GIANTS WITH FEET OF CLAY - THE PITFALLS IN GOING FOR UNBALANCED AND UNSUSTAINABLE GROWTH

Carmine Bianchi: University Of Palermo, Palermo, Italy
Graham Winch: University Of Plymouth, Modbury, United Kingdom

Contact: Carmine Bianchi, University of Palermo, (c/o CED4) Via Mazzini, 59, 90139 Palermo, Italy, Email: bianchi@unipa.it

ABSTRACT

Much work in the small business field concerns growth – commending growth objectives, developing and implementing growth plans, and identifying the challenges growth brings. This has been as central theme in much of the authors’ work in analysing and modelling ‘normal’ businesses development and those attempting to break out from constrained growth or ‘business dwarfism’. Recent case analysis has begun to unearth a new phenomenon, which might be termed ‘business gigantism’ – a situation of rapid and unsustainable growth that places severe stains on the firm.

This paper briefly recounts two case studies where small firms secured substantial funding (relative to their size), in both cases via public agencies, to support new developments. In both cases, funding was secured on the basis of formal business plans but their static and mechanistic nature failed to reveal the perils that faced the firms attempting to grow too quickly. In the event, both firms experienced catastrophic crises.

The key driving forces that are likely to have lead to the extremely disappointing performance of both firms are then examined, and the mechanisms incorporated into simulators reflecting each situation. Experimentation with the simulators is shown to be both able to replicate the crises that emerged in the real firms and to leads to the development of scenarios wherein the companies might have been able to grown in a balanced and sustainable way.

INTRODUCTION

Worldwide, there are many schemes by which governments and other business support agencies seek to encourage small firm growth by means of a variety of direct and indirect funding support. Direct funding can take the form of subsidies, tax benefits, grants or subsidised (below commercial rate) loans. The rationale is well rehearsed, such funding can accelerate growth in the small firm sector, generating local economic benefit and creating employment opportunities. Indeed, it is not the larger firms or multinational giants that are seen by many individuals and agencies as the key drivers for economic growth, but the small firm and start-up sector. However, the benefits of direct external grant-type funding have to be taken largely on trust as there appears to be negligible substantive evidence to prove that such grants do indeed lead to accelerated growth that is proportional to the costs of the schemes. To the contrary, some authors have highlighted downsides.
The authors have undertaken significant research into the phenomenon of the “dwarf” or “stunted growth” firm (Bianchi & Winch, 2005; 2006). In this respect, the perils associated with an absence of prompt and selective perception of strategic assets, and the time needed to respond to changes in environmental shifts have been investigated before (Bianchi et al, 2003, fig. 9-h). Different possible patterns of crisis have also been observed, styled within four main typologies of “dwarf” businesses (i.e.: bonsai, rickety, conservative, and marginal firms). Common aspects characterising crisis and failure in dwarf businesses have been related either to a misperception of external factors which may weaken business strategic assets, or to an overestimation of the level and consistency in such assets available to foster growth. While the first phenomenon has a major impact on the outflows depleting strategic assets, the second one affects the inflows. Lack of understanding about the business strategic resource system, delays, and the inertial effects of relevant external factors on the firm are common to the two phenomena. More specifically the second factor can also be related to the phenomenon of “gigantism”.

This paper specifically investigates this second small-micro-firm peculiarity, namely, the notion of small business gigantism – the emergence of unbalanced and unsustainable rapid growth stimulated by the “unnatural” injection of relatively large levels of government grants. This phenomenon naturally juxtaposes the dwarf business - while dwarf firms remain in a steady and small-micro state for decades (encompassing several generations) thereby failing to fulfil their potential for growth, firms suffering from business gigantism have grown too big in comparison to their prior size and state and have in effect overreached their capabilities. For example, this could be the case when a start-up occurs that is at a size and growth rate that are far too big compared to the dimensions that would be suggested for a firm at this stage, given the industry, market area, technology, knowledge, etc..

This paper recounts two case studies where small firms secured substantial funding, relative to their size, to support new developments. In both cases the funding was via public agencies, and in both cases too, the funding was secured on the basis of formal business plans which included the need for some company owners’ co-funding. Unfortunately, the static and mechanistic nature of these plans seems to have failed to reveal the perils that faced the firms if they attempted to grow too quickly. Specifically they understated or ignored the need to develop other new strategic resources (e.g. knowledge, prototypes, and commercial contacts). In this way, they also seemed to have failed to identify the need for further equity injections and the time lags involved in bringing the plans to fruition. By contrast, the optimistic views reflected in the plans, which were shared by owners, their consultants, and funders alike, seem to have implied that investing a huge amount of money would virtually guarantee growth and healthy profits.

