Why some small and medium enterprises grow and others do not?

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Abstract

Why some SMEs grow, and others do not is one of the key questions that largely remains unanswered in entrepreneurship research. We develop a new opportunity-centric process theory that seeks to explain the growth, stagnation and collapse of a firm as well as the processes by which these changes occur. We draw on case studies of three fast-growing SMEs that experienced different episodes of growth, collapse, and stagnation. We investigated opportunity exploration and exploitation, capacity acquisition and capacity utilization over the entire history of these firms. Our findings suggest growth is enabled (or interrupted) by (mis)balancing capacity acquisition and sales volumes. The firm's capability to balance exploration and exploitation determines its growth pattern and sustainability over time. We explained different growth curve patterns, including staged grwoth, stagnation, dwarfism, and collapse. Our study contributes to the literature by developing a dynamic framework that links the SME's strategic orientation, entrepreneurial orientation and growth curve. Our theorizing offers a dynamic alternative to the conventional stages model, and as such will enable large-scale quantitative studies of SME growth processes.

1. Introduction

Small business growth is one of the dominant themes in the entrepreneurship literature (Gartner,1990). Decades of research have delivered many insights into the factors that influence and predict Small and Medium Enterprises (SMEs) growth and decline, such as the entrepreneur's network (Ostgaard 1996; Brüderl 1998), the resource base (Birley 1990; Davidsson 2003), individual-level motivations (Wiklund 2003) , and hostility and dynamism of the environment (Davidsson, Achtenhagen, and Naldi, 2010; Wiklund, Patzelt, and Shepherd, 2009). However, this search for growth factors seems to have hit a dead end (Gibb and Davis ,1990; Levie and Lichtenstein 2010) as we lack sufficient understanding of the growth process (Davidsson et al., 2010).

Despite profound critiques, the understanding of entrepreneurial growth processes is still largely based on stage models, such as the models of Clarysse and Moray (2004), Greiner (1972), and Lewis and Churchill (1983). Stage models are critiqued for drawing on assumptions of linearity, such as that all firms grow through a unified and fixed number of sequential stages Phelps et a., 2007; Levie and Lichtenstein, 2010). Recently, an increasing number of studies are re-conceptualizing firm growth as a dynamic phenomenon, and call for exploratory empirical investigations to shed light on the underlying processes (Davidsson et al., 2010; Levie and Lichtenstein, 2010; Phelps, Adams, and Bessant, 2007). In this respect, Levie and Lichtenstein (2010) suggest that a firm evolves through iteratively aligning between business model configuration and when stimulated by untapped opportunities. However to understand growth dynamics, further theoretical investigation is needed to address the processes of opportunities pursue and business model reconfiguration and how they can facilitate or hinder growth.

It is well established that exploitation of business opportunities directly affects the firm performance, and growth (Shane 2003; Kohtamäki et al., 2010; March, 1991). However, opportunity pursuit involves complex strategic choices between exploring new opportunities (e.g. introduce new generation of products, open new markets….etc.) and exploiting the current one(s) (e.g. improve products; quality, reduce material consumption…etc.) (He and Wong, 2004). Complexity arises from the contradiction between the two orientations, yet their interdependence on one another (Lavie et al., 2010). Interdependence occurs as exploration provides new opportunities for further exploitation, and exploitation provides income to finance further exploration (Lavie et al., 2010; Kohtamäki et al., 2010). Contradiction between exploration and exploitation are short-term productivity trade-off with long-term innovativeness (March 1991), and stability trade-off with adaptability (Lewin, Long, and Carroll, 1999). In addition, the two orientations are competing for firm's limited resources (Voss et. al, 2008; Lavie et al., 2010; March 1991).

Failing to manage this paradoxical association between exploration and exploitation may lead to growth abortion (Walrave et. al, 2011). An increasing number of empirical studies report the positive impact of ambidextrous orientations—that is, the ability of a firm to balance exploitative and explorative processes within its organization—on firm's performance (Kohtamäki et. al, 2010; Lubatkin et al., 2006). That said, little is known about how growing SMEs establish and sustain ambidextrous orientations. For instance, what is the effect of a dispositioned orientation (i.e., over/under exploration or exploitation) on the growing SMEs? Are there any recurring patterns that lead to the emergence of ambidextrous or dispositioned orientations?

Production capacity draws the immediate boundaries for growth. No matter how abundance is the demand, the firm cannot grow if it did not have enough production capacity to fulfill sales orders. Therefore, it is essential to investigate the production capacity expansion as it can explain part of the change in the growth curve. Sterman (2002) modeled the dynamic complexity of balancing sales volume and sales fulfillment capacity. We will adapt such dynamic model to investigate the capacity acquisition and utilization practices and its effect on enabling or interrupting growth.

