Building on Entrepreneurs' Leadership through 'Lean' and Dynamic Performance Management Systems in Small and Micro Firms.

Challenges and Missed Opportunities *

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Abstract

This paper frames the potential benefits of 'lean' and dynamic performance management (PM) systems for small and micro enterprises. In this context, the 'lean' attribute is used to characterize a different approach in applying PM to small firms, in respect to larger organizations. In fact, such systems may exploit the entrepreneur's tacit knowledge and build on leadership, by incorporating individual attributes into organizational routines.

Related to small and micro firms, direct experience and case-studies suggest that their sudden crises and demises are often a product of gradual – internal and external – phenomena that entrepreneurs are not enabled to selectively and promptly detect and counteract.

To empower small and micro-business actors with relevant information and decision-support tools, formal, financial-oriented and structured accounting systems are usually recommended. Though such tools may generate benefits in terms of specific knowledge on single and isolated information needs (e.g. net working capital, product costing), they are not primarily useful to support decision-makers to figure out relevant patterns of behaviour over time, and to frame and question the causal structure affecting them, in order to support sustainable decisions. Furthermore, usually such tools are not developed by explicitly taking into account that a micro or small business has very specific and differential features, in respect to larger firms. This implies that the critical problems or issues to deal with, in order to foster a sustainable development in such firms require the use of tailored 'lenses' to properly frame them.

We claim here that using 'lean' and dynamic PM systems may help entrepreneurs and their own direct collaborators in this process of 'tailored' and continuous scanning of crisis symptoms and detection of opportunities for their business development. To this end, based on a number of exemplary cases, we discuss the potential benefits of such systems, in respect to four specific contexts (artisan, new company start-up, established firm, and micro-giant company). Related to such contexts, we identify: 1) needs or priorities, and 2) obstacles or impediments to pursue business survival and development. This conceptual framework discloses a quite original empirical basis to outline 'lean' and dynamic PM systems that may provide decision-makers with a set of key-performance drivers that help them to prioritize action, in each of the four above-mentioned contexts.

Key-words: *Small and Micro Firms; Lean and Dynamic Performance Management; Leadership; Entrepreneurial Capabilities; Insight Models; System Dynamics; Case-Studies.*

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Research questions:

- Why a 'lean' and dynamic Performance Management approach is needed in managing small and micro firms?

- How to frame different small and micro-business contexts and related criticalities for survival and sustainable development in the long-term?

- What is the role that 'lean' and dynamic Performance Management systems may play to fine-tune the structure and behaviour of performance drivers and end-results with the specific problems/issues in the different explored contexts?

1. Leveraging on entrepreneurial leadership, tacit knowledge and creativity to foster a learning-oriented approach to manage small and micro-business sustainable development

Small and micro enterprises[1] display distinctive characteristics from the majority of their larger competitors, not only in terms of size (e.g., limited workforce, small customer base, market niche orientation), but also of organizational structure, strategy design and performance management. Entrepreneur's leadership, personalized management with little devolution of authority, family ownership-management, informal and unstructured Planning and Control mechanisms are key-characteristics that differentiate the management processes carried out in these firms.

In particular, such firms are able to compete and survive on the market due to a limited number of competitive advantages linked to critical success factors, such as product quality, innovativeness, distribution promptness. These advantages are mainly based on specific (technical, or handcrafted) competencies of the owner/entrepreneur, who usually does not hold significant managerial skills and resources (e.g., management control mechanisms). Therefore, as long as the firm is capable to defend its (technical) competencies on the market, it will be likely to survive with a certain success. However, as many real cases prove, in the long-term the lack of Performance Management (PM) systems may imply a weak understanding of both the impact of current decisions on future growth and on the policies to

[1] The European Commission Recommendation 2003/361/EC defines micro, small and medium-sized enterprises according to their staff headcount and turnover or annual balance-sheet total. A medium-sized enterprise is defined as an enterprise which employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million. A small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. A micro enterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.

undertake in order to cope with major changes. Usually, the deep causes of crises are far from being related to sudden and inescapable events. Rather, they gradually arise as a result of the concurrent action over time of different variables pertaining to the "relevant" business system, which embodies not only the internal boundaries of the firm, but also a wider range of variables belonging to other external sub-systems, e.g., related to the competitive environment.

Therefore, to timely cope with possible sources of discontinuity leading to business crises, entrepreneurs and other small business key-actors should develop their abilities to detect weak signals of change. In this perspective, structural deficiencies of small and micro firms should not only be primarily related to lack of capital, managerial concepts, technical capabilities, and qualified professional management. Entrepreneurs particularly need to better frame the complex system where they operate, i.e., to learn.

Standard accounting and financial-oriented packages and structured PM systems are usually recommended by both practitioners and researchers as a powerful tool to empower decision-makers to prevent and counteract crises. However, although such tools may usefully satisfy specific information needs (e.g., product costing, net working capital needs), they may not fully help decision-makers in selectively detecting patterns of behaviour of relevant variables driving to success or crisis (Tilt, 2010; Nandan, 2010; Maskell & Baggaley, 2004; Mitchell & Reid, 2000; Perren & Grant, 2000).

To foster small and micro business entrepreneurs' strategic learning, the adoption of formal – though 'lean' – PM systems may prove to be useful. A 'lean' PM system in small and micro firms is able to combine the advantage of a structured with a flexible and selective approach. The 'lean' attribute is used here in order to characterize a different approach in applying PM to small and micro firms in respect to larger organizations. In fact, such systems may fit with the characteristics of small and micro firms. They are able to exploit the entrepreneur's tacit knowledge and to build on their own leadership by incorporating such individual attributes into organizational routines. As a result, the use of 'lean' and dynamic PM systems – through insight models – may contribute in improving entrepreneurial capabilities and leadership.

Based on this conceptual background, this paper will: (1) discuss why a 'lean' and dynamic PM approach is needed in managing small and micro firms; (2) frame different small and micro-business contexts and related criticalities for survival and development; (3) identify the role that 'lean' and dynamic PM systems may play to fine-tune the structure and behaviour of portrayed performance drivers and end-results with the specific problems/issues in the different explored contexts.

Also, the paper will consider the methodological conditions, motivations, challenges, and requirements to successfully introduce this approach to small and micro-business management, and how to communicate to leader-entrepreneurs the usefulness of such a tailored approach.

In the last section of the paper, a number of examples related to real small and micro business success/failures will be discussed, and the role – in terms of challenges and missed opportunities – played by 'lean' and dynamic PM systems in the context will be framed.

