Innovation in micro enterprises: reality or fiction?

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Received 27 November 2013
Revised 11 February 2014
7 October 2014
Accepted 3 May 2015

Abstract

Purpose – Although there is significant literature on innovation activities in large and medium-sized enterprises, studies that report on innovation practices in micro enterprises are lacking. The purpose of this paper is to explore three issues: understanding of the term "innovation", innovation practice(s) and how innovation can be effectively measured.

Design/methodology/approach – The 12 case studies presented in this paper involve micro enterprises based in Ireland. Data collected during depth interviews provide insights into understanding, practices, motivations, behaviours and attitudes relating to innovation.

Findings – Although awareness of innovation theories, processes and procedures is found to be low, all of the micro enterprises studied engage in a range of innovation activities across products, processes, people and marketing. Innovation is important to the development of the enterprises; however, innovation is not a managed or systematic process, and this is often due to lack of resources.

Practical implications – This paper presents six recommendations which are of use to academics, micro enterprises and government support agencies. These recommendations include making changes to the service provided by support agencies, simplifying innovation, developing an innovation brokering facility, and improving the design/delivery of innovation programmes.

Originality/value – The paper enriches understanding of the experience of participants through the use of narrative structuring, and augments knowledge on the innovation practices of micro enterprises.

Keywords Ireland, Metrics, Innovation, Entrepreneurs, Micro enterprises

Paper type Research paper

Introduction

This paper examines innovation in micro enterprises in order to assess whether innovation is effectively practised and measured in micro enterprises. In this paper we ask three questions in relation to micro enterprises: do micro enterprises understand innovation? Are micro enterprises aware of accepted innovation-management theories, processes and procedures? Do micro enterprises measure innovation?

A micro enterprise is defined by the European Union (2014) as:

> […] an enterprise with fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed €2 million.

Wolcott *et al.* (2008) report that micro enterprises may be home-based, farm-based, or street-front businesses, and can be either part-time or full-time businesses. There are significant differences between accepted theories and practices in innovation management and how innovation is understood, implemented and measured within enterprises. Nicholas *et al.* (2011) identify gaps between what is understood as new product development (NPD) best practice by researchers compared to practitioners, and claim that there is limited value in developing theories and models about the best ways to manage NPD, unless these model and theories are fully diffused and can be made useful to NPD practitioners.

The majority of academic literature (Andrew and Sirkin, 2003; Drucker, 2002; Cooper, 2002; Kanter, 2006; Hering and Phillips, 2006) is based on large organizations,

Journal of Small Business and Enterprise Development
Vol. 23 No. 2, 2016
pp. 349-362

1462-6004
DOI 10.1108/JSBED-11-2013-0176

and the applicability of the findings of such research to micro enterprises is limited. Furthermore, Salavou *et al.* (2004) and Battisti *et al.* (2010) report that there is an absence of studies on innovation within small/micro enterprises. An additional challenge according to Nicholas *et al.* (2011) is a gap between what researchers and practitioners understand to be innovation/NPD best practice. Furthermore, Rowley *et al.* (2011) acknowledge that there is considerably more work to be done in the area of innovation types before researchers and practitioners are able to communicate clearly on the subject. If this is true, what are the implications for micro enterprises?

The structure of this paper is as follows: the next section provides a review of the barriers to innovation; this is followed by a description of the approaches to measuring innovation; an outline of the study's methodology; the findings relating to understanding, measuring and the practice of innovation; and finally conclusions and recommendations.

Barriers to innovation

Discussing systems, structures, multidisciplinary approaches, flexibility, creativity and innovation portfolio management is important. Such discussions are sensible and practical for companies with enlightened management, skilled staff, sizable budgets, networks, sophisticated organizational structures and so on. But what about micro enterprises? Micro enterprises have small numbers of staff who carry out a range of different functions; small budgets; and management who are preoccupied with day-to-day survival, rather than the development of an innovation strategy. Can micro enterprises realistically follow the Stage-Gate product innovation process as set out by Cooper (1990, 2002)? Do micro enterprises innovate? If so, to what level and in what types of innovation do they engage, and what are the barriers to innovation?