Demand cannot be met with merely the availability of production capacity, but the entire business model need to be (re)designed to deliver value and capture the prospected demand. (George and Bock 2011, Zott and Amit 2007), Entrepreneurs (re)innovate business models to optimize firms' capabilities to capture opportunities (Levie and Lichtenstein, 2010). Exploring new opportunities may require searching for different configurations. Once optimum configurations reached, the business model step into stability state (Rivkin and Siggelkow, 2003). To date, little is known about how such state of optimum opportunity-to-business-model alignment is reached, disturbed, and transformed to the next state.

The aim of this empirical study is to develop a new opportunity-centric process theory that accommodates the dynamic complexity of the phenomenon. We conducted an exploratory study of three cases of growing SMEs that experienced subsequent episodes of growth, stagnation, and collapse. We investigated their opportunity pursuit, capacity expansion, and business model innovation over the life span of the firms.

We developed a dynamic model in which firms grow by optimizing three interdependent processes: (1) Balance exploration and exploitation of opportunities to sustain fueling the

growth potential. (2) Balance between capacity acquisition and sales volume to maximize sales fulfillment capabilities and production resources Utilization. (3) Proactively reconfigure business model to maximize its effectiveness in capturing opportunities. The three processes compete over dominating the firm's resources (including entrepreneur's attention as a scarce resource).

The theory contributes to the literature by developing a dynamic framework that links SME's entrepreneurial orientation, business model evolution, and capacity expansion optimization and growth curve. Our theorizing integrate multiple entrepreneur level, firm level and environment level factors to explain growth, and to offer dynamic alternative to the stages model. Such comprehensive theorizing will enable large-scale quantitative studies of SME growth processes.

2. Literature

2.1 Opportunity Driven Growth

Opportunity is a central concept in understanding the entrepreneurial growth of the firms. Shane and Venkataraman (2000) defined entrepreneurship in terms of opportunity recognition, evaluation, and exploitation. To fuel growth, entrepreneurs innovatively and proactively pursue various opportunities (e.g. new products and new markets) (Wiklund et al., 2009; Davidsson, 1989; Zahra and Covin 1995), and sometimes they pursue several opportunities simultaneously (Dimov 2007, 2010).

However, growth can also be non-entrepreneurial when it is driven by volume, demand expansion or acquisition of other firms (Davidsson et al., 2010). Davidsson et al. (2010) argued that: "Firm Growth is an aspect of entrepreneurship if it is achieved through the introduction of new products or services. If it consists solely of demand-driven volume expansion for existing products or is achieved through the acquisition of business activities that were already up and running within another organization, growth is not an aspect of entrepreneurship" (p. 12). The focus of this paper is the entrepreneurial growth that takes place by investing in opportunities.

There is an inconsistency in the definition of opportunity itself, particularly in terms of whether it is created, discovered or imagined (Dimov 2007; Shane 2012; Short, Ketchen, Shook, and Ireland, 2010). To accommodate different definitions of opportunity, we envisioned an opportunity pipeline in which opportunities pass through different phases.

———Insert Figure 1 here———

Initially exogenous opportunities exist due to changes in the environment (de Jong and Marsili, 2010; Shane 2003). In the discovery phase a 'perceived opportunity' is formed. Different entrepreneurs can perceive the same external opportunity differently according to their individual differences and prior knowledge and beliefs (Baron 2007; Felin and Zenger, 2009; Klein, 2008; McMullen and Shepherd, 2006; Shane, 2003). In the innovation phase, entrepreneur imagine a business idea (a recombination of resources) that he believes can profitably exploit the opportunity (Davidsson et al., 2010; Dimov, 2011; George and Bock, 2011; Shane, 2012). In the implementation phase entrepreneur converts the accepted business idea to potential project by allocating resources and assigning specific times to it (Klein, 2008).

According to our envisioned 'opportunity pipeline', the nature of the opportunity itself changes according to phase. Ranging from: an exogenous existence independent

from the entrepreneur in the emergency phase; subjective existence as a reflection of the mind of the entrepreneur in the discovery phase; imagined design in the innovation phase; created in the implementation phase. It is only when new project is accomplished profitably; then we can have evidence that confirms the existence of the exogenous opportunity in the first place. However, not all the attempts to pursue opportunities are successful (Casson and Wadeson, 2007; Klein 2008; Scott 2012; Shane 2003; Short et al., 2010). Sometimes the opportunities are mere misperceptions based on false beliefs held by the entrepreneur (Wiklund et al., 2009).

