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FOSTERING A STRATEGIC NETWORK CULTURE IN ENTREPRENEURS' EDUCATION TO ENHANCE SMALL BUSINESS GROWTH *'THE BLUE BAY' MANAGEMENT FLIGHT SIMULATOR*

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Abstract

The management literature on 'strategic networks' has proved the opportunities for business growth management associated to resource sharing among firms located in a same geographic area and positioned along a common value chain. Small-medium enterprises (SMEs) provide a very important research field on this subject. However, in spite of the wide record of cases on successful networking among SMEs, empirical evidence suggests that the pursuit of such networks often encounters major difficulties particularly when the 'hub' firm is also a small company. Entrepreneurs' cultural limitations (individualism and suspiciousness above all), together with a bounded awareness of the networking processes and lack of contacts with bigger companies that might take the role of the 'hub' firm are among the most important causes of the scarce diffusion of strategic networks in most less developed economic regions.
The use of system dynamics (SD) interactive learning environments (ILEs) as a teaching aid in small business entrepreneurs' education can significantly contribute to develop a 'strategic network' culture, thereby fostering a deeper awareness of the pitfalls and benefits underlying small firms' networking processes. An SD network game, "Blue Bay", has been built to simulate cause and effect relationships underlying the rivalry, co-operation and negotiation processes among different 'actors' operating in a same industry.
The "double loop" learning process enhanced by the ILE stems from the understanding of:
a) relevant system boundaries;
b) key-variables affecting system behaviour;
c) feedback loops related to product positioning;
d) counter-intuitive short and long term effects generated by collaborative and non-collaborative policies.

Keywords: System Dynamics; Small-Medium Firms; Strategic networks; Business Growth Management; Learning; Interactive learning Environments; Entrepreneurship

1. Introduction

Particularly in the last decade, the literature on business networks has demonstrated how "external growth" can be a successful strategy in pursuing small business growth. Concerning the appraisal of the strategic and financial advantages associated to networking, the management literature has produced many interesting scientific contributions. Nevertheless, it is possible to observe from direct experience that there are many and widespread geographic areas where small business entrepreneurs seem to be scarcely inclined to start co-operative relationships among them. Individualistic behaviour and suspiciousness are among the most significant obstacles to the diffusion of entrepreneurship and the development of networks which may foster business growth.

Such a phenomenon is particularly emphasised in those industries (as, for instance, tourism) characterised by a predominance of human resources over the technical or financial ones, due to the

significant relative weight played by the entrepreneur's own visions and business idea. In such contexts, quite often the entrepreneur is more inclined to build up and defend a competitive advantage, rather than sharing resources with other potential partners in the competitive system. According to such a view, particularly competitors are implicitly perceived as an "enemy", rather than a potential partner.

The noxious effects generated by such a view on the growth of the small firm and of the wider context where it operates are evident, in terms of both lower bargaining power towards customers and suppliers, and lack of synergetic development of competencies and shared knowledge. In a word, in terms of ricketiness and involution of the business system.

When the start-up of a network among SMEs is led by a small business entrepreneur, external growth tends to be particularly complex, as a direct consequence of the complexity characterising the business system in such contexts. As a consequence of such complexity, a proper understanding of the networking process in the small business perspective, and the perception of the role that small business entrepreneurs are likely to play as owners of a "hub firm", can only partially rely on conventional wisdom on strategic networks. In fact, research findings have been referred to strategic networks led by medium-larger "hub" companies, and based in geographic areas where the dominant entrepreneurial culture is oriented to inter-firm co-operation.

Where, instead, the research focus concerns networks led by SMEs and developed by – and around – SMEs, different factors [1] concerning the individual person, observed in the wider context where he – or she – operates, become relevant. In such a perspective, individual variables have a more significant relative weight than others, related to more 'technical' issues, such as – for instance – how risks are allocated and shared in the network, or to legal schemes according to which the agreement will be formalised.

The analysis of SMEs' networks, particularly of those whose hub firm is also a small business, suggests the following research questions from which this paper stems:

- what factors may foster or tackle the start-up and growth of networks among SMEs?
- how can one explain that networks among SMEs are a major strength for some regions, while in other less developed geographic areas small business entrepreneurs are not prone to start networking processes with other small firms?
- how could management education support small business entrepreneurs in properly perceiving the advantages related to the start-up and growth of strategic networks among small firms?

Based on the above questions, this paper aims to focus, in an SMEs' management perspective:

- business internal and external factors which might tackle or foster strategic networking among SMEs;
- strategic analysis and diagnosis methods, and operative tools which might support small business entrepreneurs to better perceive the peculiarities, advantages and difficulties of communication and implementation, associated to strategic networks among SMEs.

The thesis of this paper is that computer-based interactive learning environments (ILEs) are likely to give a significant contribution in fostering an entrepreneurial culture more oriented to strategic networks.

System dynamics ILEs as a teaching aid in small business entrepreneurs' education can significantly contribute to develop a 'strategic network' culture, thereby fostering a deeper awareness of the pitfalls and benefits underlying small firms' networking processes. The "double loop" learning process enhanced by ILEs stems from a deeper understanding of:

a) relevant system boundaries;
b) key-variables affecting system behaviour;
c) feedback loops related to product positioning;
d) counter-intuitive short and long term effects generated by collaborative and non-collaborative policies.

Based on the above premises, this paper consists of two main sections.

The first one concerns the issue of small business growth, in the perspective of networking. More particularly, the peculiarities of strategic networks among SMEs, will be analysed in order to outline the problems that a "hub" small business entrepreneur usually finds, especially in the initial stages of a networking venture. Such an analysis will allow us to better outline the research context and the education needs that ought to be taken into account in order to foster the development of a new class of "hub" small business entrepreneurs, who may lead the start-up and growth of small business strategic networks.

In the second section of the paper, the role of SD-based interactive learning environments in educating small business entrepreneurs to better understand the benefits of external growth and the peculiarities of strategic networking among SMEs will be outlined. A *microworld* will be analysed,

[1] e.g. in terms of personal networks, values, entrepreneurial culture, not always rationalised perceptions and operational constraints affecting decision making processes.

in order to show how the SD method and related interactive learning tools may provide a substantial help in linking each other in a coherent picture in the entrepreneur's mind – and operationalising them – basic concepts learnt during a small business growth course, through different teaching methods, such as: lectures, case-studies, role-playing.

2. Strategic networking as an option for external growth

If observed on a dimensional perspective, business growth can be both analysed under an *internal* and *external* profile.

Under the *internal* profile, growth is seen as a result of funds allocation to qualitative and quantitative business process improvement. Internal growth usually implies higher investments (i.e. fixed costs), production capacity personnel staff, etc., leading to higher rigidity (i.e. higher economic risk).

On the other hand, *external* growth is pursued through the externalisation of some activities and processes, based on tight links with other firms. Such a strategy may allow a business to widen the scope of its activities and the boundaries of its strategic business areas, thereby achieving a higher operational growth. External growth does not imply, however, an increasing rigidity related to higher investments that would be, instead, necessary if an *internal growth* strategy were pursued [2]. Instead, it allows the firm to fulfil in partnership with other businesses [3] some strategic activities (e.g. concerning R&D, sales promotion and support, distribution) that could not be otherwise easily individually carried out by itself. In fact, for instance, lack of financial or intangible (e.g. know how) resources that cannot be bought on the market or easily and rapidly internally built may be a primary cause suggesting a small business entrepreneur to pursue an "external growth" strategy. External growth may also allow a firm to improve the level of efficiency and effectiveness of its processes, as it often implies a deep redesign of the business value chain through a decentralisation of unprofitable activities [4] that can be better fulfilled by partners, thereby increasing the overall value added generated in the industry [5].

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[2] Lorenzoni G., 1990, L'architettura di sviluppo delle imprese minori, Il Mulino, Milano, p. 36; Lorenzoni G., Lo sviluppo delle piccole e medie imprese, 1996. In VV.AA., Validità del capitale di rischio e fattori di sviluppo delle piccole e medie aziende, Clueb, Bologna; Jarillo J., 1993, Strategic Networks. Creating The Borderless Organization, Butterworth Heinemann, Oxford; Jarillo J., 1986. On Strategic Networks. In Strategic Management Journal, vol. 9; Ferraris Franceschi R., Modello di crescita esterna e fattori di sviluppo della piccola azienda, in VV.AA., Validità del capitale di rischio e fattori di sviluppo delle piccole e medie aziende, Clueb, Bologna; Cavalieri E. - Ranalli F., 1994, Appunti di Economia aziendale, vol. 2, pag. 361-362, Edizioni Kappa, Roma.

[3] Often also with competitors.

[4] Such as, for instance, product design, component parts production, distribution or support activities.