Anecdotal evidence, observation and past studies (Salavou *et al.*, 2004; McAdam *et al.*, 2004) indicate that there are many potential barriers to the development and management of innovation. These include:

- limited time/capacity;
- an operational focus with short time horizons;
- the absence of a consultative management style/structure;
- a lack of suitably qualified personnel (and a limited ability to recruit);
- a shortage of finance, coupled with the high costs of innovation (particularly IP) resulting in possible risk aversion and an inability to build on innovations;
- inadequate ICT infrastructure;
- difficulty in accessing suitable partnership/alliance opportunities, and a fear of partnerships due to possible exploitation;
- the presence of dominant competitors; and
- inadequate information on issues such as market requirements and opportunities, potential innovation benefits, etc.

However, the flexibility of micro enterprises, and their ability to communicate quickly, personal, simplified processes and ability to adapt can actually support innovation. According to de Sousa (2006) a culture of organizational learning is essential to ensuring sustainable innovation. Many owner-managers often have an authoritarian or

direct management style that does not encourage innovation, flexibility or risk-taking. Such a management style can dampen innovative or creative flair amongst staff. This is further compounded where owner-managers employ family members. While owner-managers can be effective at changing things quickly and efficiently, this is primarily related to mechanistic, operational issues rather than learning-related or people-related change. Furthermore, where there is no creative culture within an organization, there is consequently no structure upon which to facilitate or reward innovation and to develop ideas from the bottom-up.

The focus in micro enterprises is on day-to-day issues to ensure marketplace survival, and therefore staff are under pressure to perform. Amabile *et al.* (2002) explain that in such a work environment there is little focus on strategic issues or innovation. Furthermore, as owner-managers potentially focus less on innovation or other strategic management issues compared to managers of larger organizations, it is difficult for them to recruit employees with the required levels of creative and innovative knowledge, skills and attitudes. Where it may not be possible to directly employ creative and innovative people, creativity and know-how may be brought into the organization via inbound, open innovation (Chesbrough, 2007; Chesbrough and Appleyard, 2007; Schroll and Mild, 2011). McAdam *et al.* (2007) explain that enterprises that have high levels of innovation take a broad, process-based approach to innovation, rather than a narrow, technical approach. This process-based approach often involves a level of critical reflection. Brown (2002) proposes a need for both a top-down and a bottom-up dimension, as well as the need to look for innovation amongst customers, competitors and employees. Macmillan and McGrath demonstrate that elements of the consumption chain can provide innovation opportunities including purchase, delivery, after-sales, exchange/returns, repairs/servicing and disposal. In a competitive, globalized, technology-based marketplace, companies need to employ innovative people and help facilitate them to bring ideas forward and participate in innovation-enabling networks, and reward them for doing so.

Measuring innovation

There has been limited research on the measurement of innovation in micro enterprises. This negatively impacts the development of innovation activities. As Forfás (2011, p. 17) states:

> […] in the absence of a broader evidence base on the outcomes of innovation, it becomes more difficult to incentivise non-innovation-active firms, particularly those who face high barriers to innovation such as small firms, to make investments in upgrading their products or processes […].

Anthony *et al.* (2008) explain that a significant problem for companies seeking to increase their growth through innovation is that they often use incorrect metrics, which result in inaccurate conclusions. Ambler *et al.* (2001, p. 3) report that the owner-managers of micro enterprises can be swayed by time, financial constraints and environmental uncertainty to take a partial view of their environment, and that, as a result, they tend to measure what is easily measured as opposed to what is useful to measure. This is unsurprising, because many micro enterprises simply focus on being competitive and on day-to-day survival. Owner-managers face a challenge in terms of devoting sufficient time to managing innovation and measuring its impact, when they are also managing all the other business functions.