From the analysis of these cases, preliminary models have been developed that capture the structures and mechanisms involved in such "inflated growth" in each case. The models focus on the need for coherent plans and balanced resources, and highlight the consequences when collateral needs and the dynamic nature of growth are ignored. A program for future research is proposed which includes further case analysis and the development of a single small firm gigantism model which could be used to support a comprehensive investigation into this phenomenon. The longer-term objectives would be to highlight the dangers of deploying grants in ways that cause a firm to over-reach its capabilities. This would enable agencies which disburse such grants to use their resources more effectively, and to help the firms themselves to balance investments in the building of balanced and complementary resources that will lead to their growing in a managed and sustainable manner.

How Effective Are Small Firm Growth Support Schemes?

Given the wide number of schemes in most economies for direct small business support, it would seem clear that such policies are well founded and that the benefits accruing from the expenditure of large amounts of public money have been carefully assessed. In a report prepared for the European Union, it has been argued by the Foundation for SME Development (2002) that building an evaluation culture to effectively determine impacts and results is “intrinsic to the development and assessment of rationales for business support by public intervention”. However, in reality, this seems less clear cut. Lenihan (1999), for example, observed that “For a number of decades considerable resources have been devoted to supporting Irish industrial policies. There has, however, been a distinct lack of evaluation of these policies.” He further continued that this is particularly pertinent to the Irish small and medium-sized enterprise (SME) sector given its employment potential and importance to the domestic economy.” (Lenihan 1999).
Curran (2000) makes a similar observation: “Despite broad rhetorical claims that policies and support help develop a strong enterprise culture and promote UK economic prosperity, the precise outcomes of these policies have been difficult to pin down”. Curran extends his view by questioning that while small businesses have become much more important (in the UK economy), it is not clear that this has been due to state intervention and that because the value of small business support in the UK seems to be a given, little attention has been given to whether the support represents good value for public money. He also queries (Curran 2000), that: “Not only can there be doubts about whether the policies and support are cost effective but more importantly, the question can be asked whether such policies are needed at all any more.” Klette et al. (2000) have also identified a number of conceptual problems involved in evaluating programmes. Cressy (2002) may even go further and laments that while the foundations of government policies to plug apparent business funding gaps are highly controversial, they are rarely subject to wide-ranging in-depth debate.

Abramovsky et al. (2004) state that the justification boils down to one simple question: ‘Did the policy lead to additional, beneficial activity that would not have taken place in the absence of the policy intervention?’ Some authors, however, while agreeing that government programs to finance small firms may have attracted little empirical attention, they have themselves made attempts to provide objective evaluation of such schemes. Lerner (1999) showed that recipients awarded funding under such programmes grew significantly faster than matched firms over a decade and were more likely to attract venture financing. (Other studies have made similar attempts by, for example, comparing the relative success of successful versus unsuccessful applicants for grants.) Interestingly though, Wren (1998) believes that; ‘Wisdom has it that direct financial assistance to small firms for employment creation may be poor use of resources since these firms have high failure rates’.!!

One further area of unclearness in the area of grant and support provision to small firms concerns the precise dynamics between advisers (many of whom may have a direct input into application evaluation and the awarding of grants) and managing agencies and the client companies. Obviously if a client firm engages with the same advisors or agencies over a number of projects then mutual confidence will grow and possibly arrangements become better geared to the needs and abilities of the client firm. However, Jackson (2000) suggests that the systems can encourage managing agencies to distort figures to produce more favourable results, for example by rescheduling debts to allow an agency to avoid recording high levels of default. It has also been suggested that advisers may be encouraged to support larger than desirable funding bids where the outcomes would be more impactful (e.g. in terms of employment creation). It has also been reported (Winch et al. 1998) that there might be connivance between advisor and client to mis-word or distort an application, for example by emphasising different aspects of a plan to ensure it fits closely with a programme’s or initiative’s objectives. Similarly, Luukkonen (1998) highlights the dependency of evaluators on those commissioning work for further studies and projects.