2. A dynamic view of Performance Management: a perspective to build on entrepreneurs' leadership in small and micro firms

Dynamic PM is an approach that enables entrepreneurs and business key-actors to frame the causal mechanisms affecting organizational results over time. Such a field of research and practice is based on two converging methods of inquiry: System Dynamics (SD) modelling and Performance Management.

Dynamic PM takes its own premises from the literature that has demonstrated the lack of relevance of conventional financially focused Planning & Control systems (Kaplan & Johnson, 1987). Such systems are no longer able to provide information that can support: the management of dynamic complexity, measurement of intangibles, detection of delays, understanding linkages between short- and long-term, and setting proper system boundaries in strategic planning. In order to cope with such problems, to provide decision-makers with proper lenses to interpret such phenomena, to understand the feedback structure underlying performance, and to identify alternative strategies to change the structure for performance improvement, SD modelling has been used to support an understanding of: (1) how end-results can be affected by performance drivers; (2) how performance drivers can, in turn, be affected by the use of policy levers aimed to influence strategic resource accumulation and depletion processes; and (3) how the flows of strategic assets are affected by end-results.

Figure 1 illustrates how the end-results provide an endogenous source in an organization to the accumulation and depletion processes affecting strategic resources. In fact, they can be modeled as in- or out-flows, which change over a given time span the corresponding stocks of strategic resources, as a result of actions implemented by decision-makers. For instance, liquidity (strategic resource) may change as an effect of cash flows (end-result); image and credibility of an organization towards customers (strategic resource) may change as an effect of their satisfaction (end-result). There also are interdependencies between different strategic resources: image may affect the capability of an organization to get funds from different stakeholders. Furthermore, both image and financial resources may affect its capability to recruit skilled human resources and keep them (Bianchi & Rivenbark, 2012).

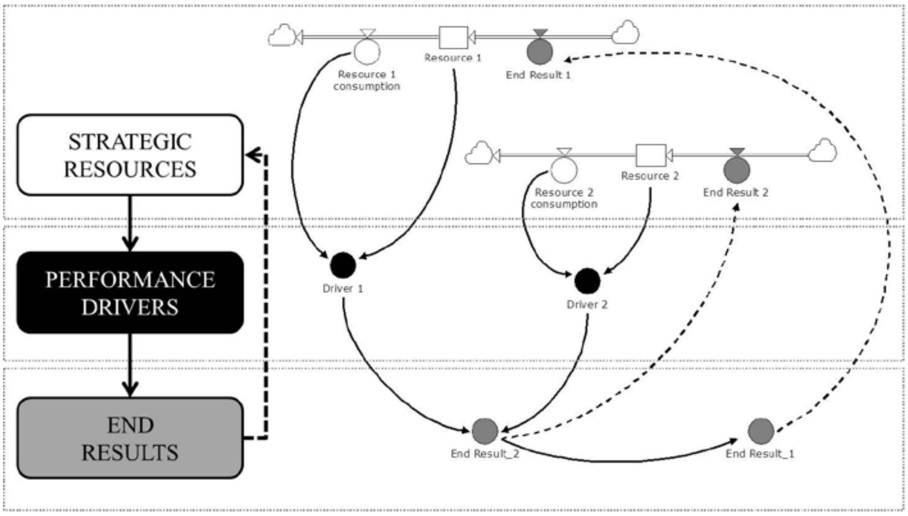

Figure 1: a dynamic view of Performance Management

Organizational growth can be sustainable if the rate at which end-results change the endowment of corresponding strategic resources is balanced (Bianchi, 2012). End-results can be measured over a sequential chain and positioned on several layers. "Last layer" end-results are those changing the endowment of strategic resources that cannot be purchased in the market. To affect the results positioned on this "last layer", further layers must be identified[2].

The literature and practice on SD applied to strategic management has developed a complementary approach to dynamic PM, implying the study of the dynamic conditions leading an organization to build up and defend its competitive advantage over time. Such an approach has been defined as dynamic Resource-based View (RBV).

[2] For example, cash flows can be affected by the current income and net working capital flows. These more detailed financial measures are, in turn, affected by non-monetary, end-results. So, activity volumes affect revenues and the net working capital flow. They also affect purchase volumes, which impact on purchase costs and (through purchases on credit and the change in inventory) on the net working capital flow. Therefore, activity volumes can be located on a first layer of end-results. Such results can be affected through performance drivers.

Previous studies adopting a dynamic RBV of organizations have confirmed that the management of strategic resources, and more specifically the maintenance of an appropriate balance between such assets, is the key to sustainable development (Morecroft, 2007; Warren, 2008).

The emerging models all focus on the building up and decline of core assets, including workers, equipment, population, workload, perceived service quality, and financial resources. Each of the strategic resources can, to some extent, be controlled in isolation of the others; however, where there is not balanced growth or coherence in the assets, then organizations will likely be unable to grow to achieve their own potential, or might grow in a non-sustainable way. The two common features in strategic resource management, as shown in figure 2, are the requirement for consistency between strategic assets and the need to actively manage each strategic asset to maintain balance.

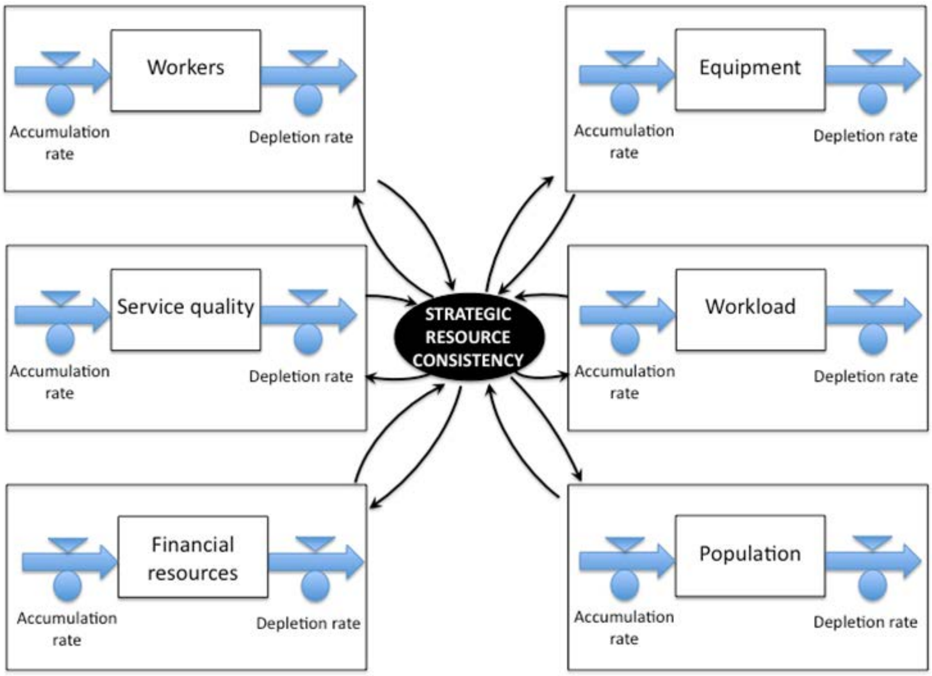

Figure 2: a dynamic Resource-based View

A synthesis of both the complementary approaches is portrayed in figure 3.