Brooks and Simkin (2012) identify specific problems when it comes to measuring innovation in micro enterprises. These include:

- an underdeveloped MIS system resulting in limited, unreliable and intermittent multi-year data;
- a small number of customers accounting for significant portions of business;
- agreed strategies being overtaken by events in the business environment;
- ad hoc budgeting, and a need for quick results over long-term investments;
- a focus on operational, rather than strategic, issues; and
- an organizational culture fostered by owners/managers.

Another important consideration is that where innovation metrics are used they tend to focus on outputs/outcomes and financial metrics, whereas inputs and processes also need to be measured, as well as softer issues such as customer satisfaction. According to Chan *et al.* (2008, p. 6), enterprises reporting the highest contribution to growth from their innovation actions measure their innovations as a portfolio, and use metrics across the whole innovation process. Therefore, if used across the whole innovation process, metrics can assist in improved strategic focus, resource allocation and overall performance.

Methodology

The 12 case studies presented in this paper involve micro enterprises based in Ireland. Yin (2009) reports that the case study method has been widely used as a research instrument for data collection, theory building and policy/programme development. Furthermore, the case study method can be used in a business setting to improve practice, typically by aiding in the development of best-practice principles or conceptual frameworks for measuring outcomes (Carrier *et al.*, 2004; Ozelkan *et al.*, 2007; Stephens and Onofrei, 2009). In this research, a case study methodology was used to explore understanding, practice, motivations, behaviours and attitudes in relation to innovation. When deciding on the number of case studies, a balance must be struck between the depth and the breadth of the study. Multiple case studies allow the boundaries of the investigation to shift because the research is essentially explorative. There is no overall consensus on the ideal number of case study companies; however, the literature indicates that between 4 and 20 case studies works well (Eisenhardt, 1989; Yin, 2009; Stavros and Westberg, 2009). In total, 12 companies with a wide variety of organizational characteristics and competitive priorities were selected. These 12 companies represent the following sectors: ICT, professional training, textiles, software development, hospitality, consultancy, medical devices, financial services and education. This is a similar approach to a study of micro enterprises conducted by Perren (2000).

Following a review of the literature, a decision was made to explore innovation in micro enterprises using three themes:

(1) Understanding innovation:
   - What do micro enterprises understand by the term "innovation"?
   - Are micro enterprises aware of accepted innovation-management theories?
   - What types of innovation do micro enterprises engage in?
   - Do micro enterprises view innovation as important to their activities?

(2) The practice of innovation:
- To what extent do micro enterprises involve themselves in innovation?
- What are the barriers to innovation in micro enterprises?
- Are micro enterprises able to effectively manage Innovation?

(3) Measuring innovation:
- Can levels of innovation in micro enterprises be accurately measured?
- Are recognized innovation metrics/measurement tools suitable for the measurement of innovation in micro enterprises?

The interviews explored the micro enterprises': characteristics and products/services; history/evolution; performance measures; and enablers and disablers facilitating innovation. In the context of business innovation, qualitative data on soft outcomes can be used to measure and demonstrate success in a number of ways, such as: highlighting progress at an individual level; showing stakeholders what progress is being made; and assessing support for innovation practices. Consideration of soft outcomes provides a truer, more rounded picture of successes. Narrative structuring (Kvale, 1996) was used to create a coherent story. Finally, three representatives from support agencies aided in the writing of cross-case conclusions. The findings are presented in the next section; this is followed by recommendations in the penultimate section.

Findings

What do micro enterprises understand by the term innovation?

The micro enterprises in this study have a broad understanding of innovation. Innovation is not only associated with NPD, or the traditional view of innovation as production and process improvements. In the words of two interviewees:

> […] it's what we do nearly every day of the week here […] we take a design from a client company and develop processes […] so that it can be produced effectively (owner/manager of a manufacturing company with 10 employees).

And:

> […] it is identifying better ways to do things. How the business can do things better and I'm not just talking about the products. It is from marketing, to PR, to product. Innovation in my world is doing things better but it has to be part of the culture (owner/manager of a software development company with eight employees).

