Measuring performance of small-and-medium sized enterprises: the grounded theory approach

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Abstract
Using the procedures stipulated by the grounded theory, this study reports the findings of in-depth semi-structured interviews with five owners-managers of small and medium sized enterprises (SMEs) on how performance is being measured. The findings reveal that the owners-managers use a hybrid approach combining both the financial and non-financial measures to evaluate performance against the predetermined goals and time. Time axis is based on the durations of completing a project. The findings have implications to both the SMEs and large organizations.

Introduction
A business organization could measure its performance using the financial and non-financial measures. The financial measures include profit before tax and turnover while the non-financial measures focus on issues pertaining to customers' satisfaction and customers' referral rates, delivery time, waiting time and employees' turnover. Recognizing the limitations of relying solely on either the financial or non-financial measures, owners-managers of the modern SMEs have adopted a hybrid approach of using both the financial and non-financial measures. These measures serve as precursors for course of actions.

A large portion of the extant literature is devoted to studies on how large organizations measure their performance; an apparent void of understanding how SMEs measuring their performance. This gap arises due to nature and complexity of the business structure, and extent of the owners-managers willing to participate in the fact finding processes. This paper reports the findings of how owners-managers of five SMEs measure performance of their organizations based on in-depth semi-structured interviews. Five respondents, three from the services sector and two from the manufacturing, were carefully selected to reflect views from two distinct business activities. The interviewing process helps support the underlying principles of the grounded theory by gaining the insights into how a particular process works while preserving its natural settings.

The results reveal that apart from using a hybrid approach, the respondents use time-axis approach for measuring performance. This means that performance and returns are measured against a given time frame that is, it is against an organization’s short-term plans and long-term strategies. The findings have contributed a better understanding and insight into the observed variations in the measuring processes, and how the time-axis approach is being used in the real world. Time approach is a useful measurement to all business organizations, irrespective of their sizes, structures and nature of activities. The paper is structured into the theoretical frameworks to help support the discussions on measuring performance, methodologies and findings.

Theoretical frameworks

Theoretical frameworks help develop hypotheses and support directions of discussions. A number of theoretical frameworks exist to evaluate how performance and effectiveness on usage of resources be measured. These frameworks can be achieved through a number of approaches. These are the goal approach, system resource approach, stakeholder approach and competitive value approach. The goal approach measures the extent an organization attains its goals while the system resource approach assesses the ability of an organization obtaining its resources (Yuchtman and Seashore, 1967). Both approaches measure the extent to which an organization achieves its goals and accesses to the resources. For the stakeholder approach and the competitive value approach, these evaluate performance of an organization based on its ability to meet the needs and expectations of the external stakeholders including the customers, suppliers, competitors (Daft 1995). All four approaches intend to measure the extent that an organization has met its planned targets; the first two approaches focus on meeting the internally-set targets while the latter two meeting the needs and
expectations of the external stakeholders. Among these, goal approach is most commonly used method due to its simplicity, understandability and internally focused. Information is easily accessible by the owners-managers for the evaluation process (Pfeffer and Salancik 1978). For the remaining three approaches, they are deemed challenging to the owners-managers of the SMEs (Quinn and Rohrbaugh 1981). The system resource approach depends on quality of the internal communications and extent of securing for its resources (Yuchtman and Seashore 1967), the stakeholders approach deals with issues relating to priority of the external stakeholders (Zammuto 1984), while the competitive values approach depends on flexibility, effectiveness and efficiencies of an organization’s structure of utilizing its resources to meet the external pressures (Pfeffer and Salancik, 1978). Quinn and Rohrbaugh (1983) conclude that among the approaches, the goal approach is a better fit for the SMEs where targets are being set internally based on the owners-managers’ interests and capability to achieve.