This paper will predominantly use a dynamic PM approach, since its primary focus is on empowering small and micro business entrepreneurs with 'lean' modelling tools through which they may frame the structure and behaviour of their company's key-performance indicators.

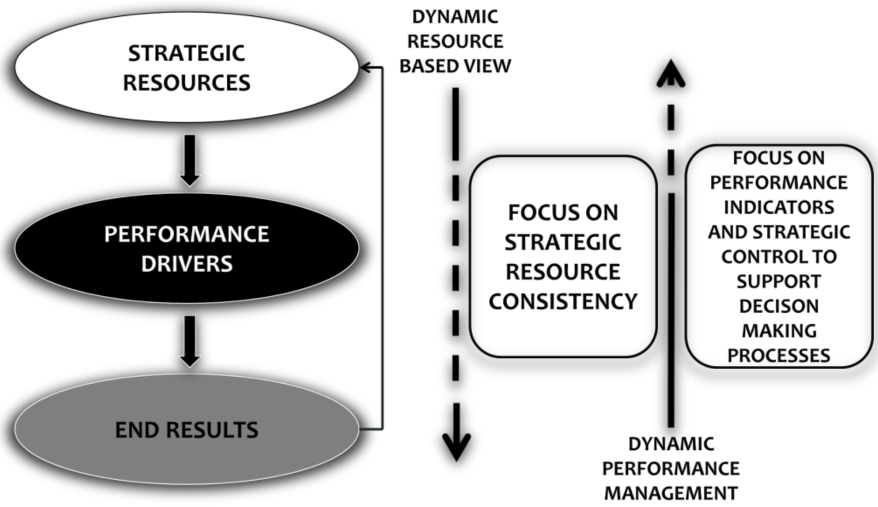

Figure 3: a synthesis of a dynamic RBV and the dynamic PM as complementary approaches to manage organizational growth in a sustainable development perspective.

3. Contexts and Dynamic Performance Management applications

As introduced in section 1 and 2, in this paper, we consider the role of dynamic PM in developing small business owner/managers' leadership skills and increasing the likelihood of successful strategic management through its application in a number of case-studies. For this analysis we have identified four different situations or contexts in which small and micro firms face especial challenges in trying to move their businesses forward.

Contexts, *which define four typical contextual settings that differentiate small and micro businesses according to a number of relevant characteristics, such as market orientation (e.g., niche, non-niche), market scope (e.g., local, worldwide), development stage (e.g., start-up, established company), product-making process (e.g., artisanal, technology-based). Namely, these small and micro firm contexts are: (1) the artisan; (2) the new company start-up; (3) the established firm; and (4) the "micro-giant".*

Needs, *which identify – for each context – those requirements that small and micro firms should satisfy to pursue business survival and development.*

Obstacles, *which point out the specific barriers/threats related to the achievement of small and micro firms success within the different contexts.*

Solutions through dynamic PM, *which support the long-term success of the venture.*

Before examining the specifics of dynamic PM in such issues, we will consider the above dimensions for each of the small and micro firm contexts. To these dimensions, into sharper focus, we include brief vignettes of the case-studies that we have investigated.

Context 1 - The Artisan

This context reflects the situation of a firm, as an entrepreneurial entity that does not yet exist. A business is in place but all the work is carried out by a single person who is able to master technical work, perhaps supported by an assistant, maybe a young family member. The artisan is considering developing and maybe expanding the business, his/her technical and entrepreneurial skills may not be enough to start a company.

In this situation, the artisan has at least two major needs to accomplish a successful transition into an entrepreneurial business:

- Converting a good product into a sustainable business
- Getting entrepreneurial skills from either outside sources or from inside (personal development)

It is not argued that this is a complete list. We just argue that these needs are likely to be central to all "artisan vs. entrepreneur" transitions.

There are likely to be many obstacles to making such a fundamental change (again this is not an exhaustive list.) Firstly, the artisan must be able to understand and estimate the time and scope of new skills needed to make a major change from an artisanal to an entrepreneurial skill base. The artisan will then need to identify the possible sources of those entrepreneurial skills. A key-barrier in many transitions is counteracting the artisan's reluctance to relinquish control to outsiders, this might include any specialist managers brought in, contracted accountants or book-keepers, outside stakeholders like suppliers of funds, and supply chain partners.

The role of dynamic PM is to support the development of solutions that address the needs of the artisan and overcome barriers. This is an issue of measuring key-performance variables to prioritise action and to assist in describing and monitoring implementation. Specifically in this case, this means the measuring of non-financial variables, and namely those related to time and skills of the artisan. This may imply a focus on personalized insight modelling – simple processes that involve diagrams, scenarios and possibly very small and simple simulation models that focus attention on key-decision variables and can assist in the surfacing and communication of knowledge between stakeholders.

> "Cremolose" is a family business that produces and sells handcrafted ice-creams, sorbets, slushes, pastries and cakes. It was started in 2000 by Nino Matranga together with his brother, after a long experience as bar assistant. The business (i.e., the main store) is located in the city centre of Palermo (Sicily/Italy) and has experienced a rapid growth in its start-up phase.
>
> Such a growth has been based not only on sales turnover, but also on the opening of new stores in franchising in different parts the world.
>
> The core competencies are related to the quality and uniqueness of its main product (called "cremolosa") that has been invented and patented by the founder, who holds high handcraft and technical skills in this business sector. Particularly, the "cremolosa" is a slushed ice-cream produced in various fruit flavours, such as almond, mulberry, nuts, strawberry, pistachio nut.
>
> However, in the past few years the company's performance started to decline due to a too rapid and unsustainable growth whose causes can be referred to the lack of a managerial approach in developing the business by the founder. Actually, Mr. Matranga - encouraged by the success of his firm – tried to enter in new businesses (i.e., launching other food businesses, fitness centres, etc.) by investing the earnings gained through the "cremolosa". But, the lack of managerial competencies and the shortage of time dedicated to develop the core-business (especially in terms of technicalities and strategies to develop new products/markets) have led to relevant losses. Namely, the lack of managerial skills and PM tools has resulted in a wrong definition of the product price (too low, if compared to the costs related to the business expansion), and a misperception of the weak signals emerging from the market sector (e.g., cost containment and low price strategy).