The micro enterprises view innovation as important for NPD, processes, management structures, organizational systems and knowledge management. The micro enterprises report that they innovate constantly in terms of commercial/marketing activities. Nine of the micro enterprises are involved in manufacturing or product development, and all of the owners/managers view service provision as a key part of their offerings. In order to ensure competitiveness, all of the respondents identified a market/customer focus as essential. It is this focus on service provision that allows them to differentiate and be successful:

> […] find the market first, then build the product and develop value innovation for your customer (owner/manager of an ICT Business with six employees).

Only three of the respondents were aware of specific innovation theories, terminology or tools. Of these, two are completing postgraduate programmes that include innovation modules, and the third is a regular subscriber to the *Harvard Business Review*. One of the respondents uses the Alex Osterwalder Business Model innovation tool for all business development activities:

> […] it drives what we do […] and what we develop (owner/manager of an a professional services provider with six employees).

In addition to the three respondents who were aware of recognized innovation theories, terminology and tools, another five respondents claimed to understand the general concept or principles behind innovation. Of the five who claimed not to know about innovation, a review of their activities during our site visit demonstrated that all were regularly engaged in some form of innovation activity. For these micro enterprises, innovation is associated with advanced technology, huge budgets and "white coats". The micro enterprises do not fully appreciate that they participate in a wide range of innovative activities every day. This is often the case with the use of theory in the workplace (Van de Ven and Johnson, 2006; Stephens *et al.*, 2010).

Types of innovation undertaken

Using the innovation mapping tool developed by Bessant *et al.* (2005), the respondents were asked whether they engaged in different types/forms of innovation. According to Bessant *et al.* (2005), process innovation is a combination of production innovation, management/organizational innovation and resource/people innovation. Ten of the respondents engage in production or management/organizational innovation, with the remaining enterprises planning such innovations pending the successful outcomes of ongoing product innovations. All of the companies engage in product/service innovation (or a hybrid of both), and identify service provision as allowing them to differentiate and be successful. Product/service innovation is seen as essential by all of the respondents, as it allows them to establish a relationship with their client base. This customer/market focused approach (position innovation) provides the respondents with information that supports other innovations (leading to commercial success). Each of the enterprises have undertaken elements of people innovation, either through recruitment practices, or through training or professional development. However, four respondents reported that, due to the high costs associated with human resource development, employee development has been limited in recent years.

Two of the respondents have not engaged in any form of organizational structure innovation. There was only limited evidence of paradigm innovation, although five of the enterprises claimed to have developed "new-to-the-world" products (it was beyond the scope of this research study to verify these claims). All of the respondents engage in incremental innovation:

> […] innovation is constant development […] a smarter and simpler way to do things (owner/manager of an ICT consultancy business with nine employees).

Two respondents engaged in radical innovation during the start-up phase. They successfully introduced products that were significantly and uniquely different to those which existed in the marketplace at the time.

The practice of innovation

Nine of the respondents believe that innovation is undertaken in an ad hoc manner, and that there is no formal or structured innovation-management system in place. The majority of respondents believe that micro enterprises are reasonably effective when engaging in innovation (the support agency representatives concurred with this view). This seems to contradict the literature: Sawhney *et al.* (2006), Kanter (2006), Hargadon and Sutton (2000) and Doran (2012) all emphasise the need for systems, structures and organization if innovation is to be effectively and successfully developed and managed. The respondents indicate that when potential opportunities arise they are carefully evaluated in terms of the possible benefit to the enterprise. Typically, these evaluations consist of a simple cost-benefit analysis exercise (assessing input and process costs against projected income). A trial sales period is also included. Other respondents undertake specific research, development and innovation (RD&I) or feasibility studies (often with agency support). These feasibility studies will have defined budgets, resources and projected outcomes. In some instances, enterprises engage sub consciously in a type of Stage-Gate process (Cooper, 1990, 2002) despite not having studied this model.

The participants were asked whether they were aware of or engaged in any networks, clusters, higher education institutions (HEIs) or other support organizations that facilitate innovation. Four of the respondents participate in an innovation network or cluster; six indicated that time was a barrier to participating in such clusters; and three felt that such networks are of limited benefit given their specific area of business. The owners/managers of the ICT and manufacturing enterprises felt that networks or clusters would not provide them with any particular benefits. This is in conflict with the findings of McDermott *et al.* (2006), Hegarty and Johnston (2008) and Stephens and Onofrei (2009).