2.2 Exploration and Exploitation: different faces of the growth pursuit

Entrepreneurial pursuit of opportunities can range from exploiting the current opportunities to exploring new opportunities. He and Wong (2004) studied the exploration and exploitation strategies of 206 manufacturing firms and identified specific activities that define each strategy. Exploitation activities include: improve existing product quality; improve production flexibility; reduce production cost; improve yield or reduce material consumption. On contrast, exploration activities include introducing a new generation of products; extend products range; open up new markets; enter new technology fields.

——— please insert Table 1 here ———

Managing exploration and exploitation of opportunities is a complex and paradoxical process for they are trade-offs between the two orientation, yet they are interdependent on one another (Lavie et al., 2010).

Trade-offs between exploration and exploitation happen due to resources allocation constraints, as they are competing for the organization's limited resources (Lavie, Stettner, and Tushman, 2010; March 1991a). For instance, investing in improving the current product range may reduce the available resources that may be allocated for extending the product range. Similarly, investing in penetrating a new market can limit the resources available for enhancing current market utilization. Deciding to allocate resources between exploration and exploitation implies trade-offs between Short-term productivity through exploitation versus Long-term innovation through exploration (March, 1991); stability enforced by exploitation versus adaptability attained by exploration (Lewin, Long, and Carrol 1999).

Exploration and exploitation are also interdependent. Exploitation provides the direct source of income that is needed to finance exploration activities, and exploration is necessary to identify and create opportunities that the firm can exploit (Lavie et al., 2010). Therefore, exploration is a prerequisite for exploitation (Cegarra-Navarro, Sanchez-Vidal, and Cegarra-Leiva, 2011), such paradoxical relation makes the firm's ability to balance exploration and exploitation crucial in sustaining its performance.

Exploration and exploitation's paradoxical association can mislead entrepreneurs to overestimate exploitation effectiveness. Therefore, firms may become trapped in a path dependent behavior where they over-exploit and under-explore (Walrave, van Oorschot, and Romme, 2011). Such an imbalanced orientation can lead to a suboptimal equilibrium (Levinthal and March, 1993). The idea of balancing exploration and exploitation is often referred to as ambidexterity (Lavie et al., 2010). Ambidexterity is found to be critical in enhancing firm performance and have a positive relation with growth (He and Wong, 2004; Lubatkin et al., 2006). For example, Brown and Eisenhardt (1997) explored six cases of successful and unsuccessful firms. Success in each of these six cases depended

greatly on managing the transition between exploiting present products and exploring new products. Brown and Eisenhardt (1997) highlighted the criticality of the transition between exploration and exploitation as a result of their competition for the same limited resources. Moreover, He and Wong (2004) found there is a positive relation between firms' balancing of explorative and exploitative strategies and their sales growth rate. As well as negative relation between firms' imbalance and growth rate.

Firms with limited resources can achieve ambidexterity and manage the conflicting demands of exploration and exploitation by holding relevant activities by different teams (organizational separation), or explore in a period and then switch focus to exploitation in a different period (temporal separation; Lavie 2010). Managing ambidextrous strategic orientation exceptionally complex in SMEs, due to the limited resources and high uncertainty settings of decision-making. Some scholars argue that SMEs might prefer the temporal separation to manage their growth (Lubatkin et al., 2006; (Danzinger, Dumbach, and Gasse, n.d.).

In the light of what we discussed in this section, we assume that: Sales growth curve is composed of different threads of opportunities. Entrepreneur increases the level of sales through exploitation of the current pool of opportunities. And firm's (in)ability to establish an ambidextrous orientation can affect growth sustainability.

2.3 Business Model and growth

Effective business model design is a prerequisite for opportunity exploitation (Chesbrough and Rosenbloom, 2002; George and Bock, 2011). Business model includes: firms' targeted customer segment; value proposition; choice of distribution channels; firm's relationship with the customers; key human, physical, financial and intellectual resources held by the firm; key activities performed by the firm; cost structure; revenue streams; and key partners in the firm (Osterwalder 2004).

Chesbrough and Rosenbloom (2002) found that business model emerges from the visioning of opportunity and adaptation of business model. Similarly, George and Bock (2011) suggested opportunity-centric prospective for business model in small and medium sized firms. In which, different dimensions of business model "interact to create and capture value directly associated with the firm's primary opportunity" (George and Bock, 2011; p: 99). Levie and Lichtenstein (2010) suggested that firm's evolution is driven by the repetitive process of opportunity recognition, value creation tension, and business model reconfiguration. Such business model reconfiguration process seeks to optimize firm's opportunity capturing capabilities.