Context 2 – The New Company Start-up

This context reflects the very different situation of a new company being launched, based on a business idea which is conceptualised and developed from scratch. This differs fundamentally from the circumstances of a new business being created from an existing base level artisan activity, where the core products or services remain the same, but an established business would offer longer-term security with growth and job-creation potential.

The basic need in this context is to identify and develop the most appropriate business model for the new venture encompassing the processes of creating the product/service to be offered, the financing options, distribution channels, and the engagement of internal knowledge resources and external partners of various types. Any or all of these might involve quite new and novel processes.

The key-barriers to success in this context are:

- The tendency for inexperienced business model and process designers to adopt static and non-systemic perspectives in sketching business plans;
- The difficulties in devising and carrying through a proper evaluation of the emerging business model and identified alternative ones. This may be because of a lack of well-developed skills in business modelling or simply the inherent difficulties in do this for highly innovative and novel structures.

Design and evaluation processes for developing the most appropriate business model have to permit and support the creation of dynamic business plans (Bianchi, 2002); this implies a focus on either generic or 'tailored' corporate models. Further, in the longer timeframe, there may be a need for adapting and updating dynamic business plans during implementation, i.e. the business plans serve as mainly a management, rather than a forecasting, tool. Given that the circumstances might involve fast moving and emerging new industries, there will be a continuing role for comparing and re-evaluating alternative futures/business models.

Mosaicoon is a small-sized company established in 2008 in Palermo (Italy). Its core-business consists in the development of innovative marketing tools. The success of this business is based on the introduction of innovative advertising models that combines the components of traditional advertising campaigns with those of interactive videos. Such a combination has determined the invention of the so called "viral advertising".
Particularly, viral advertising has been defined as "a marketing technique that uses pre-existing social networks and other technologies to produce an increase in brand awareness or to achieve other marketing objectives through self-replicating viral processes analogous to spread of computer viruses" (Source: Wikipedia). Therefore, Mosaicoon develops advertising videos for its customers – usually large-sized or multinational companies – to be uploaded in strategic positions of the web, i.e., in those on-line platforms that allow videos to be viewed and posted in other web pages (e.g., social networks). Based on both the quality and the attractiveness of its contents, as well as on the commercial contacts, the advertising video receives a number of feedbacks from the internet users that broadcast these interactive products on the web, like a virus. The more views a video obtains, the more revenues the company achieves (Bianchi *et al.*, 2013).
Mosaicoon's product portfolio includes design, execution and tracking of advertising campaigns.
So far, Mosaicoon staff counts 35 people and, according to current managerial forecasts, the workforce will grow up to 50 employees in the next few years. All employees are less than 35 years old. The company's organizational structure is divided into four main strategic business areas: Commercial, Creative, Seeding and Financial.
The increasing development of the company – particularly in terms of sales, commercial staff and new orders – is being supported by fund raising institutions that noticed its business potential during start-up competitions.
Mosaicoon's competitive strategy has been designed to position the company in a high-end market segment. This has been made by fixing a high price of interactive products that, otherwise, might dangerously allow potential

competitors to easily access the market and undermine the competitive advantages so far achieved by the firm (Cosenz, 2012).
The external limits to growth are mainly related to the characteristics of the market where Mosaicoon competes. Indeed, viral marketing offers weak barriers to the entrance of new competitors that can be located all over the world. Therefore, such a sector – also characterized by a rapid obsolescence of its technological equipment, as well as products/services – can be easily entered by those small or large-sized firms with high innovative assets. To remain competitive, Mosaicoon is called to continuously invest in those strategic resources linked to the specific critical success factors of the market (e.g., commercial contacts, R&D).

Context 3 – The Established company

This scenario involves small and micro-firms which have operated over an extended period of time in according with consolidated and quite successful business models. These will usually have been developed on a local basis. While the circumstances of the business – both internal and external – remain stable then the established business model will continue to be valid and operational. However, over time there are likely to be changes and drifts. These might be internal - for example in family firms more family members might be drawn in each wishing to share in profits and influence decisions, or new managers might be recruited in – or external, like changes in legal requirements or the entry of a major new competitor. While mostly these will not require any significant changes to the business model in use, there will be a need to monitor business performance and, if necessary, develop or evolve a new business model. In particular, there is a clear need for the co-existence of a shared (team) leadership and individual leadership.

There are two major barriers to the successful evolution of such established firms in any change situation. Firstly, a failure to detect weak signs of important change, this means the firm could be overtaken by circumstances – the so-called "*boiled frog*" scenario (Senge, 1990). Along with this is the failure to recognise the need to change the existing business model.

Solutions to these problems involve:

- Making tacit knowledge explicit so that it can be shared within the organization (e.g. training new managers/entrepreneurs);
- Balancing family and/or manager involvement with business growth. Possible relevant performance measures might include, for example, "Ratio of family managers' salaries/ Company revenues". There must be a focus on dynamic patterns of such

indicators and improving through reporting the ability of company decision-makers to understand the systemic relationships behind their dynamic behaviours over time;

- Productivity measures per unit of resource (e.g. Revenues/Employees; Revenues/Floor space) to support the identification of drift and to evaluate new models.
- Evaluating the impact of trends in the market (e.g., aging in customer base; size of customer base).