There was a strong level of awareness of programmes delivered by support agencies, although this was often as a result of direct promotion by the agencies involved. The owners/managers indicated that while such programmes are often beneficial, there have also been many occasions when the structures of the available programmes did not match their requirements:

> […] the very process that the state [agency] puts you through to give support for a small company is such that that it becomes a process in its own right and it sucks in management time to such a degree that we have used it but we don't use it anymore (MD of a manufacturing business with eight employees).

Four owners/managers reported that they have been aware of specific development opportunities, but that the support they required to progress the ideas were not readily available to them.

Innovation management

All the respondents agreed that their employees need to be involved in innovation, and that innovation should not be separate from other parts of their business. The respondents reported that they encourage employees to put new ideas forward, and that they provide feedback to employees. Four respondents explained that they do not have a formal system or pathway in place through which employees can propose innovative ideas; however, they reported that the small size of their company and the flat organizational structure means that owners/managers or decision makers are easily accessible to all employees, either informally or during regular meetings.

Indeed, for the other respondents, the innovation pathway primarily consists of either informal or regularly scheduled meetings. One company provides a financial reward to employees for providing good ideas, and the remaining respondents simply provide recognition or acknowledgement for individuals who come up with suggestions. Evidence of recognized innovation-management systems such as Cooper's (1990, 2002) Stage-Gate process or the Innovation Radar proposed by Sawhney *et al.* (2006) was not found.

When asked whether innovation is a top-down (management-led) or a bottom-up (staff-led) process, a range of views were reported. It is important to note that those who indicated that innovation is top-down in their organization do not seek to impose innovation upon staff; rather, they indicated that it is the role of management to foster, encourage and create a culture of innovation. In total, 11 of the respondents stated that they foster a learning organization in which employees can discuss and challenge the activities undertaken. They believe that their organization gains knowledge from both positive and negative experiences. The only enterprise that did not claim to be a learning organization was in the manufacturing industry, where the majority of staff consists of machine operatives. Seven of the respondents felt that their employees are at their most innovative when they are under pressure:

> […] you need to be out of your comfort zone and then you find that your mind works a lot better (founder and MD of service business with 10 employees).

The remaining respondents indicated that such pressure points provide knowledge and experience that can be reflected upon by the entire enterprise, and subsequently used to innovate in a range of areas.

Barriers to innovation

The literature indicates that there are five primary barriers to innovation: a negative management style, financial pressures, inadequate ICT, complacency and the need for investment. Nine of the respondents indicated that it is a challenge not to become complacent and/or ignore business development opportunities. All of the respondents acknowledged that they constantly have to review their markets, customers, competitors and internal activities, since complacency in any of these areas could easily put the business at risk. Where enterprises are restricted in terms of time, finances and capacity, this represents a significant challenge. The second significant barrier reported was the financial risk related to innovation. Although the respondents conduct cost-benefit analysis on planned activities, or have specific budgets in place for feasibility studies, the uncertainty of the financial impact can prevent enterprises from undertaking innovation. In addition, the high costs associated with innovation are a significant barrier. If enterprises are to use improved innovation-management structures, such as Cooper's (1990, 2002) Stage-Gate model, then the risk associated with such ventures may be better assessed, and potential pitfalls avoided. Finally, a fear of collaboration or exposing internal activities to outsiders was considered to be the least significant barrier to innovation. Businesses accept that efforts will be made by competitors and others to take elements of their ideas and use them elsewhere. Indeed, many respondents also engage in this activity themselves. Of the eight enterprises that have an innovation budget, six source this budget from available government funding for specific RD&I or technology development projects. Only one respondent has an innovation budget that is based upon a percentage of the previous year's sales or a similar metric. In addition, the respondents reported some instances in which they did not have the capacity to undertake new projects due to a time or skills deficit, or insufficient infrastructure.