Firms stop reconfiguring its business model upon reaching an outstanding configuration, hence attain (sub) optimal capability to capture an opportunity (Rivkin and Siggelkow, 2003). Optimum and stable states are occasionally disturbed due to perceived business model misfit. Either external misfit with the environment or internal misfit between business model components and each other (Levie and Lichtenstein, 2008; Rivkin and Siggelkow, 2003). Rivkin and Siggelkow (2003) found that firms swing between stability (on a good configuration) and search (for a better configuration). Moreover, they found that firms balancing search and stability interplays similar to the dynamic of balancing exploration and exploitation (March 1991); and that balancing search and stability -as well- has a positive impact on firm's performance.

Collectively, the discussed studies outline a critical role for business model reconfiguration on entrepreneurial growth. We expect to find empirical evidence that

firm's ability to sustain the business model at optimal state affect opportunities exploitation, hence can moderate entrepreneurial growth. While the failure to attain optimal configuration can -at least partially- explain stagnation.

2.4 Capacity expansion as the growth enabler.

Production capacity is arguably the most immediate and physical boundary for growth. Growth potential cannot be realized unless the firm can expand its production capacity (i.e. sales fulfillment capacity) equivalently to the growth of sales (i.e. generated from successful opportunities exploitation). Sterman (2002) Modeled a high-tech growth firms and showed how slow (i.e. conservative) investment in capacity expansion will generate sales curve that is lower than potential sales (i.e., fulfilled sales orders are lower than received sales orders).

Demand uncertainty was found to be the most important factor affecting investment in productive capacity (Chand et al., 2002; Meghem 2003). Planning for production capacity expansion can be even more complex in the case of small business than in large businesses. SMEs suffer from higher level of market uncertainty (Chin et al., 2014) and more limited resources. Hence, one would expect the importance of demand uncertainty to play even greater role in SMEs capacity expansion than it is in the large firms.

Optimizing capacity expansion under demand uncertainty is complex. On one hand, underestimating demand can lead to capacity shortage; on the other hand, over-estimating demand can lead to capacity under-utilization. Moreover, demand uncertainty can reduce the overall responsiveness of investment in capacity because the management become less confident in the sustainability of the demand (Bloom et al., 2007). Mieghem (2003) suggest that balancing capacity expansion while maintaining maximum capacity utilization can be very unlikely to attain in reality. He stated that: "its key feature is that it is unbalanced; i.e., regardless of how uncertainties are realized, one typically will never fully utilize all capacities." (Mieghem 2003; p.269)

Mieghem (2003) suggest that firms can cope with such unbalance between capacity expansion and capacity utilization by two different strategies. First Capacity-leading strategy: where firms proactively invest in capacity expansion to avoid any possible demand shortage, but at the cost of possible underutilized capacity. Second Capacity lagging strategy: firm only expand capacity after encountering steady increase in demand, this will assure it will not experience underutilized capacity but at the cost of missed sales opportunities. Moreover, Firm can temporally postpone the need for capacity acquisition by some tactical maneuvers. For example, firm can build up inventory to buffer against the temporary increase in demand and avoid rushing into new capacity acquisition until increase in demand proof not to be temporary.

However, coping with unbalance may not the only option. Other researchers suggested that the balance between capacity acquisition and capacity utilization can be pursued. Kaminsky and Yuen (2014) investigated planning capacity acquisition in pharmaceutical companies. Pharmaceuticals can encounter high uncertainty due to the long, risky and expensive product development cycle. Therefore, To optimize investment in capacity acquisition, pharmaceutical firms need to balance two conflicting objectives. First: to maximize capturing demand for the new product by reducing capacity expansion delay. Second: to minimize the risk of investment in unused capacity. Kaminsky and Yuen found that firms can achieve balance between the two objectives by stopping and

restarting the capacity acquisition project and frequent re-evaluation of the capacity expansion.

The existing research on capacity expansion is dominated by computational studies that seek to optimize the return on capacity expansion (e.g. Kaminsky and Yuen, 2014; Bloom et al., 2007). However, the investigation of small business production capacity optimization is underexplored. That can be due limited use of formal optimization model in the small business decisions, as well as the scarcity of formal demand estimation models in the context of SMEs decisions.

Capacity expansion can be modeled financially, as stocks of resources that accumulate over time by the investment, and degrade by financial depreciation (Mieghem, 2003). Accordingly, capacity expansion optimization can be seen as an economic problem that seek to maximize the net present value of the firm resources, and minimize the cost with constraints of demand uncertainty. Financial optimization address many indicators that lay beyond the scope of this paper such as depreciation, inflation, and opportunity cost. In this study, we are more interested in the physical expansion and contraction of the productive capacity and how it affects sales growth.