[5] Lorenzoni G., 1990. Accordi fra imprese e strategia competitiva. In Economia & Management, vol. 15, July; Lomi, A., 1991. Reti organizzative, Il Mulino, Bologna.

It is possible to distinguish two main categories of external growth strategies, i.e.: *equity* and *non-equity* collaborations. The first ones imply that growth is pursued through the investment of equity, either in the acquisition of other firms, or under other forms, such as joint ventures, consortia, co-operatives. Conversely, *non-equity* agreements are a more flexible and simple form of pursuing external growth, as they do not imply any formal investment of equity. A typical example is referred to *constellations* and *strategic networks* between firms. They are often the result of a long "trial-and-error" learning process promoted by a *hub* firm which involves other companies, characterised by a narrower 'business idea', in stable bilateral relationships which may eventually evolve into multilateral exchanges.

Three evolutionary stages in *constellations* have been distinguished [6], i.e.: realised, rationalised, and planned. In *realised* constellations, the *hub* firm establishes a minimal basis of non-ruled and occasional contacts with other businesses, mainly based on personal relationships between owner-entrepreneurs. The main goals of such agreements are mostly related to cost reduction or the improvement of process and product quality. Such arrangements are essentially short-term oriented and the *hub* firm does not still have any rationalised view of the constellation, that is gradually shaped step by step, as spontaneous links progress towards a more stable and reliable relationship. *Rationalised* constellations are often an evolution of the previous stage and are characterised by a longer view. Agreements among different firms are more frequently ruled by contracts and are oriented to shared growth goals. *Planned* constellations are the more evolved stage among non-equity agreements. The *hub* firm selects its partners not only on the basis of their efficiency, but also because of their innovation and entrepreneurial capabilities and the peculiar role they are able to play in a *strategic network* to increase competitive advantage. In this perspective, a strategic network is seen as a superior, *meta-business*, entity that is oriented to a long-term growth whose related benefits will be shared by all the partners. Although in a *planned* constellation (or strategic network) the *hub* firm continues to carry out the role of leader, especially towards the external competitive and social environment, all the partners tend to play a significant function in defining common strategies to pursue.

The term *strategic network* is especially intended for this latter form of agreements [7]. In a strategic network, agreements between different firms are strictly inter-related and the web of alliances is not a result of a mere sum of linkages between companies, but are instead the outcome of synergic relationships, leading to a cross-fertilisation among different firms. Strategic networking is likely to allow a firm a faster and more effective ability to affect its performance. The *hub* firm plays a

[6] Lorenzoni G., 1990.
[7] Jarillo J., 1986, p. 32.

central role in the network, albeit its area of influence is quite bounded, provided that it has a very limited power to commit its partners' policies. It can only be able to affect them, through the entrepreneur's leadership and charisma and the definition of macro-objectives shared by all partners. The capability to have an overall and systemic view of the industry processes and activities, to select partners, to communicate with them and co-ordinate all the activities in the network are critical to the success of such an external growth strategy.

3. Some significant peculiarities of strategic networks among SMEs

From the above analysis, it is possible to argue that networks provide a strategic option that is alternative to *market* and *hierarchy* [8], as it may allow the firm to reduce transaction costs. Such costs are associated to four main factors [9]:

1. decision makers' bounded rationality;
2. uncertainty on the future;
3. small numbers of firms producing and/or selling a given product or service;
4. opportunistic behaviour undertaken by some suppliers or customers.

Provided that the main cause of transaction costs is associated to *lack of confidence* between SMEs, the first goal for a new networking venture ought to be to induce potential partners to collaborate one another [10]. On this concern, it has been remarked how a careful selection of partners is a deciding factor to enhance a growth spiral aimed to feed the building of a mutual confidence and co-operation climate inside the network. About partners selection criteria, Jarillo remarked the importance of a cultural homogeneity among them [11]. Conversely, Lorenzoni has emphasised the need to build up a comprehensive and multifaceted pool of business linked each other [12].

How to develop trust, once a basis upon which a collaboration relationship between companies has been established?

When two or more people are facing an ambiguous and risky occurrence, where results of each of them are strictly dependent on the other's behaviour, which cannot be *a priori* known, they tend not

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[8] The difference between markets and hierarchies as a dual approach to business growth has been outlined in Williamson O., 1975. Markets and Hierarchies, The Free Press, London.
[9] Williamson O., 1979. *Transaction-cost Economics: the Governance of Contractual Relations*, in: *Journal of Law and Economics*, n. 22, p. 234.
[10] Jarillo J., 1986, p. 37.
[11] *ibidem*, p. 146.
[12] Lorenzoni G., 1987. *Costellazione di imprese e processi di sviluppo*, in: *Sviluppo e Organizzazione*, n. 102, July-August, , p. 96. Similar remarks are in: Dubini P. – Aldrich H., 1991. *Personal and Extended Networks are Central to the Entrepreneurial Process*, in: *Journal of Business Venturing*, n. 6, p. 308 and 311-312.

to co-operate[13]. In fact, an individualistic behaviour would spontaneously emerge from the need to minimise the risks of damage that the co-operating firm would incur if any of its partners would not collaborate in the network. As potential costs associated to lack of partners' commitment to network agreements tend to be higher than those related to opportunistic behaviour, lack of co-operation and individual goal pursuing would eventually emerge as the dominant behaviour. However, in a longer time perspective the advantages related to collaborative behaviour significantly emerges [14]. In fact, it has been demonstrated [15] that if one repeats for more than 200 times consecutively a simulation involving such a peculiar decision making context [16], collaboration eventually emerges as the most convenient behaviour for all decision makers.

Such a phenomenon provides some important issues for analysis, concerning the education of entrepreneurs towards a culture oriented to "external" growth.

A first thought on this issue is that the higher is *ambiguity* in inter-firm relationships, the higher will be the tendency of each partner to opportunistic behaviour. Ambiguity tends to be higher in the initial stages of networks and is directly related to the level of strategic vulnerability of the firm. However, particularly in SMEs, it is just such a vulnerability that pushes the entrepreneur to start personal contacts aimed to start strategic agreements with other firms. Particularly for small firms, strategic vulnerability depends on several factors, among which: resource availability, competencies and capabilities (e.g., concerning commercial or production issues), bargaining power towards clients or suppliers, internal growth sustainability and related risks, operating profitability, etc.

Small business entrepreneurs promoting networking ventures among small firms ought to be able to feel the extent to which the above propensity factors to new inter-firm ventures are perceived by potential partners. Small *hub* business owners ought to be willing, often for a long period, to divest from the firm and their personal life their own time and other resources and to invest them in new network ventures, in order to start and successfully enhance co-operation agreements with other small firms. Usually such networking activities are initially started on a personal basis, through occasional contacts with other small business entrepreneurs [17]. In a further step such personal contacts are extended on a business basis, thereby creating a *network culture* inside each networked firm, by participating to wider and more stable co-operation agreements.

Complexity of networking activities, especially in the small *hub* firm's perspective, tends to increase – other conditions being equal – when the kind of relationships that are intended to develop

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[13] Jarillo J., 1986, p. 136.
[14] *ibidem* p. 139.
[15] Axelrod R., 1984. *The Evolution of Cooperation*, New York, Basic Books.
[16] This decision context is usually referred as the "prisoner's dilemma".
[17] On "Personal" networks see: Dubini P. – Aldrich H., 1991; Marchini I, 1995. *Il governo della piccola impresa*, ASPI, Genova, 1995, p. 207-208; Ostgaard T. – Birley S., *Personal Networks and Firm Competitive Strategy. A Strategic or Coincidental Match?*, in *Journal of Business Venturing*, 9, 1994.

concern small firms operating in a same industry as competitors, or supplier-buyer agreements. In such circumstances, one will be able to pursue a cohesion among partners only through the charisma of the *hub* small business entrepreneur, and his/her capability to find the way to a culture according to which competitors are only seen as rivals. The *hub* small business entrepreneur is to be able to communicate his partners both the advantages associated to their participation in the network [18] and the fairness of the mechanisms through which they will be shared among them [19].

Other critical factors characterising the profile of a hub small business entrepreneur are associated to his/her aptitude to link in a coherent and systematic wider picture different competencies and capabilities that each partner is able to bring in the network. The quality of such co-ordinating and leading role is determinant to the possibility that competencies and capabilities from different companies are strictly interdependent and complementary each other in a unique "package", which could not be easily and economically replicated by a single partner. Such a result allows the network to convert into a strength a weakness which typically affects small businesses, i.e. the difficulty to build up a critical mass of managerial competencies and capabilities.