**Characteristics of measuring**

The goal approach directs the owners-managers to focus their attentions on the financial measures. These measures include profits, revenues, returns on investment (ROI) (Duchesneau and Gartner 1990; Smith, Bracker, and Miner 1987), returns on sales (Kean et al. 1998), and returns on equity (Richard 2000; Barney 1997) rather than the non-financial measures. Financial measures are objective, simple and easy to understand and compute, but in most cases, they suffer from being historical and are not readily available in the public domain. Inaccessibility, confidentiality (Covin and Slevin, 1989), completeness (Sapienza and Grimm 1997), accuracy (Brush and Wanderwerf 1992) and timeliness (Sapienza, Smith, and Gannon 1988) of data make comparisons among the sectors challenging and futile. Further, profits are subject to manipulations and interpretations. A possible way forward is to apply the non-financial measures, though subjective in nature, as supplements to the financial measures (Kunkel and Hofer 1993; Covin and Slevin 1989; Begley and Boyd 1987; Sandberg and Hofer 1987). The combinations of these two measures help the owners-managers to gain a wider perspective on measuring and comparing their performance, in particular the extent of effectiveness and efficiency in utilizing the resources, competitiveness and readiness to face the growing external pressure including globalizations. The most common non-financial measures adopted by the SMEs are number of employees (Orser, Hogarth-Scott, and Riding 2000; Mohr and Spekman 1994; Robinson and Sexton 1994; Loscocco and Leicht 1993; Davidsson 1991; O’Farell 1986), growth in revenue across time (Miller, Wilson, and Adams 1988), market share (Bouchikhi 1993; O’Farell 1986) and revenue per employee (Johannisson 1993). These measures need to be reviewed and updated regularly ensuring that they remain suitable for the changing environments, competition, availability of resources (McGee, Dowling, and Megginson 1995), meeting the stakeholders’ needs and expectations (Srinivasan, Woo, and Cooper 1994), and fit into internal planning and target settings (Merz and Sauber 1995).

Depending on the duration of a project or plan, results and returns can be measured based on the short or long-term measures. Short-term measures, normally based on the financial returns, are for evaluating projects that will complete within twelve calendar months while the long-term measures, normally based on the non-financial returns, are useful for projects that may take twelve months or more. The short-term financial measures, which include revenues and profitability, reflecting an organization’s current state of performance may not necessarily serve as a useful guide or prediction for the organization’s long-term survival (Birley and Westhead 1994). However, by accumulating the revenues and profits, these may become a useful pool of resources for future growth, expansion plan, help push the organization over its survival threshold (Barney 1997) and support its growth strategy (Haber and Reichel 2005). Phillips (1999) argues that profitability in the short run is an important factor in the organization’s ability to achieve its long term goals such as increased market share, brand names and reputations. Low profitability for a specific period may not necessarily reflect deficiency of the owners-managers, due to large investments are being channeled into long term projects that may lead to future growth or for meeting the internal (for example securing resources, sudden demand of employees on wage hike) or external requirements (for example, meeting the regulatory requirements). This means that while the goal approach emphasizes on achieving the predetermined targets, it is necessary for the owners-managers to consider the time frame of completing the process (Haber and Reichel 2005). In reality, time is a crucial factor that could affect survival and extent of receiving the continuing supports from the external stakeholders. In this
respect, performance should be measured based on a holistic approach which incorporates the financial and non-financial measures as well as time element. McDougall and Oviatt (1996) report that an increase in sales volume is due to the past efforts and performance, customers’ satisfactions and continuing referrals by the existing customers. In effect, most SMEs use both market shares and returns on investments as measuring indicators, reflecting on the holistic approach of using the financial and non-financial measures. This study fills the gap by incorporating time axis in the analysis.

Methodology and findings

Data collections

Due to a lack of information in the public domain, a series of semi-structured interviews were conducted with five owners-manages who hire twenty or less employees in Texas, USA. Grounded theory is used to explore what lies behind a specific phenomenon (Glaser, 1992; Parker and Roffey, 1996; Strauss and Corbin, 1998). Strauss and Corbin (1998) argue that the Theory “was driven from data, systematically gathered and analyzed through the research process. In this method, data collection, analysis, and eventual theory stand in close relationship to one another.” (p.12)

The theory focuses on the needs to gather information while preserving the actual settings. Tomkins and Groves (1983) suggest that collecting information using case studies and interviews fulfill the principles of the theory on non-disturbance of the settings. The interviewing process helps gain information which is otherwise privileged to the owners-managers themselves. If an interview is being conducted on-site, this gives additional opportunities to the researchers to observe and understand the environment where the information was collected and be aware of issues that may deem unimportant in the first place. Five owners-managers were carefully selected to reflect the environments from both the services and manufacturing sectors. The respondents in the services sector include a financial investment company, a recruitment agency and a property realtor company; while the manufacturing sector includes a manufacturer for the computer components and a manufacturer of packaging products. The interviewees were given assurance on confidentiality of data and identity. On average, the managers-owners have owned or managed their organizations for twelve years, and each interview lasts for 63 minutes. The respondents choose to have the interviews in their premises. In cases where the respondents were asked to illustrate and substantiate a particular issue, they are obliged to comply. Extensive notes were taken due to the interviewees’ unwillingness to have the conversations tape-recorded. Upon completion, the interviewing notes were transcribed, shown and discussed with the interviewee for accuracy and completion. This process is repeated before conducting the next interview. The whole interviewing cycle takes four and a half weeks.