Alternatively, capacity expansion can be modeled operationally. By modeling the physical expansion and contraction of the production capacity. Mieghem (2003) suggest we have two modeling choices: First is to model the operational capacity in terms of inventory, in which capacity increase production and decrease by sales orders fulfillment. Second choice is to model operational capacity in terms of production resources. Hence, capacity accumulates by resources acquisition and deplete by physical degradation of resources.

Arguably, modeling production resources can be more useful than modeling inventory to represent the unbalance between capacity expansion and capacity utilization, i.e. for two reason:

First: inaccurate demand expectations can cause longer term financial distress in production resources modeling (than in inventory modeling). In inventory model, a short-term resolution can be reached by pausing production until the current inventory burns up. However in resources based model costs of excess resources are endured regardless of the level of production due to the physical degradation, financial depreciation, and technological outdating of production resources.

Second: the impact of investment in resources capacity expansion on sales growth curve can be lumpy (versus continues in case of inventory modeling). The lumpiness of capacity expansion is caused by the likely indivisible nature of production resources. In comparison to the relatively fine and incremental nature of inventory. Moreover, Lumpiness can also appear because of unanticipated lead time (i.e. “time between the purchase and availability of new capacity” Mieghem, 2003 p.278), however in inventory models, lead time can be small to the point it is considerably ineffective. Lumpiness in availing new capacity can lead to staged (i.e. step like) growth curve, which mean loss of sales potential (recurring inability to fulfill sales orders due to capacity shortage).

Sterman (2002) modeled the dynamic complexity of capacity expansion and explained how delayed capacity expansion decisions can result in growth (i.e. fulfilled sales orders) that lag behind potential growth (i.e. Sales orders). However, Sterman’s model was only specified for high technology companies, in addition that it assumed the firm operate in an unlimited demand market (as demand was not the main focus of his

model). Therefore, Sterman's model is not helpful in accommodating demand uncertainty and market exploitation effectiveness.

2.5 Putting it all together

To further investigate the dynamics of growth, we will adapt the structure of Sterman's (2002) to model the dynamics of capacity expansion optimization on maximizing sales (i.e. fulfilled sales). We will expand the model to accommodate potential sales (i.e. sales orders), demand generated by successful opportunity exploitation, and untapped opportunities acquired from successful opportunity exploration. We will empirically investigate how growth can be impacted by the possible (in)balances in capacity optimization, ambidextrous entrepreneurial orientation, and business model to opportunity fitness.

Based on our review of the literature, we developed the following theoretically dynamic framework that we will use as a lens to zoom on the growth processes:

—— Please insert Figure 2 here ——

Growth potential is sourced from firm's reservoir of untapped opportunities; such reservoir is refilled by exploration of new opportunities (B1) and depleted by the exploitation of current opportunities (B2). Successful exploitation increase sales, hence avail more resources to reinvest further in exploitation (R1). Positive reinforcement of exploitation deplete untapped opportunities reservoir exponentially, hence lead the entrepreneurs to reallocate the resources away from exploitation and into the exploration of new opportunities to support long-term growth (R2). Successful exploitation of untapped opportunity indirectly drive growth through increasing potential sales (i.e. sales orders). However, potential sales are only realized upon fulfillment. Eventually, successful exploitation results in potential sales exceeding the current firm's capacity to fulfill it. Consequently the growth is interrupted due to capacity shortage (B3). To resume growth, entrepreneurs acquire additional capacity that can meet expected sales (R3). However due to the demand uncertainty, entrepreneurs can underestimate growth in sales orders hence firm face another shortage. Otherwise, the entrepreneurs may overestimate the sales orders, and acquire the capacity exceeding the current level of sales orders. In order to utilize capacity, entrepreneurs invest in sales generation, and promotion hence sustain growth uninterrupted (B4). Finally Business Model Appropriateness to capture the opportunity moderates the entrepreneurial performance (i.e. converting untapped opportunities into sales orders), hence moderate growth.

3. Research Methods

We conducted an exploratory study of three cases of growing small and medium enterprises (SMEs). The use of exploratory framework was essential to gain sufficient empirical insights that can enable further investigation of the growth phenomenon. Davidsson et al., (2010) stated the need for an exploratory investigation "the topic of growth processes is arguably an area where some exploration is not only excusable, but needed" (p. 67). We used a multi-case design, where cases were selected based on theoretical sample, which has the potential to validate the model upon addressing of similarities (Yin 1994).

We developed a detailed research protocol to enable the replicability of the research and enforce the reliability of the results (Yin 2009). We used process research (Langley 1999, 2009; Van de Ven and Poole, 1990) to build a model that explains the firm's growth, as well as stagnation and decline.