It is also critical the capability of the hub small business entrepreneur to resist to the feeling of frustration, that might be often associated to the lack of participation by many potential partners. Moreover, another significant factor is related to the hub entrepreneur's aptitude to make a proper diagnosis of unsuccessful networking efforts, in order to change policies. This last issue has a very peculiar relevance in small business networks. In fact, lack of sharing over time common goals in a network might not be associated to a lack of confidence or a strictly opportunistic behaviour undertaken by partners. It could be, instead – at least partially – due to shortages in financial, human or time resources by potential partners, that could suddenly emerge also after that some common networking policies and investments have been undertaken.

High involvement in current activities, together with the reluctance to communicate to third parties (especially if they are competitors) shortages and difficulties – even though they are contingent – are often a primary cause of misunderstandings and disagreements between different entrepreneurs taking part to the network. Such phenomena are also a primary cause of discouragement in continuing the effort to establish a network, leading to a systematic and aprioristic refusal of the idea to establish or develop inter-firm relationships, just in order to prevent from falling in a

[18] Jarillo remarked that an opportunistic behaviour is not desirable as it deteriorates the reputation of the firm. When a network with other firms is established, all potential partners require mutual trust. Provided that business reputation has a significant economic value, it is possible to maintain that reputation it is like a *hostage* that other partners can use against the opportunistic firm. "Trustful behavior can only be generated by showing that the entreprneur would be worse off if he or she behaved opportunistically". Jarillo J., 1986. p. 37.

[19] Jarillo J., *Strategic Network*s, op. cit. p. 135.

dependency state from third-parties' policies or – even worse – sharing with others strategic assets without receiving any return.

Conversely, a learning and systems-oriented perspective in the education of hub small business owners-entrepreneurs is likely to reduce transaction costs, shifting the focus of attention in managing business growth [20] from resource availability to their bilateral (or multilateral) transfer between different networked firms [21]. Such a perspective significantly differs from the one that has for a long time commonly adopted in the literature [22], according to which business growth is conceived as an accumulation process of experience and knowledge *inside* the firm. It is also different from the more recent *resource-based-view* of the firm [23], according to which competitive advantage depends on the capability of the firm to build and develop resources and competencies that might be unique (i.e. rare) and not transferable to other competitors.

Another critical issue related to small business networking is associated to the undertaking of the so-called "networking" risks by the hub firm. On this concern, Jarrillo remarks how in efficient networks such a risk factor that the hub firm is likely to undertake, for instance concerning machinery acquisition or R&D investments, is high. However, it must not be too high, so to discourage smaller firms partners to improve their performance inside the network [24].

Such a policy is difficult to undertake when the hub firm is also a small business. In fact, other conditions being equal, it will be more difficult for a small company to absorb the costs associated to the networking risks. Such factor is another primary cause of complexity, and often failure, of networks among SMEs.

If potential networking risks were significantly high and the hub firm would not be able to bear the related costs, the hub small business entrepreneur will have to overcome such difficulties, through its charisma and relational capabilities, and will dedicate a significant share of his own time to the network venture. Particularly when the results of such a co-ordination work find it hard to emerge, the hub small business entrepreneur might be tempted to slow down his own efforts and to dedicate

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[20] Bianchi C., 1999. *Il governo dello sviluppo nella piccola impresa attraverso i modelli "dinamici"*, in: *Piccola impresa*, n.3.

[21] Lorenzoni G., 1996. *Lo sviluppo delle piccole e medie imprese*, in AA.VV., *Validità del capitale di rischio e fattori di sviluppo delle piccole e medie aziende*, Clueb, Bologna; Ferraris Franceschi R., 1983. *Modello di crescita esterna e fattori di sviluppo della piccola azienda*, in AA.VV., in AA.VV., *L'organizzazione nella economia aziendale*, Giuffrè, Milano.

[22] Penrose E., 1959. The Theory of the Growth of the Firm, Wiley, New York.

[23] Barney J., 1991. *Firm Resources and Sustained Competitive Advantage*, in Journal of Management, 17; Diericks I. – Cool K., 1989. Asset Stock Accumulation and Sustainability of Competitive Advantage, *in;* Management Science, n. 35.

[24] Jarillo J., *Strategic Networks*, 1986 p. 146-147. For instance, Benetton undertakes the risk relate to the acquisition of specialised and expensive machinery, which might suddenly become obsolete, due to various factors associated - for instance - to fashion.

again his energies only to his firm [25]. However, the entrepreneur would have better to persist in his efforts to promote the network, thereby offsetting resistance factors, if he is aware that the selection of partners is adequate (in terms of mix of competencies, and overall potential knowledge, and other strategic assets) and the "network formula" is valid.

The awareness of the above propensity and resistance factors to external growth must lead the hub small business entrepreneur to adopt a long term perspective and selectively operate on different policy levers (e.g. rewards/punishments related to partners' behaviour) building the "rules of the game" for taking part to the network (fig. 1).

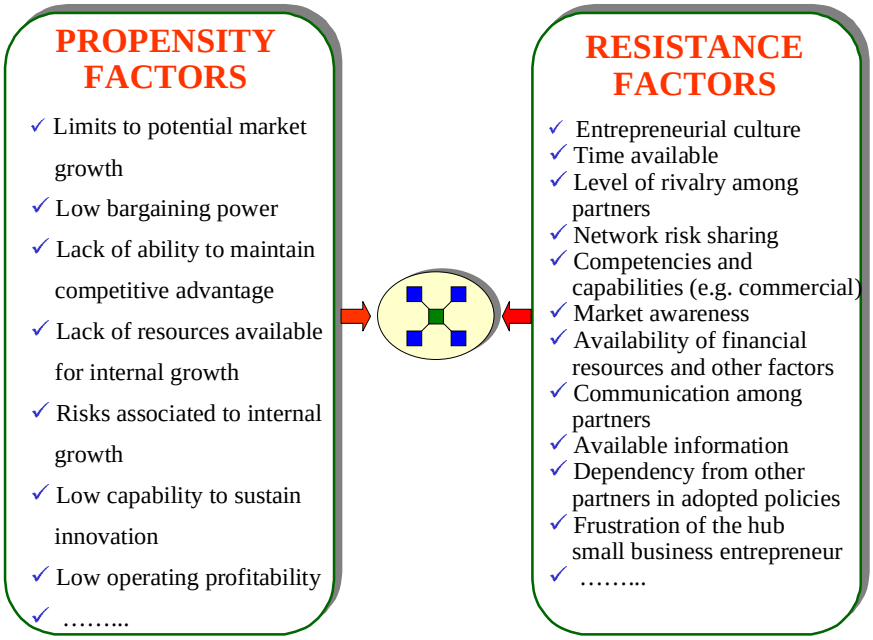

Figure 1 – Propensity and resistance factors to small business external growth

How to support the learning processes and mental models elicitation of small business entrepreneurs who may play the role of leaders in the creation of strategic networks among SMEs? How to communicate them the opportunities and advantages related to external growth and, at the same time, support them in properly perceiving the related risks and resistance factors?

Entrepreneurs education is likely to significantly contribute to such objectives. In particular, being entrepreneurial culture, aims, and perceptions the focus of such an education effort, participative teaching methods (such as case-studies or role playing) are more suitable to meet such requirements.

In order that the seed of co-operation might take root in the entrepreneurial culture, it is necessary that external growth is gradually perceived as an opportunity, or even a requirement, so to pursue a

[25] On the frustration of entrepreneurs, associated with unsuccessful networking activities, see: Turati C. 1988, *Joint Ventures. Una corsa ad ostacoli*, in: *Economia e Management*, n.3.

balanced and sustainable growth, counterbalancing the structural weaknesses and complexity factors characterising small business management.

Such education purposes can be properly pursued through education programmes concerning small business growth management issues. Such courses might adopt a package of different teaching methods, such as lectures and case-studies discussion, that could be associated with the use of *microworlds*, through which it is possible to experiment in a protected environment the typical processes characterising the start and growth of a network among SMEs.

In the next paragraph an example of application of a *microworld* in entrepreneurs' education towards a culture oriented to external growth, will be illustrated.

4. Fostering a strategic network culture in entrepreneurs' education to enhance small business external growth through SD-based interactive learning environments

4.1. The case-study on which the *microworld* is based.

The *microworld* that will be illustrated in the second section of this paper is based upon a case-study, titled *The 'Blue Bay'*, describing the dynamics of internal *vs.* external growth of a group of small firms operating in the tourism industry. The *microworld*'s goal is to make propensity and resistance factors to collaboration among small firms explicit. More broadly, it aims to support entrepreneurs in a deeper and systemic understanding of the processes underlying the constitution and growth of small business networks. It is also oriented to help small business entrepreneurs to perceive limits to internal growth, and the opportunities related to external growth.