Mazzara is a pastry shop and cafeteria located in the city business centre of Palermo, Italy. It was founded in 1909 and has always maintained a deep-rooted tradition of Sicilian pastry and ice-cream making. The success of this small firm has been based on a consolidated business model exclusively developed on a local basis. Particularly, the location – sited in the heart of the historical neighbourhood of Palermo – the elegance of the furniture and the artisanal quality of the products have represented its main sources for competitive advantage. Such factors have strongly influenced the firm's image that also contributed in designating the shop as a "cultural lounge" of the city. Actually, in the post II World War, many international actors, intellectuals and writers (such as Giuseppe Lanza Tomasi di Lampedusa) were regular clients of Mazzara. The main products made and sold by the firm were traditional Sicilian cakes (e.g., cassata, cannoli, other ricotta-cheese pastries), almond biscuits, ice-creams, fruit-chocolate-cream pastries, freeze melon cakes. In the last two decades, the firm has enlarged the shop in terms of seats and tables, and has also hired new personnel to improve the service. In 2013, there were 32 employees working as waiters, confectioners, chefs, and assistants. Beside this, Mazzara maintained its traditional furniture and location. However, such a business model – that has allowed the firm to achieve its success during the last century – has gradually been perceived by the clients as too old fashioned. At the same time, a number of new pastry shops and cafeterias have opened in the same neighbourhood adopting a modern style of furniture and services. The lack of managerial competencies and PM tools has prevented the firm to perceive the weak signals related to both a change in customer behaviours and an increasing competition emerging in the external environment. Also, in the last decade, the financial crisis has significantly reduced the potential market of the firm. In fact, the business centre of Palermo has been dramatically affected by bankruptcies and downsizing policies which have decreased the number of employees in the bar area, who were used to spend their free time, having a break during the working days. The described phenomena led to a reduction in the customer base; consequently, a financial crisis has been publicly declared in 2014. Nowadays, Mazzara has closed the shop in the city centre and is currently searching for opportunities to save its traditional pastry-making expertise.

Context 4 – The 'Micro-Giant' Company

This context involves small firms that have developed surviving and possibly thriving businesses on a local basis despite the fact that the nature of their businesses and products mean they have to compete against one or more a 'giant' companies – large, strong, maybe multi-national businesses. While such a micro-giant might have successfully entered this hostile environment, or survived when a 'giant' entered and threatened its market place, for continued success it needs a sustainable model for competing against 'giants' (Bianchi & Winch, 2008). This will involve developing the abilities to resist competitor initiatives, efficient use of limited resources to develop new products, and so on.

The major barriers to success are likely to involve an inability to change from a siege mentality – a 'David fighting Goliath' – to a stable competitive company, albeit a micro-giant (Bianchi *et al.*, 2014). In particular, this is likely to depend critically on being able to learn how to be nimble/flexible and to react quickly to competitors' moves.

One critical determinant of success in such firms is the retention of customers/clients, and so PM is likely to involve the dynamic exploration and measurement of the drivers of trust and loyalty by the local community and customers. Another key-factor will be the discovery and delivery of new products/services (e.g., product extension, innovation), and critical to this will be the micro-giant's ability to measure and manage the efficiency of its R&D function (Bianchi *et al.*, 2012).

Sellerio is a publishing house that was founded in 1963 by the Sellerio family, which viewed the then cultural scene as offering business opportunities. In particular, well known Sicilian writers like Leonardo Sciascia and Antonino Buttitta supported the spirit of such enterprise. Initially, Sellerio decided to position itself in a 'peripheral' market niche, since the core of its editions was represented by light but stylish materials, enhanced by graphical elegance and engravings and illustrations by important illustrators. The main authors published by Sellerio came from the Sicilian literature tradition and other European quality niches. The direct managerial responsibility of the owner-family, the small number of employees, and the peripheral position of the firm all define it as a small-sized enterprise. On the other hand, its successful sales performance and long presence in the market confirm Sellerio's ability to compete on a day-to-day basis with 'giant' enterprises.

The importance of intellectual capital for the success of enterprises in creative industries has been remarked by several authors. In this respect, Sellerio has demonstrated a strong inclination to discover and nurture the hidden potential of unknown young writers. Further, their successful writers have relied on the publisher to promote and position their work, contributing further to improving the firm's competitiveness. The quality of product and graphics are considered significant drivers in creating a distinctive format for collections and books (Barnard, 2005). This factor and the firm's high reputation encourage customers to select their titles just by looking at the covers, even when customers are not actually familiar with the authors or content. The final Sellerio strength has been its ability to mount promotional campaigns - its tight control of production costs enables it to compete by lowering books prices and promoting discount campaigns.

For each of the contexts identified, a brief case-vignette has been offered based on one of the case-studies the authors have undertaken in developing the context-based analysis of the potential role for dynamic PM in supporting the management of smaller firms as they evolve. Each of the vignettes briefly encapsulates a period during the case company's lifetime. They have been selected to provide an insight into each of the context categories, and picks up some of the broad detail of the firm's evolution during the period. The stories also reflect the general pathway of *<<Context -> Needs -> Obstacles -> Solutions>>* along which the companies passed. However, this pathway is a summary, and common, construct developed by the authors through retrospection with the cases, and was not a conscious process reportedly undertaken by the companies and their managers at the time. Two of the four companies appear to be moving forward, though not always perfectly smoothly, while the other two have encountered severe problems.

Table 1 resumes the specific needs, obstacles, and critical issues for introducing dynamic PM in the small and micro businesses above analysed.

CONTEXT	CASE-STUDY	NEEDS(S)	OBSTACLE(S)	CRITICAL ISSUES FOR DYNAMIC PERFORMANCE MANAGEMENT
Artisan	Cremolose	1. Acquisition of Entrepreneurial Skills (ES)	• Failure to Identify need for ESs • Inability to assess ES Development • Lack of tools to evaluate new businesses in portfolio	• Time and scope of new skills needed to make a major change from an artisanal to an entrepreneurial skill base • Assessing Artisan's reluctance to relinquish control to outsiders • Costing and pricing • Identification of customers and competitors • Balance of demands on internal resources • Portfolio management metrics
New Start-Up	Mosaicoon	1. Ability to Maximally Exploit Business Models 2. Harnessing of Internal Resources	• Maintaining Balanced Growth • Visualisation of new Business Models • Inability to See Evolving Business in Dynamic Terms	• Identification of key-success factors in the competitive system • Framing competitors and customers • Level of Coherence of Vision amongst Stakeholders • Measures of Alternate Growth Potentials • Understanding of

				Dynamics of Growth
Established Firm	Mazzara	1. Detection of Performance Drift 2. Evaluation of New Business Models	• Inability to Detect Changes in Customer preferences and Behaviour • Inability to Articulate Consequences of Drift	• Identification of causes and Dynamics of Performance Drift • Revenues per Unit Resource by product Sector
“Micro-Giant”	Sellerio	1. Ability to React Swiftly to Competitor Initiatives 2. Harnessing of Internal Product Development Capability	• Inability to Develop a *Modus Operandi* for Stable Business • Failure to Move from Successful Entry to Mixed Reactive/ Innovative Mode	• Identification and measurement of the sources of competitive advantage, which make the product unique to the customer, in spite of alternative products available from ‘giant’ competitors • Effectiveness of Repositioning for Stable Conditions • Measurement of Effectiveness of Product Development

Table 1: a synthesis of the specific needs, obstacles, and critical issues for introducing dynamic PM in the described small and micro business case-studies

The reader can speculate as to whether the apparent solutions chosen by the firms' owner/entrepreneurs are likely to be successful (or, in one case, whether the firm's demise was foreseeable). Of course, in each case the firm is at a different phase of evolution, facing quite different challenges, and is in a different industry, but there are a number of interesting similarities. The need for a dynamic view of the future is clear in each case – the companies are all going through transitions which will make their futures quite different to their pasts. All the companies were going through significant strategic changes, often initiated by external factors in their market-places, but frequently due to internal issues emerging, either spontaneously, as the company grew and changed, or because of attempts to adapt to the new external factors. A RBV of the firm and a focus to the dynamics of relevant performance measures are central to these processes.