Upon screening interviews for twelve candidate firms, three cases were selected with criteria of being: SMEs (According to the Egyptian Norms 15 to 250 workers (Elasrag 2011); five to ten years old; experience entrepreneurial growth (i.e. Opportunity driven growth); operating in the fast moving consumer goods sector. Such similarity was meant to enforce comparability, and contrast the differences in the growth processes. We targeted a diversity of organic growth patterns across cases and episodes of the life of each case. The three cases experienced fast growing episodes i.e. on average experienced more than twenty percent annual sales rate for three years in sequence (Janczak, Barès, and Montréal, 2010). Two of the cases experienced episodes of collapse, and one case were able to recover from the collapse and grow even faster. 21 in-depth interviews with founders of the three firms were conducted. Interviews were fully recorded and transcribed. To enforce the validity of the study outcome, we collected data from several sources. In total, 388 pages of secondary data and 264 pages of interviews transcripts were collected, archived and coded. Table 1 provides an overview of the collected data.

To analyzes the collected data and conceptualize the process of growth, we used a combination of analytical strategies suggested by Langley (2009) include: narrative strategy; grounded theory; and alternate template strategy. We developed case narratives and subsequently systematically analyzed the data by open as well as selective coding procedures. We used Nvivo software for the archival and qualitative analysis of both transcripts and secondary data.

Narrative Analysis: We developed a unique list of chronologically sorted events and happenings that describe the storyline of each case. Such events covered changes in our system dynamics model including business model, entrepreneurial pursuit, and capacity optimization.

Theoretical Analysis: To seek new insights we followed Gioia (2013) methodology moving from data to first order concepts to second order themes to aggregate dimensions. We started by applying open coding to the in-depth interviews and the secondary data. The generated first orders concepts were phrased into thick description to enhance our comprehension of its meaning (Langley 2009). The generated concepts were constantly compared (Strauss and Corbin, 1998) and generated second order themes that cover different aspects of the phenomenon.

Alternate Template Analysis: After the first two phases of analysis (Narrative analysis, and grounded theory) we used the theoretically developed causal loop diagram as alternative template strategy (Lapointe and Rivard, 2007) in which we iteratively cycled between concepts, emerging framework and the dynamic theoretical frameworks we developed from the literature. This iterative multi-lenses analysis resulted in more refined and concise list concepts that coherently describe the processes that lead different patterns of growth and stagnation. We finally consolidated the emerged concepts into a final list of second order themes (please refer to figure 3 for the list).

4. Findings.

Our analysis shows that entrepreneurs sustained the growth of the sales through the following activities,

- Balance capacity acquisition and utilization to optimizing capacity for growth.
- Balance exploration and exploitation of opportunities to sustain fuelling Up Demand.

• Balance business model reconfiguration and stabilization to maximize capturing opportunities.

Please review Figure 3 for the emerged data structure

—— Insert figure 3 here ——

4.1 Sustain Fueling Opportunity for Growth

Our analysis shows that entrepreneurs fueled-up growth in the long term by establishing ambidextrous orientation. While ambilevous orientation (i.e. opposite of ambidextrous) interrupted/collapsed growth.

4.1.1 Ambidextrous orientation Sustain growth

Entrepreneurs kept the growth engine running by fueling up the firm with additional demand through ambidextrous opportunities pursuit. Entrepreneurs repetitively invested in the exploitation of current opportunities to sustain demand generation over the medium term. On the longer term, entrepreneurs sustained demand generation by investing in new untapped opportunities exploration.

TGB sustained growth through the balance between exploration and exploitation. (Please refer to Table 2 for full view of growth trajectories). In 2007 TGB initiated a successful venture in gourmet bakery niche. Upon success they sustained growth by exploiting the current opportunities through geographical expansion: "We made the best use of the customers who tried us on the north coast [summer vacation destination for a higher class in Egypt]. From day one, we made good use of the word of mouth of those customers, and we selected all the shops' locations in the higher class's neighborhoods in Cairo and Alexandria to serve the same segment who tried and liked TGB during their vacations; when we opened in Zamalek, it worked automatically."

Furthermore, it exploited the current opportunity by starting home delivery unit (that formed 30% of their business). Then by adding sandwich bar "We already had the customers coming for bakery, and had nice bread baked six times a day, so we thought why not add cold cuts and vegetable bar and have a sandwich corner to generate new income from the same customers." Then they started to recognize the limitation of the current opportunity and considered exploring new opportunity.

However, as TGB was growing, the founders recognized the limitation of the gourmet market niche. Therefore, they planned to explore the middle-class market to fuel up the growth of the business in the long term: "….We live in a country where only 2% of the population can afford TGB, and 98% cannot even get close to such shop... is it our ambition to only serve 2% of the market? No, we needed to have another brand that could grow in the mainstream of the market."