Two Cases Where Things Have Not Gone To Plan

Two real cases are briefly described here. In both cases, a small firm obtained substantial funding (compared to its size) from public agencies, based on their business plans, in order to start activities (1st case) or increase their activity volumes (2nd case). However, static planning did not show the perils associated with getting the funds (which also implied some company owners’ co-funding) which would not have proved adequate in enabling the firms to produce immediately positive income rates and implied strong profit potential. On the contrary, with the funding such firms where like "giants having clay feet" - in order to produce profits they would have needed much more time, owing to the need to develop other and new strategic resources (e.g. knowledge, prototypes, commercial contacts) and further equity. In this respect this is what we consider to be cases of "inflated growth" or over-reaching capability, which we would like to call "gigantism". These, we see, as examples of how dimensional growth should not be seen as the best and only way to exploit the business potential.

**Case 1: The Cooperativa Nuova Iniziativa** was a firm which was started in the 1990 by a number of young unemployed people in Palermo. The firm was expected to "produce" and sell advertising spots based on computer-generated cartoons. The start-up process required that people be trained, equipment (both hardware & software) selected and purchased, demonstration products created, commercial staff recruited and trained, and customers had to be gained and retained. The firm got a large start-up grant to support its establishment from a state agency (based on Law n. 44/1986, relating to business start-up support).
However, while they had the finances to purchase good quality computers and software and to start paying salaries, rent, etc., they did not have the necessary expertise initially. The industry sector was at the time a new one, as was the technology, and this was particularly true for the region (Southern Italy) and for those involved with the firm. Therefore the firm was like a giant, but with clay feet...! Their static business plans, which had been financed by the State Agency, were incapable of taking into account the longer time it would have taken to develop the chain of essential strategic resources – namely the knowledge and skills through which to create demonstration advertisements, through which to build and develop a customer base, leading to the building of market share and new equity, through profit streams. They quickly built a large infrastructure, but one that was unable to develop the necessary resources and deliver the necessary revenues and profits.

Rather, things tended to go in the opposite direction: in order to cover at least part of their excessively high fixed costs, within about one year from their start-up they were forced to divert the time of their people (who were supposed to be in training) to type degree theses, in order to get at least some revenues. And the more the “giant” firm suffered negative cash flows and their bank accounts dropped, the more the state agency delayed the further payments of the of the granted funds.

The second case provides similar insights, but with respect to a small firm that was already operating successfully, but for which exaggerated growth potential was envisaged. The funding here was purposefully intended to generate significant local employment possibilities through the expansion of the firm.

**Case 2: Strong Pylons LTD** produces to order iron pylons which are installed in various building works (e.g. roads, harbours). Its clients are mainly in the public sector (e.g. municipalities, agencies, etc.). Some years ago, the firm, which was a small compared to others in its industry, obtained funding from the Italian state (based on the Law n. 488) to finance an increase in production capacity, through the expansion of its plant. Such funding would have been provided, according to the L. 488, if the firm could have:

1. demonstrated through a business plan that such investment would have generated an increase in employment;
2. shown the sustainability of the strategy through a balanced “debt/equity” ratio.

As in the previous case, this firm was not properly supported by its own advisors (who prepared the business plan), nor by the public agency. In fact, huge funding was applied for through the business plan, arguably much too large in relation to the size of the firm. This is possible to explain in the light of two factors: (1) since advisors are paid proportionally to the value of funding claimed, they may be over optimistic and super ambitious and inflate the amount of the proposed investment, even though it might not be a real benefit for the client; (2) the fixed costs and other rules associated with this funding (as the funding has been designed and established by the public agency) tend not to be geared to small debt lending. Therefore, the amount of lending involved, though it may not be significant in its absolute value, can simply be too high for many small firms who participate in this scheme.

Further, in this case, as with many others, the process of developing plans did not include a proper calibration of funding to the real needs of the firm. This is crucial, since many of these entrepreneurs do not have any clear understanding about what it would really mean to get this funding, in terms of crucial changes in their own company structure (e.g. in financial terms, but also in the level of operations and number of employees, as well). They are often simply attracted by the idea of getting a large sum of money without any (or any significant) cost. But, since this money co-finances capacity expansion, they are not enabled to work out the dramatic changes that their own company will have to face in the near future, following the funding.