Specifically, a RBV is needed as it relates both to hard resources such as author inventory in Sellerio, retail space in Mazzara, or to soft resources like business development skills in Mazzara, and design and product development capabilities in Mosaicoon. A focus on the dynamics of performance measures is needed, since it will allow business decision-makers both to understand which dimensions (beyond the financial one) should be gauged to pursue sustainable development, and to support them in identifying the relevant drivers of success; the improvement (or stability) of these over time is possible through the identification, building and deployment of strategic resources.

The second common feature is the importance of leadership; this involves elements of envisioning the future (or alternative futures), the surfacing and sharing of the leader's tacit knowledge, and general issues of communication of ideas and the building of alignment of perspective and thinking amongst the stakeholders. This fact also clearly points to why an explicit PM approach, particularly one that is itself dynamic, is essential. This perspective must focus on how performance has been evolving and how it can continue to improve through the changing circumstances. This will involve tracking small changes, or drift, in performance so that action can be planned and implemented in good time, and that dynamic factors both during and after any transitions are considered. It is also essential that such a 'lean' and dynamic PM approach works alongside and complements a dynamic RBV of the firm and supports and enhances the leadership of the firm.

4. Two examples of 'lean' and dynamic Performance Management systems in small and micro firms

In this section we show and discuss two examples related to the application of a 'lean' and dynamic PM approach to real small business failure/success. Particularly, we will focus on both the artisan (Cremolose) and the new company start-up (Mosaicoon) contexts.

Regarding the first case, the development of a 'lean' and dynamic PM framework has allowed us to selectively identify a set of performance indicators that might have supported Mr. Matranga in framing the Cremolose business system. In particular, the identification and measurement of performance drivers – as well as the understanding of the forces affecting them – might have supported Mr. Matranga in assessing the long-term effects caused by the adoption of his emerging strategy.

Particularly, the competitive development of the firm has been based on the quality and uniqueness of its products. This variable is here modelled as a ratio between the company product quality and competitors' product quality. Such competitive advantage has been built based on the entrepreneur's abilities (as an artisan) to develop innovative and good sorbets (very close to their natural flavours) in the core business. The change in product quality (end-result) is affected by a driver measured by the ratio between "time allocated to improve product quality" and the desired time to improve quality (i.e., a benchmark).

A higher product quality perceived by the market, in comparison to the firm's competitors, can increase the sales orders rate (end-result), which affects sales revenues, income, and cash flows (which are end-results too on a lower layer of inference). A higher level of liquidity (strategic resource) – due to positive cash flows – can be invested in purchasing high-quality raw materials to be used in producing slushed ice-creams, sorbets, and other pastries. This policy can further increase the core product quality (reinforcing loop fostering business development).

The firm has experienced a number of limits to growth, which have generated a crisis. Such limits can be detected – likewise it was commented regarding the development forces – by a number of performance drivers.

First of all, it is possible to mention "Process efficiency" and "Costing reliability". The first driver can be measured by the ratio between kgs. of product and the quantity of raw materials consumed (raw materials yield). The second driver can be measured as the ratio between estimated and actual production costs. Both drivers are affected by the entrepreneur's skills: the more the company grows in its core business, the more the entrepreneur needs to develop new skills, beyond his fundamental technical skills in artisanal pastry-making.

Concerning this, a 'lean' and dynamic PM system might have enabled the entrepreneur to identify the sources of possible limits to the company's growth and the crisis risks related to the total available time of the entrepreneur and the available liquidity to reinvest to build new competencies (in minimizing waste and improve costing). So, a trade-off between the need of increasing the total time to allocate to management activities (i.e. the need to hire a manager or finding a business partner) and the need of slowing down the sales turnover growth rate would have been promptly and selectively perceived by Mr. Matranga. Here, the entrepreneur's technical skills (which have been named in this way to differentiate them from his artisanal skills) have been modelled as stocks of strategic resources. Such stock can be increased by corresponding inflows, which depend on financial and time investments.

A declining or unsatisfactory performance in process efficiency and costing reliability reduces income and cash flows, in spite of an increasing product demand (balancing loop underlying a limit to the company's growth). In fact, on the one hand, a lower costing reliability affects the profit and loss statement of the firm, since actual production costs are higher than the budgeted values. On the other hand, low process efficiency – at least in the long run – forces the firm to increase the product price even beyond market thresholds (related to competitor's prices, demand elasticity associated to the product niche). A too high price may generate a strong reduction in market demand and in cash flows. Negative cash flows would generate a reduction of liquidity, which would further limit investment in the new entrepreneur's technical skills or in the acquisition of high quality raw materials (reinforcing loop underlying a financial and competitive crisis of the firm).

More performance drivers associated to the allocation of entrepreneur's time to run the (core) business are linked to the trade-off between time needed to feed the development of new businesses. Encouraged by the rapid success gained through the quality of products, the entrepreneur decided to enter new businesses – such as other food stores, fitness centres – that have diverted his attention from the development of the core-business. The time dedicated to other businesses has led to an impoverishment of product quality and a consequent reduction in the sales orders rate. Furthermore, the rising financial needs related to the investments in different businesses have strongly decreased the liquidity gained through selling the Cremolose products. As a result, nowadays the firm is marginalized at the borders of the city market.

Figure 4 provides a framework of a 'lean' and dynamic PM system based on the Cremolose business.

