players who could stimulate transactional critical mass on the REM and provide the bandwagon effect for others to join (Grewal et al. 2001). Viewing these early movers as strategic partners in the venture would also have meant keeping them informed about the REM development and eliciting early feedback from them.

DISCUSSION

The main contributions of this paper are in providing a theory-based understanding of REM/B2B portal failure and describing how that theoretical perspective can assist market-makers plan, develop and manage REMs and portals. Resource-based theory is a useful theoretical lens to examine REMs as it can be used to guide market-makers in evaluating their motivations and business plans against the reality of their competences and resource constraints, which could lead to better outcomes for such initiatives.

While it is true that it was progressive for local governments to experiment with such innovative concepts as REMs and regional B2B portals (after all, many large and commercial B2B exchanges and portals failed after the e-marketplace shakeout in recent years), in some cases there seems to be a basic mismatch between the motives behind such initiatives and the business models chosen, given the level of resources available to the local governments and the nature of the sector they were trying to influence.

Research points to SMEs being more cautious in adopting new technology (Craig 2002). Some studies like those by Chau (2001) examining the inhibitors to EDI adoption by SMEs in Hong Kong, suggest that the most significant inhibitors were related to organizational readiness, which included factors like knowledge skills about technology, attitude, internal IT support and support provided by vendors (constructs of RBT). According to Evans (2002) preliminary evidence shows that despite intervention via local and regional governance, e-commerce had not yet fundamentally changed the relative economic status of the Greater Manchester and Merseyside regions of the United Kingdom.

These and other studies indicate that socio-economic initiatives attempting to influence innovation adoption by SMEs are often long processes involving extensive resources and can be expected to have long payback periods. However in the case of both TwinTowns and the Victorian regional B2B portal that failed (Fisher and Craig, 2004), the platforms were expected to be self sustainable within a relatively short period of time, without much consideration given to issues like building the competences of the participants or providing them with a competitive advantage, and a seemingly simplistic view of the resources required to get SME participation on a commercial basis.

The key recommendations that this paper thus makes for REM/B2B portal development is to take a resource-based view of the initiative at various units of analysis (market-maker, REM/portal and participant) and to consider strategic partnering at all levels. We also advocate an iterative cycle of resource-based evaluation of REM and portal development from these perspectives throughout the life of the initiative.

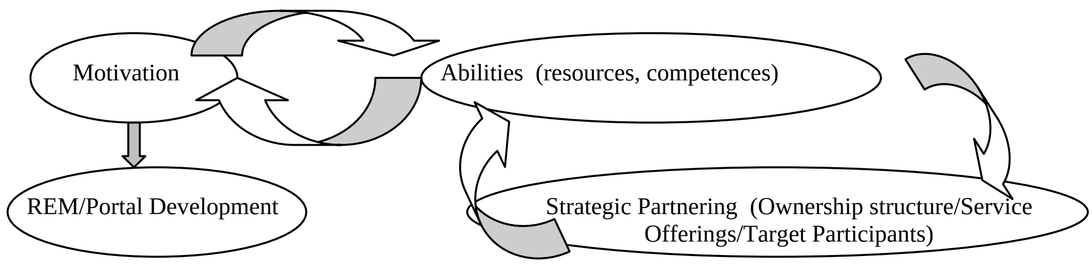

Figure1. Resource-based iterative evaluation between motivation and ability

LIMITATIONS

While the preceding analysis and discussion provide a theoretical basis for examining failure of REMS and portals, it may not encompass all factors that could have accounted for the failure. Other factors that can affect the success or failure of REMs are the geographical location of the region that the REM services; the readiness of the community to adopt the new way of trading; the political climate surrounding the region and bargaining power of the owners (affects their ability to obtain public funding and support). Further research is required to determine theoretical replication and examine other issues like whether or not SME uptake of e-commerce may be better served by re-formed markets (vertical REMs, industry clusters or supply chain arrangements) which can enhance existing trading practices and relationships to reduce costs and increase productivity, as opposed to breakthrough markets which attempt to introduce new trading practices (Day et al. 2003); whether a staged approach to REM development is required to be integrated with other initiatives simultaneously. Longitudinal research into existing REMs and B2B portals is also necessary to determine if indeed taking a resource-based view of the initiatives can improve the chances of success.

CONCLUSION

In an evolving area like e-marketplaces, the developing landscape poses many uncertainties to owners and participants alike. This situation is compounded in REMs and B2B portals for SMEs where the imprecision or uncertainty lies not only in the newness of the technology but also in the concept as a whole. A not-for-profit REM, owned or sponsored by local governments and business associations who often do not have internal expertise in the area and targeted at SMEs who traditionally are active only further down the innovation adoption curve, can be a quagmire of technological, business, social and political uncertainty. It is not surprising that some of these initiatives have failed or are taking a long time to show the desired results. It is thus necessary for market makers to properly evaluate the costs and benefits of the initiatives to determine if REMs and portals are effective instruments to achieve the objectives of increasing SME uptake of e-commerce and stimulating regional development. A resource-based view of the development and management of REMs and portals for SMEs can lead to more realistic objectives and better planning for such initiatives.

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