Measuring innovation

Four of the respondents reported that they quantify innovation using objective measures. Two of these use management accounts to gather this information. Reports of the significant benefits that are accrued from good management accounting practices are an interesting finding of this study. Regular management accounts provide owners/managers with a very powerful tool that can assess progress within their organizations. Six of the companies indirectly measure innovation, as they regularly use accounting information to assess their products, markets, sales, profits and costs. Such information gives them an indication of the success (or otherwise) of their product range, and whether it is meeting annual growth targets. This information supports future planning activities. These enterprises incorporated management accounts as the business developed, and as the need for timely and accurate management information became a pressing issue. It may be that innovation and metrics may also grow in importance as an enterprise develops further. As one owner-manager stated with reference to these areas:

> […] that would be stuff that it's only now I can see the need for (owner-manager of a manufacturing business with 10 employees).

All of the micro enterprises use customer satisfaction as a subjective measure. Four of the companies have participated in an innovation audit undertaken by an independent third party. Three of these undertook the audit to secure external funding support for specific RD&I activities.

Finally, the case studies explored whether micro enterprises could effectively use innovation metrics as proposed by Chan *et al.* (2008) and Anthony *et al.* (2008). Only four of the companies quantify innovation using objective measures, whereas all of them use the subjective measure of customer feedback. The respondents felt they are currently able to measure the innovation areas proposed by Brooks and Simkin (2012), which include: customer satisfaction with new product/service; the percentage of innovations meeting the development schedule; the amount of R&D spending as a percentage of sales; the number of new products/services launched; and the percentage of sales/profits/market share from innovations in a given time period. These five areas are relatively easy for micro enterprises to monitor; for example, customer satisfaction can be gauged by telephone, e-mail or direct contact, while those undertaking funded feasibility studies and RD&I projects can measure the amount of RD&I spending as a percentage of sales, as well as the percentage of these innovations meeting their development schedule. These are specific activities that entail a certain budget and time frame. The number of new services/products launched is also easy to measure: six of the companies regularly use accounting information to assess their products, markets, sales and the percentage of sales/profits/market share from innovations over a given time period. The elements that are used least to measure innovation, and which are unlikely to be used by the respondents in the future, include: the number of intellectual property (IP) measures undertaken; outbound innovation activities (sales of patents, licences, etc.); and the number and level of external innovation collaborators.

Summary

Seven specific points emerged from the case studies:

(1) Only a minority the micro enterprises are aware of the literature on innovation theories and models, which is line with Nicholas *et al.* (2011). However, all of the

micro enterprises engage in innovation and possess a broad understanding of the concept.

(2) As suggested by Sawhney *et al.* (2006), Kelley and Littman (2006), and Baregheh *et al.* (2012) innovation is very important to micro enterprises. It is essential for their survival, and they engage in a wide range of innovations across products, processes, people and marketing.

(3) While Cooper (1990) and Kanter (2006) highlight a need for systems and structures of innovation within businesses, only one of the micro enterprises have an innovation-management system in place. A lack of resources is cited as the reason for this absence; however, the small size and flexible nature of micro enterprises also means that innovative proposals with merit can be assessed and acted upon quickly. Although the micro enterprises manage innovation in an ad hoc fashion, there is evidence that they do so effectively.

(4) Many of the micro enterprises are positively disposed to innovation, and facilitate it where possible. The owners/managers stated that they have good staff, who are innovative.

(5) Despite the importance attributed by McAdam *et al.* (2007) and others to regional innovation systems, most of the enterprises do not engage in innovation networks/clusters. The reason for this seems to lie in the fact that the owners/managers feel that the available networks/clusters are not suitable for micro enterprises.

(6) The main barriers to innovation identified by the owners/mangers are: a lack of time, financial risk, poor ICT infrastructure, complacency, and the high costs of innovation (i.e. prototyping and IP).

(7) Although the owners/managers saw merit in measuring innovation activities, less than a third of them do so, and those who do often only measure innovation because management accounts provide them with the information to facilitate this.