The exploration project in the middle class had indeed succeeded and pushed the business further over the growth curve. By 2013, a successful exploration in the middle class was already well established that formed fifty percent of the annual sales revenue. By 2012, Entrepreneurs, recognized the steady expansion in the middle-class segment. Therefore, TGB started to expand in Carting units to restaurants, and by June 2013 (times of the interviews) TGB were preparing another exploration i.e. the launch of a catering unit dedicated to corporates.

Similarly, GNP sustained growth through the balance between exploration and exploitation. (Please refer to Table 3 for full view of growth trajectories).

4.1.2 Ambilevous orientation

Webster's Revised Unabridged Dictionary (1913) defines ambilevous as:" Left-handed on both sides; clumsy; -- opposed to ambidexter" representing being bad on both hands. Ambilevous orientation takes place when the firms have both orientations at disadvantage, not when it is only bias toward one orientation over the other. In our cases, firms showed ambilevous orientation by over-exploring and under-exploiting.

Our analysis shows that ambilevous orientation led to shoot and collapse behavior where firm achieves short episode of fragile growth followed by a collapse that at many times threatened the existence of the firm.

Sphinx's experienced recurring tendency toward ambilevous orientation, which caused successive episodes of fragile growth followed by a collapse. Please refer to Table 4 for full view of growth trajectories. The entrepreneur over-invested resources and attention into exploration of new opportunities, and under-invested into exploitation of the already seized opportunities.

In 2007, Sphinx was initially established to provide affordable detergent products in the lower class sector. At this early stage, it failed deploy the required machinery, and the founder had to improvise a manual packing system with limited capacity. And experimented to penetrate the rural areas near the factory where customer is to have lower quality expectations. Despite the challenges in these markets, firm performed well and started to outperform the long established competition. Nevertheless, the entrepreneur was distracted away from the opportunities and sought the exploration of new opportunities in export.

Sphinx was indeed able to close a contract in UK with one of the famous retail chains specialized in affordable products. Nevertheless, he failed to provide proper logistics; the shipment was damaged while unloading. He was rejected by the client, and never since been able to enter the UK market again.

On 2008, the entrepreneur redirecting his attention to the rural market in Egypt the entrepreneur were able to achieve success in Beheira (close by Rural Governorates): "The main competitor …. Did not sell to gain profit but to pay loans [the competitor sold at prices below cost to generate cash]… He was breaking us up, but we could overcome all of that. Moreover, we could break into his market and his products and attracted people to take [consume] our products."

The success of Sphinx's offering in Beheira held a promise of similar successes upon expansion. The detergent industry in Egypt is multi-billion. And 57% of the population live in 17 rural governorates with customer profile (and arguably expectations) similar to Beheira. Nevertheless, Sphinx did not exploit its success in the rural market thoroughly. Instead, success drove the entrepreneur away to allocate his attention and the firm's resources in exploring new opportunity in the middle class in Alexandria (i.e. large, urban and modern city). New opportunity involved radically different customer profile, competition, and distribution channels structure….etc. Therefore, required considerable investment in distribution system, new products, and marketing activities.

In 2009, detergent market experienced a rare uplift due to the break out of swine flu pandemic. Such market uplift positively synergized with the mainstream market exploration and Sphinx achieved reasonable success and doubled its net annual sales in 2009 to reach 400,000 USD. However, by 2010 it lost the market after the crisis in

product design, and Sphinx was forced back to exploit the left opportunity in rural areas. Sphinx expanded in the rural areas covering wider geographical area: "I had all of the deltas and part of Cairo like Hawamdia [Rural area surrounding the city of Cairo] ….we were very conservative regarding dealing [distributing] in Cairo…could penetrate up to Red Sea, [most west of Egypt], and they reached Luxor [Most south of Egypt, the other end of Alexandria]". By focusing on exploiting the initial opportunity, the firm compensated for the lost market and resumed growth. Sphinx achieved 25% further growth to reach 501,000 USD.

The pattern ambilevous orientation recurred 2010 again, When Sphinx started to explore Catering of detergents at the cost of giving less attention to exploiting the rural market. Then by 2011 to explore promising Libyan market (during Libyan revolution) at the cost of giving up on Catering market. Finally, Sphinx ended losing Libyan market, Catering market, and a significant share of rural market.