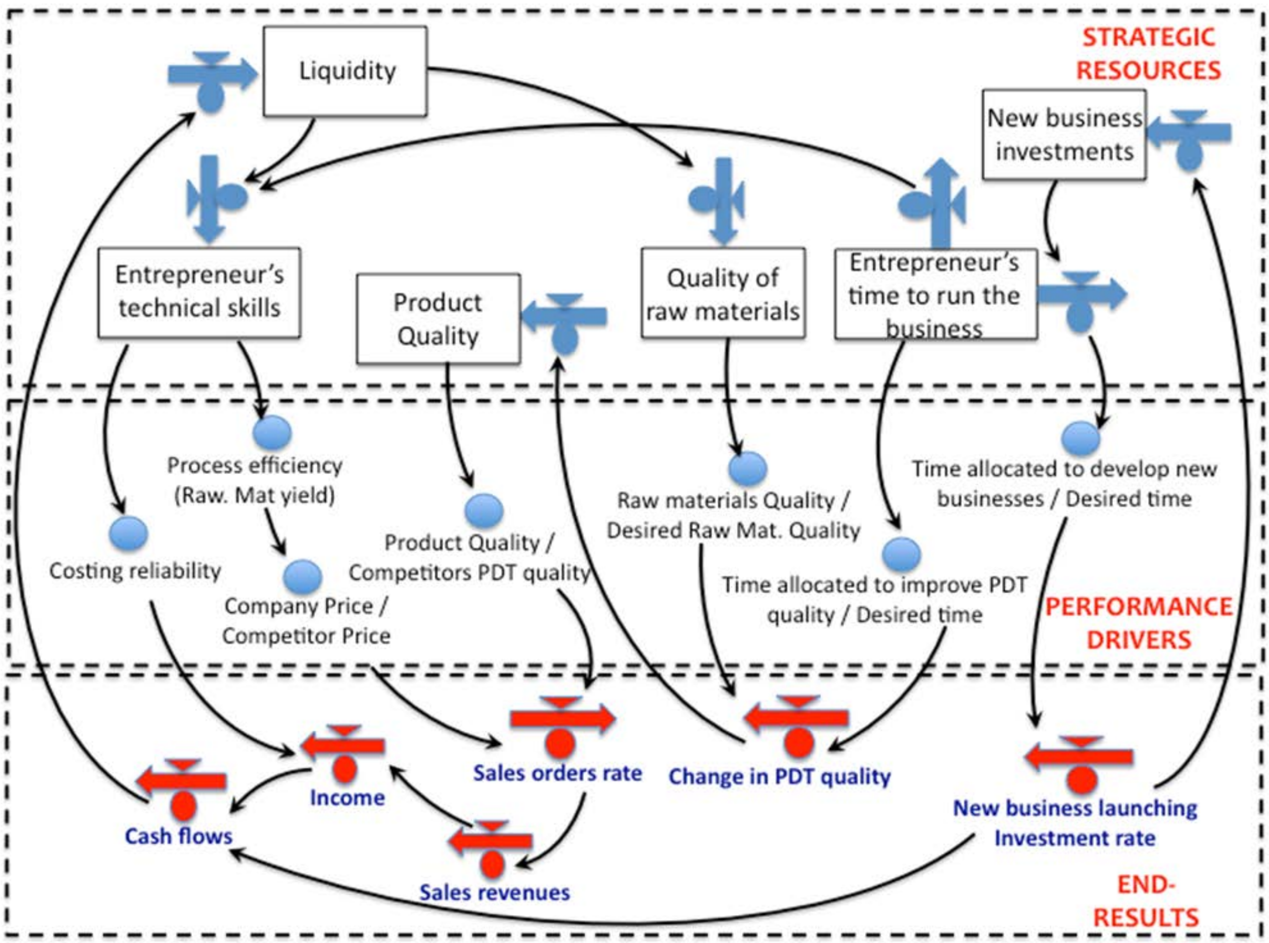

Figure 4: an example of a 'lean' and dynamic PM system based on the Cremolosa case-study.

Concerning the new company start-up context, we also developed a 'lean' and dynamic PM framework based on the Mosaicoon business. As described in the previous section of this paper, the firm makes and broadcasts advertisement videos on the web.

The increasing success that Mosaicoon is currently experiencing can be mainly related to the massive number of views (end-result) that its on-line videos are able to collect in a short time-span. An increase in video views depends on video quality, which is measured as a ratio between Mosaicoon's and its competitors' video quality. The total number of videos that have been successfully put online affects such quality: the more experience has been developed, the higher (other things being equal) the quality of videos will be.

A strategic resource affecting the development of on-line videos and their quality is the customer base. The change in the customer base (end-result) is affected by the relative price of company services ("company price/competitor price" ratio) and by the relative business image ("video views/desired views" ratio). The first performance driver is affected by the strategic resource related to the average company price (perceived by the market). The second driver is affected by the stock of total views. The two drivers affect the end-result named “change in customers”. In fact, while a high price (in respect to the competitors) may reduce the change in customers, a high relative business image may offset the effects on the change in the customer base generated by a premium price strategy. Concerning this, to maintain a small size of the firm, Mosaicoon’s competitive strategy has been designed to position the company in a high-end market segment. To this end, once the company has built a strong image into the market, such a goal has been pursued by fixing a higher price of interactive products in respect to the price of its competitors’ products. Though, a too strong price increase may dangerously undermine the competitive advantage so far achieved by the firm.

To increase the customer base, the company may also focus on the commercial efforts of those employees who regularly work in the commercial business unit. Namely, commercial efforts can be measured in terms of productivity, i.e., by assessing how many commercial contacts each employee is able to collect by promoting advertisement campaigns and other interactive marketing products. Beside this productivity driver, the firm also needs to measure how many commercial contacts will become regular customers. To this end, the indicator that evaluates the number of customers gained per commercial contact represents a useful parameter of its commercial effort effectiveness.

Such analysis has emphasised the main drivers directly and indirectly affecting the number of views. Views affect sales revenues, income, and cash flows (lower layer end-results). A growth in these competitive and financial end-results will generate a stronger endowment of strategic resources owned by the firm, which will generate the basis for further development (reinforcing loop). In fact, as shown, a larger customer base and number of views will foster a development in experience in producing videos, which will increase their quality. A higher number of total views will increase the company reputation, which will allow the firm to apply a premium price with no loss of customers, but with a higher profitability of each transaction.

A higher stock of liquidity will foster the hiring of new salespeople. This will generate new contacts, new customers, more views, higher sales revenues, income, and cash flows.

Likewise it was commented in the previous case, also in this example there are possible limits to growth. Such limits can be referred to corresponding performance drivers. Ignoring a shrinking performance of such drivers may first slow down the business growth process, then may even determine negative commercial and financial end-results.