Data analysis

The grounded theory stipulates that the process on data analysis involves three coding. These are open, axial and selective. First, data from the interviews are analyzed on a sentence by sentence basis using open coding (Strauss and Corbin, 1998). This means that since many questions were raised and discussed during the open coding, the interviewing notes are analyzed based on a few key words. Relationships between these key words were identified and collated to develop axial coding. An axial coding refers to a process of collating key words in categories and sub-categories according to nature and properties. Strauss and Corbin (1990) explain that `axial coding is a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories’ (p.96). The final process of the grounded theory involves selecting coding. Categories and sub-categories that bear similar nature and properties are grouped, refined and reshuffled for re-grouping. This process of grouping will continue until the individual categories can be distinctively identified, readily expressed in causal conditions, environmental conditions, organizational conditions, management strategies and consequences, and more importantly, meet the aims of investigation (Strauss and Corbin, 1990). There is no fixed rule on the numbers and types of categories and subcategories for a particular investigation, but the processes will continue until meeting the aims of an investigation and its theoretical frameworks. This means that some issues collected in the course
of interviews and observations may be discarded due to they do not easily fit into any particular category or criteria of the investigation. These neglected issues should be regrouped, evaluated and analyzed to confirm with the original sources before finally trashed. This process may cause some information deemed irrelevant at the time of compilations or investigations, but may become relevant at a later stage, or if it is to be interpreted in a different perspective, format, environment or situation. There is no apparent guideline on judging relevance of a particular category or sub-category, as long the researchers have met their aims. The elimination process is one of the limitations of the grounded theory.

Case studies

Table 1 summarizes details of the five cases. It reflects how performance is being measured on a short-term and long-term basis. To arrive at these findings, each respondent is first contacted by telephone explaining the purposes and importance of the research. Once a respondent has agreed to participate, a copy of the interviewing format is mailed to the respondent. A follow-up telephone call is made a week later to ensure receipt of the document, to give the interviewees an opportunity to raise and clarify issues, and more importantly, to set a mutual convenient date and time for an interview. It is not uncommon to have interruptions during an interview due to the owners-managers’ ongoing business activities. On three occasions, the interviews were disrupted and required rescheduling due to unscheduled incidents. Despite this, the respondents are supportive and cooperative to reschedule and complete the interviews. This reflects their keenness to help support the research project.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Nature of business</th>
<th>Key financial measures</th>
<th>Key non-financial measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Short term</td>
<td>Long term</td>
</tr>
<tr>
<td>A</td>
<td>Financial investment company (services)</td>
<td>Turnover, net profit before tax</td>
<td>Growth in turnover &amp; revenue</td>
</tr>
<tr>
<td>B</td>
<td>Assembling computer components (manufacturing)</td>
<td>Turnover; Net profit before tax; returns on investment; profit per employee</td>
<td>Growth in revenue; growth in number of employees</td>
</tr>
<tr>
<td>C</td>
<td>Recruitment agency (services)</td>
<td>Turnover; Net profit before tax; profit per employee</td>
<td>Growth in revenue; growth in number of employees</td>
</tr>
<tr>
<td>D</td>
<td>Plastic packaging manufacturer (manufacturing)</td>
<td>Turnover; Net profit before tax; returns on investment</td>
<td>Growth in revenue; growth in number of employees</td>
</tr>
<tr>
<td>E</td>
<td>Property reactor (services)</td>
<td>Turnover; Net profit before tax; returns on investment; turnover; profit/employee</td>
<td>Growth in revenue; growth in number of employees</td>
</tr>
</tbody>
</table>

Table 1: measures used by the respondents
Service A

A was established as a financial investment company since the early 1990s. It uses both financial measures including turnover and net profit before tax, and non-financial measures including customers’ satisfaction and referral rates. The hybrid approach is used due to ‘our competitors are using the combined approach’ (Respondent A). Respondent A is concerned with both the short-term, which is set for 1-3 years and long term, which is 4-6 years, returns. ‘We use customers’ satisfaction and referral for the short term plans; while growth in market share, turnover and profits for the long-term strategy’ (Respondent A). A captures its customers’ satisfactions through surveys, either by requesting the customers to complete questionnaires after each visit to the premise or contacting the customers by phone after the services. For the new customers, the staff will ask them for the sources of referrals. This helps assess effectiveness of the on-going marketing campaigns, quality of services, market niche and growth of customers’ base.