Conclusion and recommendations

Authors including Mintzberg and Gosling (2002) and Ghoshal (2005) have focused their arguments on the limited impact of research on practices used in business. Furthermore, Bensimon *et al.* (2004) argue that there is a need to enhance the link between research and practice by studying problems that are of greater relevance to policy makers and practitioners. Therefore, and based on the 12 case studies in this paper, we make six recommendations.

First, development agencies need to innovate in terms of their services. Agencies who engage in business development activities should consider how their support services are structured. The case studies indicate that micro enterprises do not fully utilize networks/clusters. As programmed approaches are not always suitable, support needs to be holistic and enterprise-centric. Developing programmes and support concepts and expecting companies to come forward and use them achieves limited results.

Second, the "one size fits all" approach does not work in many instances, while cut-off dates for support programmes are not helpful. National programmes and structures that work in large urban areas, with a concentration of HEIs, multinationals

and many more enablers of innovation will not necessarily succeed in more rural sub-regions. Development organizations should consider direct engagement with micro enterprises in order to assess specific needs and opportunities. This will result in the delivery of tailored supports that are best suited to individual enterprises. In line with government policy, many successful and innovative businesses (e.g. retail businesses) do not qualify for state support; however, via a number of progressive and flexible agency approaches, projects with good potential, irrespective of their business sector, can be supported, and more should be done in this regard.

Third, innovation should be simplified. The micro enterprises regard innovation as a complicated activity that is associated with high-level technology research and development. As suggested by Nicholas *et al.* (2011), innovation needs to be presented by researchers and support organizations in a way that clearly demonstrates the practical benefits for the enterprises engaging in innovation.

Fourth, innovation brokering facilities should be provided. Companies with growth potential should be proactively identified, and a range of measures developed to support their innovation and market capacity. The feasibility of developing an innovation and business brokering facility aided by the support bodies should be investigated. Within the case studies, four of the owners/managers identified different business ideas that they want to develop, but are unable to at present for various reasons. A brokerage facility could start by having development experts in six key support bodies contacting up to ten of their most progressive client companies at two given times during the year in order to identify possible innovation opportunities. The experts could then come together to discuss the opportunities that arise; indeed, with the agreement of the micro enterprises, the experts could use their knowledge and networks to identify innovative ways in which the opportunities could be developed (e.g. licencing, joint ventures or tailored financial and capacity building packages). This process needs animation, and initially requires a level of goodwill and willingness on the part of the development organizations to both co-operate and proactively identify innovation or business opportunities within existing enterprises. If successful, the innovation brokering facility will provide the agencies with investment opportunities and create additional wealth and employment opportunities.

Fifth, innovation programmes specifically aimed at micro enterprises should be delivered. It may be possible for HEIs to offer innovation modules directly to micro enterprises, which would equip participating enterprises with new skills. This would require a more direct, targeted approach from HEIs/training providers. The result for micro enterprises would be an improved approach to innovation and innovation-enabling activities, which would increase growth prospects.

Sixth, and finally, monthly management accounting systems should be incorporated into micro enterprises. There are significant operational benefits for micro enterprises that implement monthly management accounting systems. Only a minority of the case studies incorporate specific innovation metrics, but those who utilize management accounting systems have access to valuable information about their business. This allows the owners/managers to identify information in relation to specific products, markets, sales figures, etc. This, in turn, provided metrics in relation to NPD, process innovations, commercial/market innovations, etc.

As a result of this research, a number of issues arise that require further study. The first is whether flatter, more organic innovation models are better suited to micro enterprises, as opposed to more widely recognized innovation-management systems, models and structures. The second issue is whether support organizations

and policy makers can present innovation to micro enterprises in a non-theoretical way that is practical to implement. Third, a question arises as to whether current support structures, networks and clusters can be effectively tailored so that they are responsive to the (real) needs of micro enterprises. Fourth, and finally, the merits of good management accounting systems are evident from this research study, and it may be possible to undertake a detailed study into the exact benefits of effective management accounting systems, as well as the benefits that accrue as a result of using them.

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