In this case, a substantial increase in capacity was the main objective demanding that the entrepreneur made higher commercial efforts to increase sales orders to a level that could saturate the increased capacity, and the newly created employment, and therefore could economically justify the investment. However, in order to increase sales orders at a sufficiently rapid rate, the firm was forced to allow more generous terms of payment to its customers (who were already used to paying with delays and with long time extensions).
Also, the higher capacity and operational costs were a factor impacting on a significant increase in the business overheads. This resulted in big losses.

In both these cases, the firms would probably have benefited significantly from funding, if it had been much lower! Over-extending in both start-ups and existing SMEs can be a significant cause of serious problems, which emerge in financial terms but are often related to other factors - all linked to the lack of capability to manage change by the businesses' key actors. Often, this is not only, or mainly, a technical capability; it is more a lack of preparation on the part of the entrepreneur to make the necessary changes in culture and operating processes, and to build a pool of managers able to support him/her in driving the plans through. This is particularly true in the case of a start-up. There are other common factors in the two cases:

1. a lack of perception of strategic resources needed to build competitive advantage, and the times necessary to build and accumulate them;

2. a lack of perception of the sequence of relationships which enable a system to build essential strategic assets, emphasising that the acquisition of only some of them is not sufficient to build an advantage.

3. a lack of perception of delays underlying the building of the essential sequence of strategic assets.

Capturing The Key Driving Forces In The Two Cases In Dynamic Models

In order to encourage business decision makers and other key-actors supporting small and micro-firms to learn from crises produced by recurring errors, these two cases can be framed through modelling and simulation. The learning process fostered by such an approach should be expected to produce a change in decision makers’ mindset, i.e. their own mental models. This is not an easy and automatic process, since conservative behaviour and resistance to change are often major barriers discouraging double loop learning (Argyris & Schon 1978 Senge 2000).

In this section, the structure and behaviour relating to two simple simulation models developed by the authors to better understand the cases will be described.

Cooperativa “Nuova Iniziativa” Case:

*Figure 1* depicts the main feedback loops underlying the business system’s behaviour. The static business plan, which was the basis for the company receiving funding, was developed on the hypothesis that the higher liquidity available through public loans would enable the business to build a substantial foundation of both qualified equipment and skilled people in a short time. On another side, cash could have been invested in marketing efforts, which – based on the higher expected quality of people and equipment – would have led to increasing sales revenues. Higher sales revenues would in turn have increased income, resulting in higher cash flows and liquidity. Such a forecasted increasing trend in income and liquidity would have allowed the business to promote further growth (see reinforcing loop “R1” in *Figure 1*).

Both a lack of a systemic view of the linkages between strategic resources and a flawed perception of the delays associated with its growth processes were major causes of losses for the company. In fact, an excessive focus on equipment investments and hiring human resource, and delayed marketing investments prevented the firm increasing its sales revenues to a volume which could justify the high fixed capacity costs (related to the size of a small start-up firm). This was also due to the time it takes for equipment and training investments to produce an impact on the productivity of marketing efforts.

Therefore, by not taking into account the variable called “impact of equipment investment and people training on marketing effort productivity” in *Figure 1*, the firm tended to overestimate planned sales revenues, along with related income and cash flows. Quite to the contrary, in the short run such an over-investment policy produced an increase in fixed capacity costs, leading to a decreasing pattern of income, cash flows, and liquidity (see balancing loops “B1-B2-B3” in fig. 1). Increasing negative bank balances generated by the above dynamics led to higher financial costs, which caused rising losses, negative cash flows and an exponential growth in negative bank balances, ultimately leading to a deep economic and financial crisis (see reinforcing loop “R2” in *Figure 1*).

The feedback structure described was embodied into a simulation model, with the intent of using the case-study analysis as a framework to teach entrepreneurs and other ‘actors’ supporting
entrepreneurship how to determine sustainable growth strategies. Such a capability implies a higher perception of the dynamic interdependencies between strategic resources and business performance. It also implies a higher perception of the perils associated with an inflated growth rate that is based solely on a massive injection of capitals from external funders, though with a business owners’ co-funding.

The simulator that has been constructed is designed to reflect a set of critical interacting assets to establish that the kind of company financial crisis can be produced by the feedback loop structure depicted in Figure 1. The model includes stocks or levels of four important strategic assets, namely, equipment, people, marketing effort (which explains the extent to which the firm is known by its potential customers), and liquidity (or bank balances).