Manufacturing B

B manufactures and supplies computer components for the US market. The average annual number of employee is 26.4. The respondents uses both the financial and non-financial approaches to ‘ensure a balance weighting when measuring performance of both the long term results and short term returns’ (Respondent B). B defines a short-term plan as ‘an action taken at the present time with its impact within the next 12 months, while a long-term action may affect the organization, in term of performance and activities, within the next five years’. The respondent computes its market shares based on the industrial reports and growth against its peers of relative in size and history. The respondent regularly reviews its goals and strategies and desires to expand its market share and customers’ base.

Service C

C provides career advice and recruitment services to both the potential employees and employers. Its main source of commissions is through screening the applications of the high schools’ and universities’ graduates. Since its inception 15 years ago, C relies on its existing clients for referrals. C evaluates its performance based on its customers’ satisfaction and referrals rate, and profit per employee. Customers’ satisfaction is based on feedbacks from both the employers and job applicants. C uses a hybrid approach to measure performance due to ‘it is unfair to rely solely on profits and turnover, but include the growth rate of our market share’. Organization C places an equal attention on its survival and future rate of expansion.

Manufacturing D

Respondent D who hires an average 46.7 employees annually, manufactures packaging products based on the clients’ specifications. The clients’ bases are industries and offices located in Texas. Since its inception 13.5 years ago, D is concerned with its survival and has been relying heavily on the financial measures like turnover and returns on investments. For the past two years, D has shifted its emphasis to the non-financial measures to ‘give us a balanced picture on where we are and where we are going’ (Respondent D). This is in line with the goal approach of measuring performance. D considers an action as short-term if it bears results or impact on the organization’s plans, performance and targets within the next 12 to 15 months. For an item or action to be considered long term and the consequence of which will take place within five years.

Service E

As a realtor, E provides advice to the potential homeowners. The lucrative revenue generated from the oil and gas sector in Texas has brought a huge demand for residential homes and commercial properties. Despite this, the sector faces fierce competitions. E has been in existence over the past 20 years and grown through continuous referrals. E places huge emphasis on staff’s approaches to the clients’ inquiries, and has allocated more than 68% of its annual budget on issues relating to staff including compensations, continuous education and development. E is keen to ensure a long term growth and sustainability, and uses ‘the hybrid approach to evaluate its performance based short-term financial returns and long term non-financial measures.’ E classifies short-term items if they bring
impact to the organization within the next 9-12 months, and long-term issues if they may have the implications within the next four to five years.

**Cross-case analysis**

Having collected the information on the individual case, a cross-case analysis is an essential categorization process. The collation helps understand the underlying issues, reasons and actions (Strauss and Corbin, 1998). Categorizations could be challenging unless there are strong relationships among categories within certain key words (Yin 1994). Strong coherence could be due to the norms and cultures of a particular sector. However, this should be interpreted with care due to small size of respondents in this study. Table 2 shows the summation of matrices based on individual’s norms, cultures, believes and practices. These norms could serve as useful references to all in the SMEs and large corporations both within and outside the US.

<table>
<thead>
<tr>
<th>Duration</th>
<th>Financial measures</th>
<th>Non-financial measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term (less than 12 months)</td>
<td>• Profit before tax</td>
<td>• Customers’ satisfaction</td>
</tr>
<tr>
<td></td>
<td>• Turnover</td>
<td>• Customers’ referral rate</td>
</tr>
<tr>
<td></td>
<td>• Profit per employee</td>
<td></td>
</tr>
<tr>
<td>Long term (within five years)</td>
<td>• Growth in revenue</td>
<td>• Growth in revenue</td>
</tr>
<tr>
<td></td>
<td>• Growth in number of employees</td>
<td>• Growth in customers’ base and market</td>
</tr>
</tbody>
</table>