The case-study upon which the *microworld* is based takes its origin from the direct observation and reflection on several real cases, referred to small touristic districts, endowed with a significant potential – e.g. concerning their historic-cultural heritage and/or natural resources – which are not, however, properly deployed by local small hotel firms, because of several factors, among which:

- an excess of focus on current operations, whose related objectives are difficult to be related to longer term goals in the entrepreneur's mind;
- a lack of resources, particularly concerning staff and capital;
- a narrow scope of the business idea, leading to a bounded communication network [26] with other business actors operating in a same value chain. Lack of communication, also in the same area where the small hotel firm operates, is the main cause of deficiencies in available information,

[26] On the importance of communication and image as the focus of business strategy, see: Coda V., 1991. *Comunicazione e immagine nella strategia dell'impresa*, Giappichelli, Torino.

often leading to an inconsistent product strategic positioning and to a structural subjection of the business to large tour operators. This pushes small hotel owner-entrepreneurs towards a spasmodic search for cost savings and efficiency, thereby implicitly relegating effectiveness and service quality to a 'second choice' goal.

Based on the above assumptions, the case-study tells the story of "Baia Azzurra" (in English: "Blue Bay"), a small touristic area where three small family-owned hotels are located, i.e.: Belvedere Hotel, Punta Lunga Hotel and Panorama Hotel.

The above three hotels are very similar one another, both concerning the kind of "touristic product" they offer (e.g. sale prices, number of beds/rooms), both with regard to their cost structure and available resources. They are sequentially located on a same promenade, since always appreciated by tourists for its contrasting colours, its fine sand and beautiful sea beds. The three hotels are also not far from a thermal centre and an archaeological park.

Since the beginning of the '60s, the tourism business has always been the only source of income for the three families owning the hotels located in the 'Blue Bay'. Such an activity has allowed the families to achieve a satisfactory quality of life. Particularly in the '60s and '70s, the three firms were able to rely on a loyal customer base, mainly coming from the two main cities of the region were they are located. The courtesy, the familiar ways with clients and the refinement and quality of the hotel restaurant's recipes have been the main (if not the only) distinctive factor characterising the three hotels until the end of the '70s. The close similarities between the three firms' business ideas have always represented an obstacle to any kind of collaboration between them. In fact, although the personal relationship between the three business owners-entrepreneurs has always been good, under a formal profile, very seldom they had the chance to get together in contexts different from a mere exchange of opinions on the political events of the village.

From the end of the '70s till now, the touristic flows towards the "Blue Bay" have been affected by deep changes, which have also modified the structural internal management conditions of the three hotels. As a matter of fact, most of the significant flow of tourists from the two big cities of the region, that tour operators are able to manage today, remains in the area of the touristic district for the only time necessary to visit the archaeological excavations. Tourists are then diverted towards other centres where there are larger hotels. Quite seldom, those tourists that see the beautiful landscape and view of the "Blue Bay" from the bus, are also informed that in the area there are a few hotels located on the beach.

Moreover, such hotels have a bounded capacity (both in terms of human and financial resources) to attract a direct clientele, thereby giving up the tour operators market segment. Large tour operators are, however, quite reluctant to divert part of their demand flows to the hotels located in the "Blue Bay", due to the small number of beds they are able to provide. This has caused, on a side, a progressive reduction both in price and margins for each hotel (the average commission rate charged by tour operators is about 50% on the price paid by the tourist for the stay); on another side, it has pushed the three firms to gradually increase the number of rooms and beds, thereby increasing fixed costs and the economic risk too (fig. 2). Fig. 3 displays income dynamics for the three firms.

The "Blue Bay" case-study is concluded by some questions, through which the learner is invited to take the role of one the three hotel owner-entrepreneurs and to think and debate around the following issues:

- which causes led the three firms to the above state of crisis?
- to what market segments the three firms have addressed their offer?
- on what conceptual bases a successful competitive strategy for each of the three companies?
- what constraints ought to be faced by each entrepreneur in order to bring his/her firm back to a growth path that is compatible with liquidity, profitability and patrimonial solidity? [27]?

[27] On these issues see: Coda V., 1984. *La valutazione della solvibilità a breve*, in: *Finanza Marketing e Produzione*, n. 2.

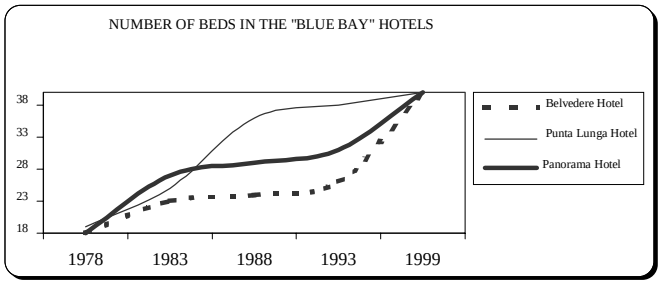

Figure 2 – Number of beds in the three hotels in the "Blue Bay"

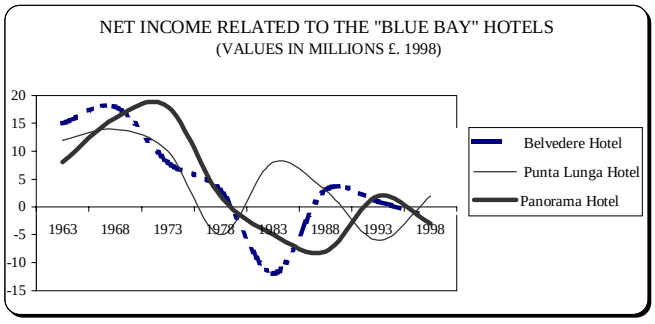

Figure 3 – Income earned by the three hotels in the "Blue Bay"

4.2. The simulation-debate learning process enhanced by the "Blue Bay" simulator as a teaching tool for small business entrepreneurs.

After reading the case-study, the learners are asked to reflect – based on the above questions – on the dynamics portrayed in the texts, and on the problems highlighted in the final section of the case. In a further step, they are invited to start a group simulation and analysis of results [28], by which they take the role of the small hotel owner-entrepreneur. This allows them the directly experiment, through the microworld, the effects generated by their own policies, and to assess the consistency of initial assumptions. To this end, each group is given some initial supplementary information, concerning issues like for instance the initial business financial statement, the initial value of the business-owning family's personal assets, available maximum bank credit. All the three businesses start from the same initial condition: same market share, cost structure, number of beds, sale prices, same dependence from tour operators.

[28] Each group consists of two people.

Each group must compete against others [29] to pursue a balanced and sustainable business growth. Decisions are made through an input shell displayed by a personal computer connected with a server through a network game.

The microworld consists of four main sections, i.e.:

1) a *guided introduction* to which each learner can have access from his computer;

2) a *system dynamics model* to which each group can have access through

3) a *control panel* that allows one *to set policies*, and

4) another *control panel* through which the *educator and tutors can schematically summarise and comment on decisions* and related results associated to each firm.

During the simulation session, players belonging to different groups are not allowed to communicate each other. This allows one to reproduce a context similar to the real world for many small firms, which often meet significant difficulties in obtaining relevant information and communicating with other actors in the wider environmental system (fig. 4).

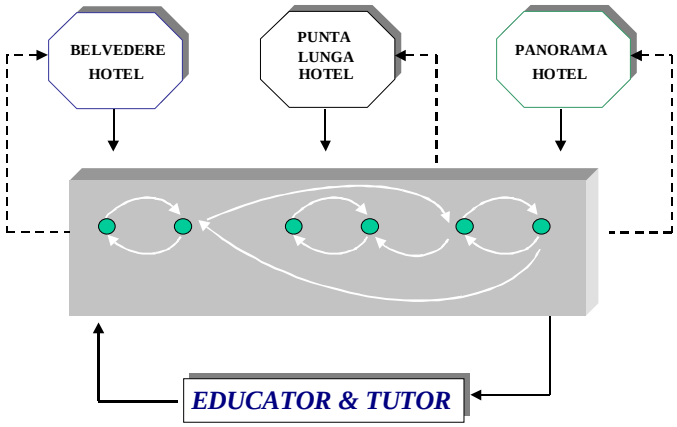

Figure 4 – Teaching room layout in using the microworld

Fig. 5 displays the start window, to which all participants can have access. It introduces It introduces main key-actors, i.e. each of the three hotel firms and tour operators. Each group can only select information concerning its firm (fig. 5) and know the "rules of the game" concerning the relationships of hotels with tour operators (fig. 6).

Through the start window each group is able to visualise the control panel displaying policy levers and graphs illustrating achieved results.

As it is possible to observe from fig. 7, policy levers concern:

- the increase in the number of beds, through new rooms acquisition [30],

[29] i.e. with the other two hotels.