Each of these assets has an outflow reflecting loss or deterioration of the asset and an inflow reflecting that actions can be taken to build them up. The first three assets listed have been modelled as indices, in order to chart the extent and time span through which investment efforts are able to generate a critical mass of resources that relate to each other to affect financial performance (i.e., sales revenues and income), and thereby the fourth strategic asset previously considered - liquidity.

Direct action in terms of investment in new equipment, training, and marketing effort will hence provide both direct inflows into the corresponding resources, as well as expenses which reducing liquidity and income rates. However, such inflows will be delayed by the time it takes for the firm to build up capacity. In this case, while purchasing and installing new hardware and software equipment takes a relatively short time, hiring and training people to make a proper use of the equipment, and to develop demonstrators and other ‘products’ to support marketing efforts will require a much longer delay.

In this way, the variable ‘People and Equipment Combined Index’ (which is subject to constraints due to people training) affects ‘Marketing Efforts Strategy Productivity’. A low level of people training (due to the longer time it takes to accumulate such an intangible resource) is a major cause of the reduced capability in the firm to build up its marketing efforts into a higher corresponding ‘Marketing

![Figure 1 – Main feedback loops leading to crisis at the “Cooperativa Nuova Iniziativa”](image-url)
Effort Index’. This will cause on a side a waste of financial resources (due to the unbalanced investment strategy), and on another side will determine a difficulty in increasing sales revenues. This is shown in Figure 2.

Figures 3-a and 3-b depict the consequential effects on financial resources, in terms of liquidity and equity, respectively.

As depicted in Figure 3-a, bank account balances are affected by four major flows, namely:
1. the current cash flow,
2. payments related to purchased equipment,
3. public trust funding,
4. equity investments by company owners,
5. dividends.

More specifically, public trust initial funding and possible supplementary financial aids are subject to delays which may increase according to the perceived attitude of the firm to self-fund through equity.
investments its growth. In consequence, equity investments can be provided by owners from their own personal assets in order to keep a desired threshold level in equity. Equity can be also increased in order to replenish bank accounts to avoid drastic reductions in the available bank credit. As depicted in Figure 3-b, equity is affected by income, equity investments by business owners, and dividend rates, which are distributed if the firm would generate profits.
Based on the above analysis, the simulator offers policy levers allow players to make relevant decisions (see Figure 4).

These levers relate not only to equipment, training and marketing investment effort strategies, but also to:

a) desired minimum threshold level in equity, and

b) the percentage of personal assets an entrepreneur is inclined to invest, when required to adjust equity and bank accounts.

From Table 1 it is possible to see the setting of policy levers relating to two distinct scenarios. Figure 5 displays the output tableau for the two scenarios showing the simulated behaviour of key variables over time.

The first scenario reproduces the typical ‘inflated growth’ oriented behaviour. From start-up, the firm pursues a very aggressive investment strategy in equipment, followed also by aggressive investments in hiring and training – the indices for these factors are set at, or close to, 1. With a delay, the firm also significantly increases its marketing efforts. At the same time, the business owners are not prone to invest their own personal assets into company equity. From Figure 5 it can be seen that with such a strategy in place, scenario 1 (solid line) reflects a situation which leads to bankruptcy.

The second scenario summarised in Table 1 depicts a much milder investment strategy in equipment and hiring/training, and a more sustained effort in marketing. At the same time, the business owners increase their inclination to invest their personal assets in the firm’s equity in order to preserve the perceived financial solidity and equilibrium of the firm.

As can be seen in Figure 5, such a strategy leads to a sustainable trajectory over at least a five year time horizon.

Figure 4 – Policy levers.
### Table 1 – Setting of policy levers in two simulation scenarios.

<table>
<thead>
<tr>
<th>Policy levers</th>
<th>SCENARIO 1</th>
<th>SCENARIO 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First semester</td>
<td>Second semester</td>
</tr>
<tr>
<td>Equipment Investment Effort Strategy (min = 0; max = 1)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Training Effort Strategy (min = 0; max = 1)</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Marketing Effort Strategy (min = 0; max = 1)</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Desired minimum threshold level in equity (€)</td>
<td>50,000</td>
<td>100,000</td>
</tr>
<tr>
<td>% Personal Assets invested as equity when needed</td>
<td>20%</td>
<td>40%</td>
</tr>
</tbody>
</table>

---

**Figure 5 – Simulation results (“Cooperativa Nuova Iniziativa” case).**
These simulation results emphasise how pursuing a less aggressive investment strategy (see the dynamics of people training and equipment indexes) and supporting it by robust marketing investments, together with proper co-funding by business owners, can lead the firm to overcome the start-up difficulties from the third year. This also allows the business to realise – particularly in the last two years – a full €1.5 million from the public trust.