Table 2: matrix on measuring performance

**Findings and Analysis**

The goal approach helps the owners-managers to evaluate performance against the predetermined goals. To achieve the planned target, performance is evaluated against the financial measures and non-financial measures. The findings reveal that the owners-managers place equal attentions on both the financial measures (profits before tax, turnover, profits per employees and revenue growth) and non-financial measures (customers’ satisfactions, referral rates, and growth in customers’ bases and revenues). These measures are in congruence with the goal approach where the owners-managers are basing the performance on the extent that predetermined targets have or could achieve. The targets are internally generated targets set by the owners-managers themselves for satisfying their own desires and expectations (Naman and Slevin 1993; Sandberg and Hofer 1987). The time axial is an added contribution to the literature to reflect time is an essential factor for achieving the results and returns with the limited resources. In the study, the respondents use twelve months as the norm to differentiate between a short term return from the long-term results. The cut-off point of twelve months is established due to easy to understand, comparisons and reporting. In general, the respondents use turnover, number of employees and revenue per employees for the short-term evaluations; growth in revenue and number of employees for the long term. The short-term measures help reflect the current position and size of an organization while the long-term measures identify its strength and ability to grow (Orser, Hogarth-Scott, and Riding 2000), attract market acceptance (McGee, Dowling, and Megginson 1995), accept for their technical quality, and reflect an overall success of a business (Bamford, Dean, and McDougall 2000). Despite complexity of its structure and corporate cultures and norms, the categorization process has helped identify and collate all the related categories for the above matrix. The grounded theory, based on the coding and key words approaches are useful to future research which intend to keep the natural settings. The above matrix is constructed based on a relatively small sample but is a useful impetus for larger populations and large corporations (Kirchhoff 1977).
Implications and future research

Discussions and implications

This study helps understand how the owners-managers measure performance. The grounded theory helped set the process of extensive in-depth semi-structured interviews and observations while maintaining the natural settings of the business processes. The grouping and regrouping processes based on key words and coding processes have identified the financial and non-financial measures based on short-term and long-term matrices. In line with the goal approach, the owners-managers focus their evaluation process on abilities to attain the internally generated goals and targets. The respondents treat an event or issue as short term, if its returns or results materialize within the next twelve months, while a long term if a process will yield its results within five years. The owners-managers of these SMEs use a hybrid approach on measuring performance due to their concerns on ensuring meeting the financial results as well non-financial returns. Financial measures include profits and turnover while non-financial measures are the long-term growth and survivals of the organizations.

In the course of interviews, the respondents have expressed their intentions on setting long-term vision and strategies of globalization through joint ventures and franchising. This is an interesting insight which, if the above study were to be approached using different routes, rather than the grounded theory, this would not otherwise be revealed. The intention of adopting for the global route is to ward off fierce domestic competitions, increase their accessibility to resources and markets, and diversify the organization's risk for not to be too dependent on the local markets.

Limitations and Future Research

There are a number of limitations to this study. First, the current study uses a cross-sectional analysis whereby it gives a snapshot scenario on the approaches and intended approaches of measuring performance. A longitudinal study would be useful to identify and supplement the usage, relevance and flaws of the measures, in particular the long-term measures. Second, results of each case are substantive and are specific to the case itself. Even the formal hypotheses that emerged from the cross-case analysis are related to the sites or cases, these findings cannot be generalized easily (Macintosh and Scapens, 1990). Third, the conscious or unconscious bias on the interactions between the interviewer and interviewees since the information was shared with the interviewer if requested. The content of the cases was first drafted for comments by the interviewees. This process may mean that certain issues may be discarded by the interviewer and interviewees, but may deem important to the readers or being looked at different angles. However, the multiple data collection methods such as interviews, document inspections and further inquiries help minimize the threats to validity and reliability of information. This study uses the multiple case study approach to provide for the needed confidence in the coding processes and to claim for some degrees of representatives of the population (Yin, 1994). Further, even though this study intends to focus on in-depth understanding of the behavior and nature of the SMEs, the five selected respondents may not necessarily reflect the culture and approaches adopted by the owners-managers as a whole, or in other part of the country and other industries. More empirical tests could help firm up the understanding and reasons for selecting or neglecting certain categories of measures. Repeated surveys help provide comparative observations of measures in a variety of settings on an industrial, national and international context. Apart from solely based on the goal approach, future research could be based on other diverse theoretical approaches including stakeholders, competitive value and system resources to offer a comprehensive perspective of how the measures help an organization's plans on its growth, success and successions.
References