- sale price,
- direct promotion expenses (e.g. through leaflets, newspaper advertisements, or the participation to tourism fairs) in order to promote the hotel's name and to build up a direct customer base, that is loyal to the firm, independently tour operators policies,
- expenses to maintain and improve the level of quality of service provided (e.g. maintenance and improvement of rooms, personnel training),
- the share of time that the entrepreneur dedicates to direct promotion and the remaining time dedicated to promote the wider "district" such as the *Blue Bay*,
- promotional expenses afforded in order to publicise the *Blue Bay*, jointly with the other two near hotels,
- personal withdrawals of equity made by the player-entrepreneur to increase family assets [31];
- equity increase done by the player-entrepreneur through withdrawals from family assets [32];
- the strategic business area (i.e. clientele conveyed by tour operators *vs.* direct customers) to whom the firm wishes to give a priority in the allocation of its production capacity (i.e. number of available beds). Such a decision has a significant importance, as the tour operators market segment is very sensitive to oscillations in the allotments (in terms of number of beds available) that each hotel is able to guarantee in a given time span. Consequently, a reduction in the allotment available for tour operators will cause soon a decrease in the flow of tourists that tour operators will be willing to direct towards the hotel. It follows that the choice to give the priority to direct customers, in the allocation of available capacity, underlies – in principle – significant economic risks for the hotel, especially when direct customers' flows are not known in advance.

Before starting the simulation session, learners are informed that selling their "product" through tour operators involves an intermediation cost equal to 50% of the price paid for a package including a week holiday. Conversely, hotels may decide to directly sell their "product". This means that they would by-pass tour operators, as the "product" would be sold through smaller travel agencies or even directly, during tourism fairs. This second option would imply a 20% commercialisation cost equal to 20% of the final price paid for a week holiday.

However, as previously mentioned, at the beginning of the simulation session players do not have any piece of information on the size of potential market referred to the above strategic business areas, i.e. tour operators or direct sale. Sooner or later, during the simulation they will be able to

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[30] Beyond the acquisition of new beds, the firm must periodically afford the maintenance of the existing ones. Such an activity is automatically decided by the model which – based on an obsolescence time of the structure – periodically calculates maintenance costs for each firm.

[31] The salary of the entrepreneur and other members of the family owning the firm who work in the business are included in the labour costs

[32] The 80% of family assets can be invested into business equity.

experience how the 'direct sale' option implies a very bounded potential market (if compared to the 'tour operators' alternative), especially if the player's efforts are oriented to promote only the hotel's name, rather than the 'Blue Bay' as a whole. The players will be able to develop a larger and more profitable potential market if they will jointly promote the wider touristic area where their hotels are located. However, this will require that all groups will spend the entrepreneur's personal time to promote the 'Blue Bay' network and will agree to invest a same promotional budget to attract more stable touristic flows.

Figure 5 – Start window

Figure 6 – Basic information on each hotel

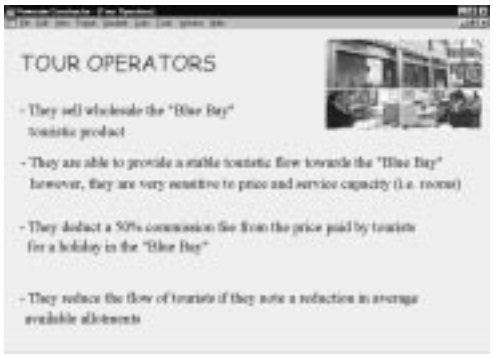

Figure 7 – Basic information on tour operators

Decisions made by participants cover a quarter time span over a 250 weeks (i.e. 5 years) time horizon. Such decisions are mainly made based on the information included in the control panel reported in fig. 8. Such information set mainly concern: income, profitability, number of guests [33],

[33] There is a delay of a few months between the time when the decision maker decides to increase the number of the hotel's beds and when the number of new beds is concretely available. Such a delay is due to the time necessary to acquire and set up new capacity acquisition. Moreover, as it is possible to see from fig. 8, at each quarter the player can decide to acquire at most 10 beds. Such a constraint is again related to the time necessary to acquire new production

market share, personal assets available for equity investments, bank balances, maximum bank credit, and equity. If negative cash flows are not offset by equity investments by the hotel owner, if their is an available bank credit, they are automatically covered by an increase in negative bank accounts, Bank credit, is directly proportional to the business debts-to-equity ratio and the investment turnover, perceived by banks [34].

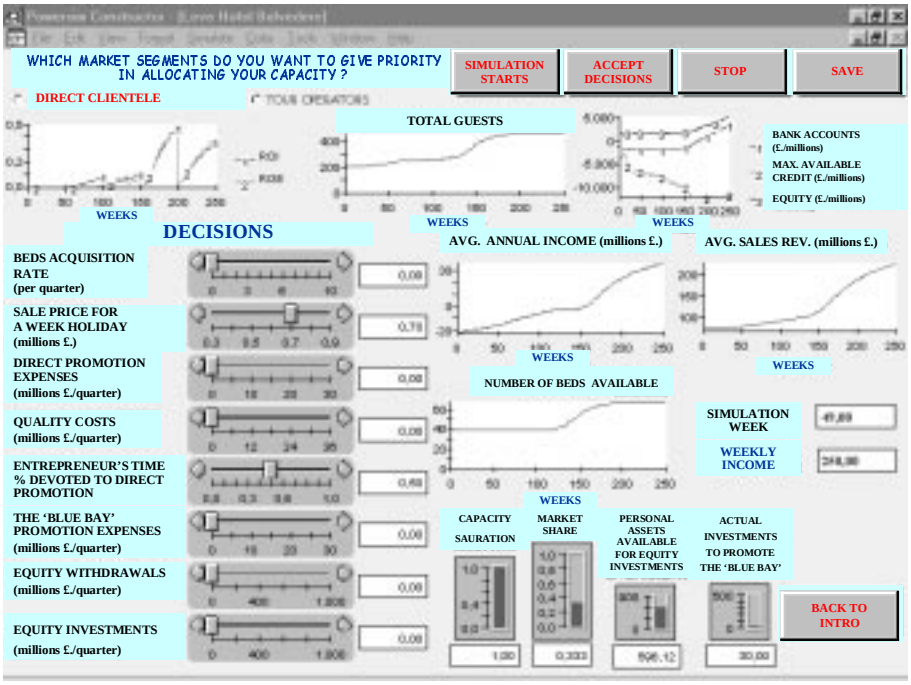

Figure 8 – Control panel for each player

Other information is given during the simulation, according to the education needs being pursued. For instance, when available bank credit progressively decreases, two sequential messages inform decision makers of the risk to get into lack of liquidity and, hence, into failure. If allowed credit has been fully exploited and banks are not anymore willing to finance the firm, or even when the firm generates a deficit, the players are noticed with a failure message and the simulation model will not allow him to make any further decision. After that such a failure message will be received, the group will be invited by the learning facilitator to reflect on the causes generating the insolvency

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capacity. Particularly when the demand growth rate is high and the business 'production' capacity is fully saturated, it can be significantly difficult to synchronise the new beds acquisition rate with the demand expansion rate. Such a difficulty is mainly due to the above mentioned delays, whose misperception is a main cause of bias in decision making. In fact, the stock of beds currently available is the results of decisions made in the past, while the capacity exploitation rate is influenced by the current demand rate. If one considers that the business image is strongly influenced by available capacity, and in turn affects current demand (which also depends on the potential market size), it is possible to understand the risk of over-investment in production capacity. Quite often, such a phenomenon can be either associated to an "excess of enthusiasm" in decision making while the demand rate is significantly increasing or to a misperception of the above delays in capacity acquisition.

and/or deficit state. Afterwards, the players be asked to start a new simulation session, to test the working hypotheses developed during the teamwork through the analysis of past results. Other error

messages may concern the possibility that the players wish to invest new equity by an amount higher than available personal assets (see fig. 9-a)

Figure 9-a – Messages of financial crisis and error

Among the messages given to the learners by the microworld, during the simulation, an important role is played by those related to the decision to make promotional investments for the "Blue Bay" district. When a group first invites other competitors to jointly promote the district (i.e. to create a network), the microworld informs other groups (i.e. competitors) about the possibility to participate in the network. Each group, however, does not know the investment that the others are willing to do. Consequently, two alternative outcomes are possible:

1. *all groups are willing to afford the investment*. In this case, if the budget that different groups wish to spend is different, the two groups who wish to make a higher promotional investment are informed about the possibility to achieve an agreement with competitors on a lower amount. Consequently, they will be free to accept the proposed investment or to refuse it.
2. *at least one group is not willing (or able) to afford the proposed investment*. In this case, it will be impossible to start a network policy and the other groups will be informed of this.

If two of the three groups fail, and the other would like to start a network policy, the microworld would inform it that it is impossible to pursue such a policy, due to competitors' failure (fig. 9-b).