**Strong Pylons LTD Case:**

Although there are many similarities between the key structures in the two case study companies, at this stage they are each represented by slightly different simulators focussing on the critical, but slightly different, mechanisms at play in their respective histories. Figure 6 depicts the main feedback structure underlying the second simulator. Three main feedback loops must be examined, in order to explain the overgrowth and collapse of ‘Strong Pylons LTD’.

The reinforcing loop ‘R1’ shows the intended growth that the business owners wished to foster when they asked for funding. The higher desired funding reflected the objective of hiring a larger number of employees and to have a larger workforce required an increase in production capacity (machinery). Since both the increased staffing and production capacity raised costs and reduced income, other things being equal, the company intended to increase its sales turnover by allowing to clients more generous payment delays. In this way, higher sales orders were expected to increase sales revenues and liquidity, though these effects would have to be after long delays associated with both the considerable time to complete an order in the industry, and the remarkably generous terms of payment they allowed.

![Figure 6 – Main feedback loops leading to “Strong Pylons LTD” crisis.](image)

The effect of both delays was, on the one hand, to neutralise the reinforcing growth-oriented loop that the business owners intended to pursue, and, on the other hand, to bolster the balancing loop ‘B1’, which represented a considerable limit to the firm’s operational growth. In fact, it was a major cause of lower sales collections, in spite of a higher order rate. This generated a financial crisis, since the firm had to provide increasing cash outflows to pay salaries and purchased materials, while it suffered significant problems with inflows due to the long production and sales collection delays.

Therefore, rather than increasing bank balances and fostering further growth through capacity acquisition, the firm had to draw down liquidity from its bank credit. This raised the financial costs.
and, in a short time, generated losses and negative cash flows, which reduced bank balances even further. Such a reinforcing loop (‘R2’) led to crisis and failure.

The second simulator was constructed with a set of stock-flow structures similar to those described above for the first simulator, though the details of these are not repeated here. Simulation results depicted in figure 7 show the behaviour produced by the feedback structure and the strategy described above. The policy levers on which decision makers operate are:

1. desired funding, and
2. maximum debt-to-equity ratio.

In a first scenario, desired funding has been set to € 84 millions, this would be the financing needed to create new employment opportunities by hiring 80 additional employees, to be added to the existing staff of 20 people. This also reflects the need to increase plant capacity from 2400 to 12000 units per month. Therefore, in order to get such funding the firm would have to increase its structure by 400-500% in a very short time! While the time to hire employees was relatively short, around one month, the time to build production capacity was longer - more like 6 months. However, capacity acquisition was decided after the hiring of new staff.

The second policy parameter mentioned above - maximum debt-to-equity ratio - has been set to 0.65, implying a low inclination by the business owners to self-fund the growth of their company.

![Graphs showing simulation results](image)

**Figure 7** – Simulation results (“Strong Pylons LTD” case).

In a second scenario, the desired funding has been set to € 42 millions, reflecting a more modest objective of hiring 30 new employees, to be added to the existing staff of 20 people. This also implies the need to increase plant capacity from 2400 to 6000 units per month. In order to get such funding the firm must still increase its structure by 150-250% in a short time: this is a much less intensive – though still ambitious – growth rate.

Furthermore, growth is now more self-funded than in the first scenario with maximum debt-to-equity ratio set to 0.4.

As can be seen in figure 7, the first scenario leads to the same kind of crisis as was experienced by the real ‘Strong Pylons LTD’ company. On the other hand, the second scenario (the dotted lines) reflects more modest growth objectives and greater personal commitment by the company owners to funding the growth, and this underlies a sustainable strategy. Although this leads to much lower sales revenues, and also to a lower income rate in the first two years (compared with the ‘overgrowth’ scenario), in the long run it shows much better results in terms of both liquidity and profitability. This also means that
the business owners’ personal assets can be significantly increased in the long run, through dividends that are taken. The first scenario, by contrast, shows a decreasing pattern in personal assets, due to the need to invest capital in order to address the debt-to-equity ratio issue.