For example, ignoring the ‘law of diminishing returns’ related to a too aggressive commercial strategy, based on a too intensive salespeople hire rate, may generate a too high “salespeople

salaries/Indicated salespeople salaries". The denominator of this ratio refers to the sustainable salespeople costs that the current sales revenues on which the firm may rely would allow. A ratio higher than one is not a negative factor per se. In fact, if the increase of contacts, customers, video views and revenues that an aggressive salespeople hiring strategy may determine more than offsets the increase of salary costs, than the previously commented growth-oriented reinforcing loop can be fostered. However, a too high salesforce increase would result in a reduction of income (since the increase in fixed commercial expenses would be higher than the increase of sales revenues). This would result into a drop of cash flows and liquidity. Such phenomenon would act as an internal limit to a further salesforce expansion.
Figure 5 portraits a 'lean' and dynamic PM framework based on the Mosaicoon business.

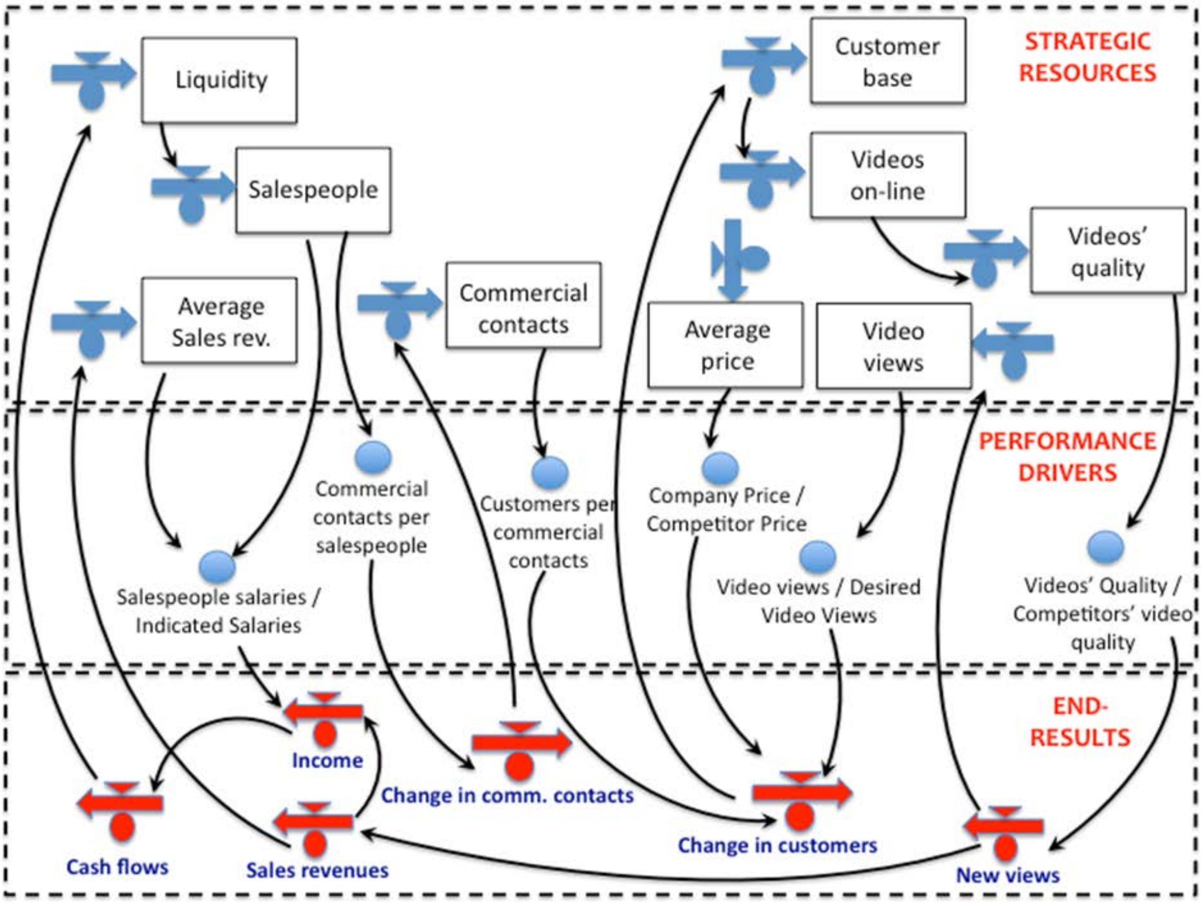

Figure 5: an example of a 'lean' and dynamic PM system based on the Mosaicoon case-study.

5. Conclusions

All small and micro enterprises at some point in their evolution will undergo one, or indeed several, significant changes brought about by either external forces or internal developments. There are classical strategic management tools available to support the process of strategic repositioning, including the use of the RBV of the firm, but we have considered the potential benefits of 'lean' and dynamic PM systems to enhance these approaches. In this research, the 'lean' attribute is used to characterize a different approach in applying PM to small firms, compared with applications to larger organizations. We would expect that such systems will be able to make use of entrepreneurs' tacit knowledge and enhance their leadership by incorporating positive individual attributes into organizational routines.

Our direct experiences and case-study analyses, some of which have been presented in detail here, have indicated that sudden crises, and in some cases a company's eventual demise, are often a product of gradual changes in circumstances that entrepreneurs have not been able to detect and isolate promptly and/or not counteract. We have considered how classical information and decision-support tools, formal, financial-oriented and structured accounting systems are typically employed. However, their value is limited in terms of supporting decision-makers in figuring out important patterns of behaviour over time, and in framing and examining the causal structure affecting them. These are essential if the entrepreneurs have to make effective decisions which will ensure a longer-term sustainable future for their firms. By placing the situation of companies facing structural change into the framework of:

<<Context -> Needs -> Obstacles -> Solutions>>

we have looked at the process of moving to new structures and activities, including placing this into the circumstances of four cases, presented briefly as vignettes. The cases recount the evolution of the companies supported by analysis using then current approaches. We have therefore presented a more detailed examination of two of the cases which presents a 'lean' and dynamic PM systems approach. This defines a PM system that is appropriate for the resources and capabilities of the smaller firm, but which can still take on board the dynamic nature of the firms and their environments.

We argue here that using such a 'lean' and dynamic PM system can help entrepreneurs and their direct collaborators in the process of the company-specific and continuous scanning of crisis symptoms, and the detection of opportunities for developing their business. This conceptual framework reveals a quite original empirical basis to outline a 'lean' and dynamic PM system that might provide decision-makers with a set of key-performance drivers that helps them to prioritize action. We would further claim that our analysis here demonstrates how a focus on 'dynamic' performance could support the leadership of creative entrepreneurs in communicating the core and purpose of their business idea, both inside and outside the firm. It should also help entrepreneurs to restrain their emotional spirit, and to isolate and understand better the pertinent system and its delays, beyond the peripheral issues that can tend to over-tax their mental and physical resources.

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