Figure 9-b – Messages related to network promotion investments

[34] Such a relationship is not communicated to the players, in order to foster a deeper analysis and group debate on the dynamic links between business growth, solidity, solvency and profitability.

Such message embodies a very important message for the learner. In fact, although the remaining group has a monopoly rent in the 'Blue Bay', each player will perceive the weakness of the surviving firm. In fact, it will not to be able to start networking policies with competitors; this will substantially reduce both the business bargaining power towards tour operators and its attitude to develop a direct clientele. Such a circumstance will provide the learners a new, different perspective through which a business context can be observed: competitors can be seen as a potential partner (i.e. a resource), rather than merely an enemy to win.

A *third section* of the microworld is made up by the control panel, that only the learning facilitator and tutors are able to browse from their computer screen. It allows to monitor decisions made by participants and their effects on the relevant system. This will help them both to support behaviour analysis in each group, during the simulation, and particularly to foster a deeper debate in the final plenary session.

As fig. 10 shows, such a panel does not only include decisions made by participants and main performance indicators. It also embodies other key-factors which are not made explicit in each group's control panel, although they are very important to fully understand the dynamics experienced in the simulation. Such factors refer to: 1) *image*, both related to each hotel and the 'Blue Bay' district; 2) the *split of total guests in two categories* (i.e. direct and tour operators' clientele); 3) the debts-to-equity ratio of each firm. Such factors are not made explicit in the players' control panel, in order to reproduce an information feedback that is quite close to reality. In fact, particularly in smaller firms, there is a structural difficulty in getting prompt and relevant information on intangible variables such as 'image' or even on financial variables such as the "debts-to-equity" ratio, which are often perceived with a delay and separately from the rest of the system.

Each of the above three variables plays a significant role in affecting business performance.

The 'image' factor, differently from price and number of beds available (to whom tour operators are very sensitive) significantly affects direct clientele. In fact, business image affects customers' loyalty and new clients acquisition (due to word-of-mouth effects), both referred to direct and tour operators' clientele. More particularly, the 'Blue Bay' image influences the direct flow of tourists not intermediated by tour operators.

Main factors impacting on image are:

- promotion investments, which are in turn affected by each firm's available liquidity;
- time devoted to promotion activities by each entrepreneur and his/her direct collaborators;
- the quality/price ratio perceived by clients.

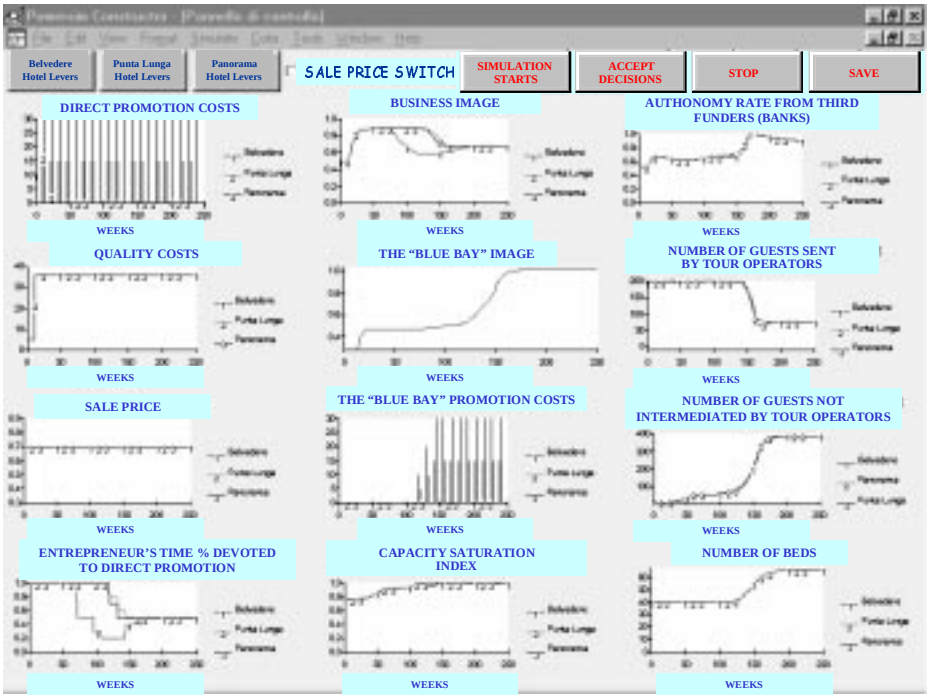

Figure 10 – Control panel used by the learning facilitator

This last parameter is inversely proportional to the number of available beds and directly proportional to quality investments.

The opportunity to split the direct clientele from the one intermediated by tour operators depends on the significant difference between the two strategic business areas, in terms of both the sale process and customers' preferences (and, consequently, of different policy levers on which to selectively operate).

The third above mentioned key-factor – i.e. 'debts-to-equity' ratio – significantly affects business performance, due to the risk that the pursued growth rate is not internally sustainable by the firm, particularly on a financial profile.

4.3. What participants can learn from using the microworld

When participants start a simulation session for the first time, according to the above stated conditions, quite seldom decisions initially adopted are likely to be oriented towards a network policy. In fact, pursuing such a policy is tackled by different factors, such as:

- the low probability that the three groups, being worried of the negative business profitability, simultaneously decide to pursue from the beginning a long term policy oriented to external, rather than internal, growth. In fact, such a policy implies a high financial and economic risk, due to significant promotional and quality investments to which – at least initially – a very bounded flow of guests can be associated. Another implication of such policy is related to the

lower revenues that the firm would earn if it would first allocate its limited capacity to the direct clientele, rather than to long term (even though less profitable) sales to tour operators;

- uncertainty about the relationships between promotional investments and direct customers flows, due to lack of knowledge of the potential market and demand elasticity to different policy levers;
- uncertainty on the short term effects on company image and sales that a reduction in the entrepreneur's time allocated in hotel promotion, will be likely to generate as a consequence of an increase of the time invested to promote the network;
- uncertainty on competitors willingness to continue to pursue joint network policies, even though their profitability is worsening in the short term;
- uncertainty on the financial resources that will be necessary to sustain a growth rate associated to the network policy;
- uncertainty on the profitability of network policies.

The above, and other, uncertainty factors are often a primary cause of a too weak network policy, implying low and insufficient investments, that will not allow the firm to make a major leap in its competitive and financial performance. Quite often, it is also possible to generate a significant flow of direct clients, but the growth rate is not sustainable due to a lack of capacity (i.e. available beds) or equity. Conversely, in other cases, often after several simulation runs, the groups seem to be initially successful in developing a flow of tourists that might assure a satisfactory profitability and a proper capacity saturation rate. Such a phenomenon often feeds the players' expectation that in the future the demand increase will be the same as in the past: in other words, limits to market growth are ignored. This mindset is a primary cause for an excess in capacity investments. This will cause an increase in fixed costs, depreciation, maintenance costs, and expenses that will be necessary in order to keep stable the price-quality level. In other words, such behaviour will – sooner or later – generate a financial and economic crisis (fig. 11).

After a few simulation runs, the above mentioned difficulties are likely to generate a mistrust in the players, concerning the possibility to pursue an external growth policy, based on strategic networking with competitors. This feeling – that is very close to reality – is a primary cause for diverting the players' efforts from external to internal growth policies. Such policies imply an increase of capacity (i.e. available beds) and a concurrent reduction of sale prices offered to tour operators, in order to have a stable flow of tourists that might allow the firm to earn a contribution margin to cover the rising fixed costs.