Discussion and Conclusions

The European Union would seem to have a clear commitment (Foundation for SME Development, 2002) to supporting the small firm sector, reflecting the perceived importance of SMEs to employment and wealth creation and the accompanying need to encourage start-up and business development within the sector. However, it recognises that in many instances SME development needs will not or cannot be met by the private sector, in part or in full, and that such “market failures” are thus the rationale for public intervention. However, the task of using any public monies to maximum effect is a difficult one, and Freel (1998) has argued that, based on a number of detailed, in-depth, cases and in the context of the relative literature, the notion of “picking winners” (in trying to identify start-up small firms with the greatest success potential) is “not a viable alternative to blanket cover.” (On the other hand, that author does argue that since the form which an organisation takes and the ability of an entrepreneur to manage within the given environment are largely determined post start-up, it might be feasible to effectively select firms with significant growth potential once they are in full operation. The task of funding bodies themselves and advisers to both the funding bodies and potential recipients is thus simply to ensure that the firms (or start-up proposals) will most potential are chosen and then ensure that support, including any external funding, is managed such that the target firms’ potential is achieved.

However, almost by definition, firms selected are being moved into what might be considered as an “unnatural state”. The term “market failure” is used to suggest circumstances when public intervention is needed because: “… private companies cannot or will not provide business support services because they cannot make a commercial return even where there is demand or need for a service” (Foundation for SME Development, 2002). However, others might argue that this is not a market failing, but rather a market acting prudently and not venturing into arrangements that are too risky for both public funds and growing small firms. As long ago as 1977, Higgins (1977) asserted:

“If a company wants to maintain a stable capital structure, distribute a relatively constant proportion of profits as dividends, avoid issuing new equity shares, and grow as rapidly as market conditions permit, management may be in for a rude surprise.”,

In his paper, he demonstrated that these common corporate objectives are often mutually infeasible. This paper has described two real-life cases where things went seriously wrong when such a task was attempted with the injection of substantial external funding from SME support initiatives. The likely processes in these companies have been identified and interlinked through causal loop diagrams. These diagrams focus on the critical feedback loops that determine the behaviour of key variables over time, and ultimately the performance of the companies. This analysis identified the loop structures that both support growth and those that might kick-in and prevent growth and/or provoke other negative reactions. Both these companies went for highly ambitious growth strategies that lead to crisis and failure, and the system structures that are likely to have led them to this situation had clearly not been clearly identified, had not been analysed completely, or perhaps had even been overlooked completely.

The simulators described here reflect the operations of the two case study companies. Experimentation with the simulators has, through the setting policy of levers to critical values, replicated the kind of behaviour in both cases that led to major crises in the simulated firms. The models are exploratory at this stage, but the fact that failed behaviour is replicable suggests that the models are valid starting points for examining the phenomenon of “overgrowth”, when firms over-reach their capabilities, and for seeking alternative policies that might lead to sustainable growth strategies. Further, in each case a scenario with different policy lever decisions was identified that could have led to a viable strategy for sustainable growth. While it is encouraging that sustainable growth might be feasible, albeit with more modest growth targets, it took careful analysis and repeated runs with the simulators to find the effective policy balances, and this suggests that the task in real life is indeed likely to be far from easy. However, this work has also shown that the analysis, simulated experiences, and entrepreneurial learning that are possible with such simulators means that they do offer a support tool for this tricky task.
This paper has sought to alert entrepreneurs, advisers, SME support agencies and academics to the risks of developing growth strategies in SMEs that are too ambitious, can over-extend the firms’ capabilities, and might ultimately lead to crisis and maybe even business failure. Two cases have been analysed where such a situation occurred encouraged by large injection of public money from SME support initiatives. Further research is planned to analyse further such cases and to refine understanding of the underlying structures and system drivers. Simulators, such as those described here, can demonstrate how ill-conceived plans might lead to crisis, but also offer the potential for analysis and training that would help produce growth strategies that are viable and sustainable. In order to provide a proven strategy design support tool, it is intended that the two variants of the “overgrowth” simulators used here be combined into a single simulator that encompasses the range of mechanisms and processes that might potentially de-rail well-intended but doomed growth plans, and that this simulator be evaluated and validated through further scenario analysis.

References

Abramovsky L, R Harrison, and H Simpson, 2004, “Increasing innovative activity in the UK? Where now for government support for innovation and technology transfer?”, *The Institute for Fiscal Studies, Briefing Note No. 53*