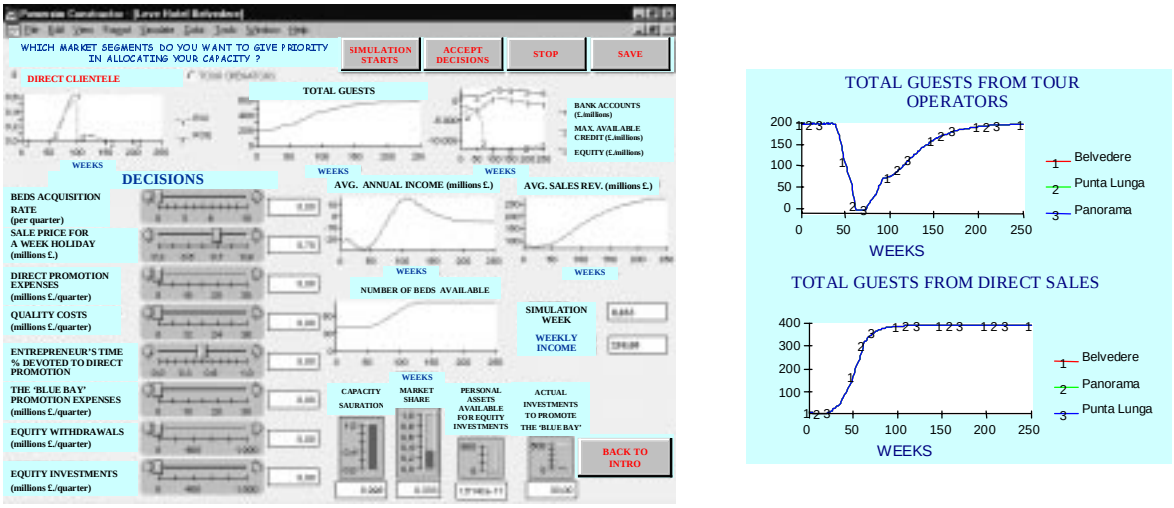

Figure 11 – Main results associated to a simulation implying an excessive capacity increase

In decision makers' mindsets, such a policy is intended to feed a growth circle. In fact, a price decrease reduces the unit contribution margin, which in turn increases the break-even flow of tourists. This originates the decision to increase capacity (number of beds), which pushes decision makers to reduce prices in order to saturate the higher capacity and reach the break-even. If, on a side, such a policy may allow the firm to increase its customer base, in the tour operators segment, on another side it also increases its dependence on large tour operators' policies. If other competitors' in the 'Blue Bay' will not correspondingly reduce also their sale prices, the growth effects that the positive loop depicted in fig. 12 underlies will be likely to improve business performance.

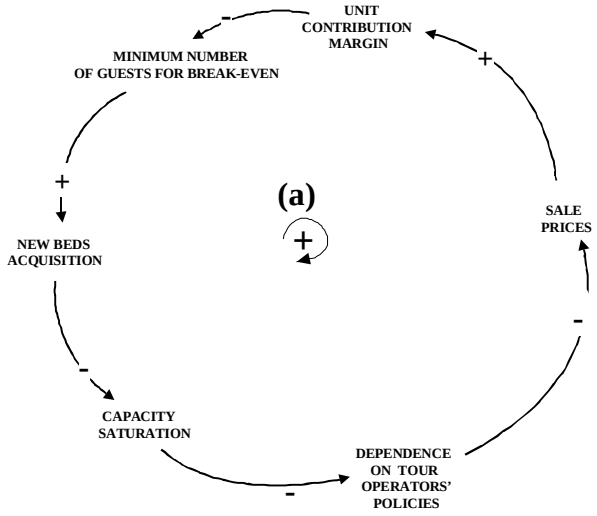

Figure 12 – Reinforcing feedback loop implicit in decision makers' mental models, related to a growth policy based on a 'high volume-low price' policy in tour operators market segment

Nevertheless, if also competitors will reduce their prices [35] the effect of such policy will be a price war escalation that will be likely to generate negative effects for all competitors. In fact, the increase in the flow of tourists that tour operators will direct towards the hotels will not counterbalance the reduction in unit margins. From the above analysis, it is possible to argue that internal growth strategies may involve significant perils that – if not properly and promptly detected by decision makers – may lead to failure.

Fig. 13 illustrates how a price reduction policy is likely to reduce sales revenues, leading to a lower income and cash flow. A lower liquidity will, in turn act as a limit to capacity growth (negative feedback loop). The figure also shows that, if the increase in the touristic flows intermediated by tour operators would not be sufficient to counterbalance the price reduction, such a low price policy would cause negative results, both on an economic and financial profile, which would be likely to generate a reinforcing regression process, leading to failure (positive feedback loop).

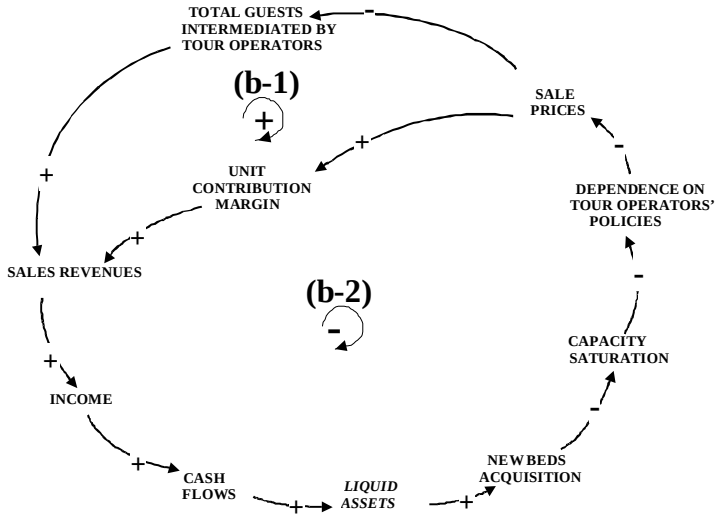

Figure 13 – Positive feedback that decision makers mental models underlie when an internal tour operators growth policy, based on a low price-high volumes, is pursued

[35] This happens quite frequently in real life.

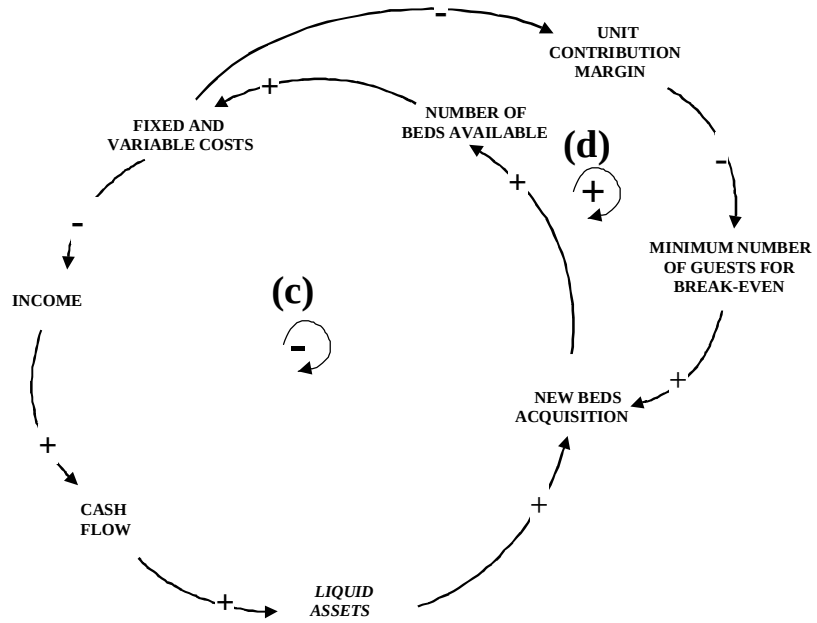

Figure 14 – Limits to internal growth based on a low price policy and related unintended side effects related to fixed and variable costs

Other unintended side effects associated to an internal growth policy based on low prices can be associated to the higher fixed (e.g. depreciation) and variable (e.g. quality) costs that a capacity increase combined with a price reduction would imply. In fact, such policy would cause a reduction in the income rate, leading to lower cash flows and liquidity, thereby tackling a new capacity increase (negative feedback in fig. 14). Furthermore, an increase in variable costs, associated to a price reduction, would give rise to a further reduction in the unit contribution margin. This would increase even more the break-even volume. Consequently, the firm would become more dependent on tour operators' policies, which would require a further capacity increase, in order to adequately respond to their needs. As consequence of this policy, a reinforcing feedback loop (see again fig. 14) would be fostered, leading the firm to prejudice its financial structure and economic solidity.

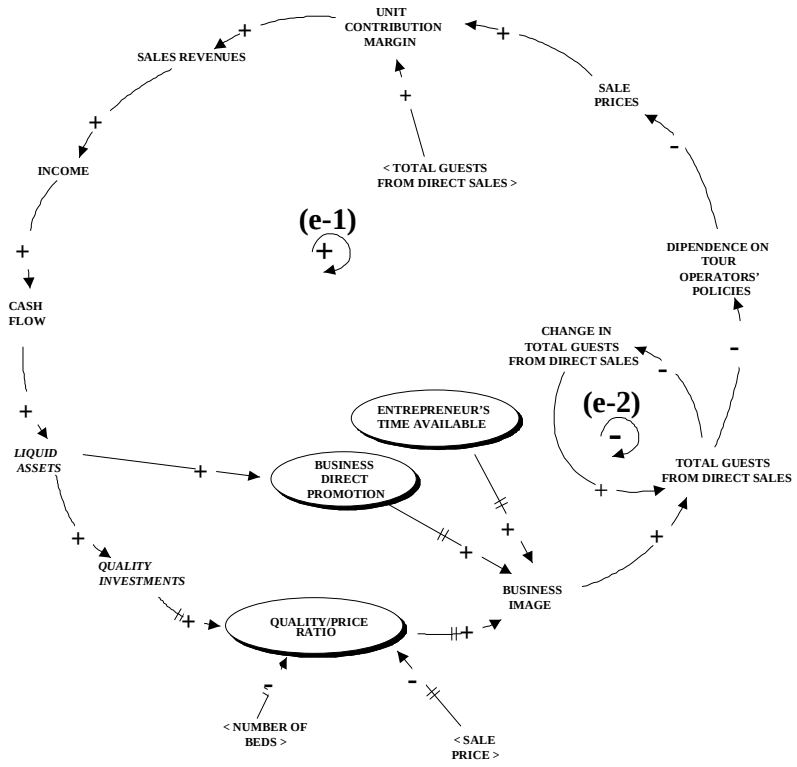

Figure 15 – Effects associated to external growth policy based on direct sales

Being eventually aware of the above limits to internal growth, and of related perils, the players will try again to pursue an external growth policy, through strategic networking. Such a policy will be aimed to make joint promotional efforts on the 'Blue Bay' name, in order to attract customers in the area. Key strategic factors in positioning the product will not be in this case low price and high capacity. On the contrary, the firm will aim to sell the product at a higher price, but quality will significantly impact on customers preferences. Promotional investments will also be critical in gaining a competitive advantage, while the number of available beds will be not a critical success factor. In other words, such a strategy is based on a *focus*, rather than *volume* concept.

Also investments in the promotion of the single hotel will be likely to support this strategy.

Fig. 15 illustrates how high quality and promotion investments, as well as time devoted by the owner-entrepreneur to promote the business, affect – although with a delay – business image perceived by customers. Such variable, in turn, directly influences the flow of direct clientele, i.e. of those customers who are not intermediated by tour operators. As previously said, such market segment is significantly different from the one referred to tour operators. In fact, it is smaller, but it allows the firm to earn a higher unit contribution margin. On the other hand, product positioning in the customer's mind, both referred to the single hotel's and the 'Blue Bay' image primarily affects the flow of tourists for each business.

A higher image recognised by the market is the key to increase prices. This will rise the unit contribution margin and – other conditions being equal – sales revenues, cash flow and liquidity. A higher liquidity level, will allow the firm to increase its promotional investments, thereby

improving again the quality of service and image (reinforcing growth oriented feedback loop in fig. 15).

However, if each hotel aims to develop a direct clientele, independently from establishing networking policies with competitors, a limit to growth will be found quite soon in the small potential market. In fact, it will be difficult for a single small hotel to attract a critical mass of tourists that could justify the shift from a 'tour operators' to a 'direct clientele' market (see negative feedback loop in fig. 15).

Consequently, if one associates to such a policy a joint effort with competitors to promote the 'Blue Bay' image, it is possible to develop a significant flow of clients, loyal to the touristic area, that would allow each hotel to give priority in capacity allocation to such market segment, without incurring any major economic risk, associated to insufficient exploitation of available resources. In spite of the lower volume of tourists, and the higher promotional investments and quality costs, this strategy is likely to generate a higher income, especially due to the higher sale price that could be charged and the lower commercialisation costs.

The awareness of policy levers on which to act in different circumstances, and of resistance factors associated to network initiatives are a fundamental pre-requisite in pursuing small business growth (fig. 16).

The above mentioned fig. 8 and 10 show the results of a simulation according to which, during the first two years, the three hotels pursue a policy aimed to increase and consolidate market share in the 'direct clientele' segment, independently from establishing network policies. Such a goal is pursued through the allocation of existing capacity to the tour operators' market segment, in order to keep a stable customer base that could allow the firm to cover fixed costs and self-finance further growth. To this end, each firm progressively increases its direct promotion expenses and quality investments, in order to improve and qualify business image on the market. Such investments are also financed through a significant equity increase.

From the half of the second simulation year, the owner of the Belvedere Hotel, being aware of limits to its direct sales growth, starts to allocate an even more significant share of his time to the promotion of the 'Blue Bay', with the aim to progressively involve his competitors in a joint promotional effort that could finally lead to a substantial increase in the image and the touristic flow towards the area.

Although diverting part of his time from the company initially produces negative effects for the hotel's image, the entrepreneur continues his promotional activity. His efforts start to generate positive effects since the half of the third year. This encourages the three hotel-owners to increase their promotional investments in the 'Blue Bay', and to find a proper balance between the time

devoted to the hotel management and promotion and the time allocated to network activities. Such a policy leads, during the third simulation year, to a progressive rise in the touristic flow in the area, that encourages the three hotel-owners to increase their 'production' capacity (i.e. number of rooms/beds, personnel, etc.). Consequently, at the end of the third simulation year, the three firms have developed a solid and significant direct customer base, loyal to the 'Blue Bay'. This enables them to give priority to the 'direct customers' market segment in allocating their available capacity.

From the half of the third year, the flow of tourists attracted by the network settles around the level of 400 people/week. The perception of limits to the potential market growth leads the three firms to stop the capacity increase policy and to start to withdraw profits generated by the commented strategy, in order to payback investments done. This leads to a 25% profitability.

Many factors significantly contribute to the success of this policy. Among them, the initial investment done to increase equity, the entrepreneurial role in striving towards strategic networking, the joint pursuit of external growth through common promotional investments by the three firms, and the prompt perception of limits to the potential market's growth.

This last issue has a particular significance, in terms of decision making and behavioural implications. In fact, if one compares the peak of guests that each firm reaches according to this policy (i.e. almost 500 people/week), with the maximum number of guests (i.e. about 600 people/week) achieved through a more aggressive and expensive policy, whose results are displayed in fig. 11, it is possible to see that the success is related to the entrepreneur's capability to give up a 100 extra flow of visits coming from tour operators. Although, in principle, such a supplementary demand would be able to generate a positive contribution margin, a more careful analysis of the consequences that a further increase in sales volumes would be likely to generate, suggests that the firm would be forced to increase its capacity investments, and hence fixed and variable costs, thereby reducing the overall profitability.

The attitude to understand cause-and-effect relationships among different business sub-systems and, between them and other actors in the relevant environments, is a critical success factor to whom the small business entrepreneur cannot give up, particularly in business growth management. This paper has tried to demonstrate how system dynamics may significantly contribute to foster a deeper learning process on these issues.

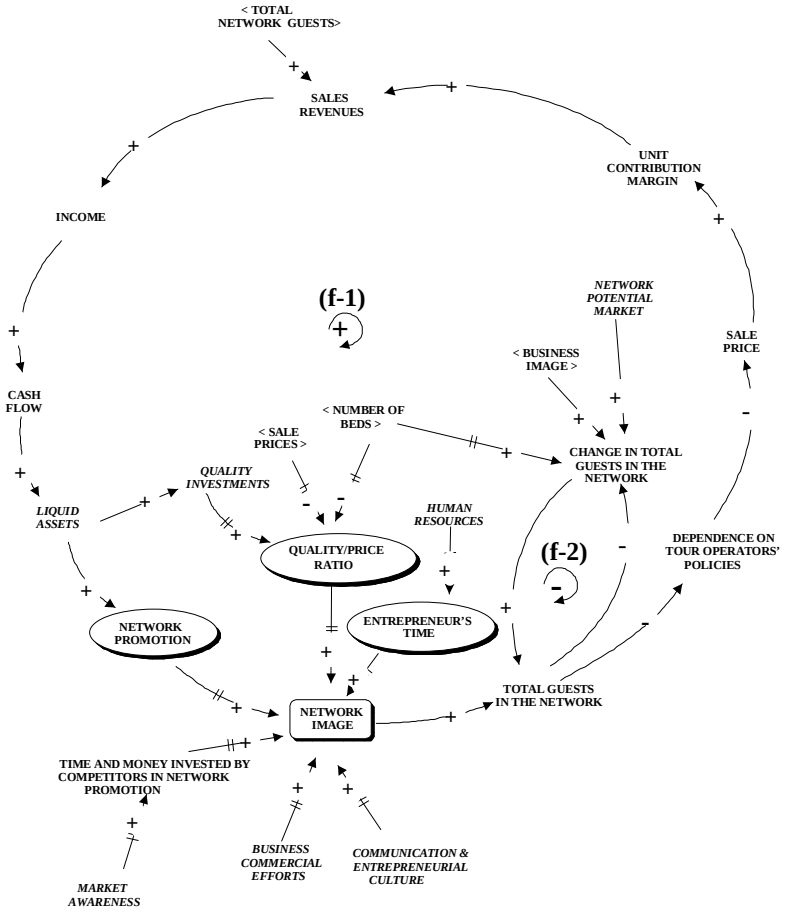

Figure 16 – Effects generated by a growth policy pursued through strategic networking with competitors