GNP provided another example of the negative effect of over-exploration and under-utilization. In 2007, the entrepreneur was passionate about growth due to recent successes in the health market. However, the entrepreneur did not dedicate the available resources and attention to the exploitation of the successful operation and left it under-exploited. Instead, he rushed in developing a vast project to explore a new opportunity in the pharmaceutical market. Such pattern of over-exploration and under-exploitation led to the failure and by 2008 the firm suffered a crisis that threatened its very survival. The entrepreneur endured the loss, terminated the new initiative, and focused on exploiting the health products market. Eventually, the foci yield into recovery, then growth of 15% at the end of 2009.

4.2 Sustain Business Model to opportunity Balance

Table 2, 3 and 4 summarize how the studied firms repetitively reconfigured its business model in order to enhance its capacity to capture and serve more demand or to explore new opportunities.

Entrepreneurs iteratively reconfigured their business models to find the best configuration that maximize its effectiveness in capturing the prospected opportunities. Our analysis shows that BM-OP balance was hard to establish, and was fragile to maintain as it was easily disturbed by radical changes. In the following section we will present our findings on:

- How capability to establish/restore, BM-OP balance drove firms' growth.
- Sensitivity to BM-OP disturbance present clear distinction between growing and non-growing firms,

4.2.1 Entrepreneurial Driven Business Model Reconfiguration

Our analysis shows that business models evolution over time happened through successive reconfiguration initiatives. Each initiative aimed to establish/restore the balance between business model and opportunity. Firms engaged into an exploitative or explorative driven business model reconfiguration:

• Exploitative Driven Business model reconfiguration Firms proactively enhance value appropriateness to maximize growth through the exploitation of current opportunities.

• Explorative Driven Business Model Reconfiguration: Firms re-innovated its business model to enable growth through exploration of new opportunity.

In 2008 TGB planned to grow through the exploitation of their success in the gourmet market. However, they discovered that current business model cannot deliver reliable product in multi-store operation. The initial workflow was designed and operated by hotel chefs; it was designed according to the hotel kitchen design, with expensive machinery and skilled chefs. Scaling up such -hotel-like- workflow to serve multi-store operation meant that TGB needed to duplicate investment in machinery and personnel in each new bakery shop they open. In addition, it has to accept inconsistency of products from one shop to the other.

Therefore, TGB decided to deploy bake-off technology (i.e. Preparing semi-finished bakeries in the central facility and distribute it frozen to the bakery shops). However this change in workflow triggered chain of changes in the entire business model: "we started to think about how we will handle distribution [design logistics of moving frozen semi-finished product from central kitchen to store]…. intensively invest in the factory to be able to centralize the process... started to hire people who would take on the responsibility of this operation. Just when we had the model in mind and understood it, we started to build the whole business on that model, starting from the site selection up to the area needed in each location." (TGB interviews). Eventually, even prices, products, and cost was changed in order to restore profitable growth in the gourmet market.

In 2010, TGB needed to re-innovate their business model once again to be able to explore new opportunity in the mainstream market: "we started to study the required resources and discovered that to reduce price to the third of current prices range [In the gourmet brand], we needed to invest in new machines in the factory [other than those dedicated to the original gourmet brand] to prepare this product for our partner [famous supermarket chain]. And we found we needed to hire new people and. Moreover, to avoid losing positioning [brand image], we needed to build a new brand and not to go with TGB brand." (TGB interviews). The exploration of radically new model disturbed the Business-Model to opportunity balance and triggered a chain effect on the entire business model components, entrepreneur needed to reconfigure each component to operate effectively.

In 2007, GNP planned to exploit the initial success in wider range of healthy products profile. GNP went from a basic 20 items range exclusively with its brand, to a comprehensive range targeting 150 items sourced from multiple brands and multiple countries. Soon after, the entrepreneur realized that delivering on such value proposition required more than availing good sources and finance. But a sophisticated procurement: "Purchase function was impossible, we did not have any protocol or even a single employee with experience in dealing with such many products and tens of local and international suppliers." (GNP Interviews).

To deliver on such value, and to exploit such opportunity, entrepreneur needed to alter the business model component by component: apply sophisticated inventory management information system and forecasting protocol to anticipate for long and unpredictable order-to-arrival-duration; recruit experienced procurement employees to establish international network of partners and suppliers; inject more financial resources for stocking long to arrive items; therefore, incurred new level of costs and had to reconsider prices. In other words, the entire business model needed to be altered to restore the balance with the opportunity.

4.2.2 Attentiveness to Business-model-opportunity disturbance.

Another apparent distinction for the collapsing case was its lack of proactivity to develop its business model, and its insensitivity to respond to business model disturbance. While entrepreneurs in the growing firms, TGB, and GNP were uncertain about their initial business model effectiveness and were very watchful for how fragile their business model might be. This uncertainty had a constructive effect for they become very attentive to the business models' development requirements. Therefore, entrepreneurs kept struggling to enhance their business model all over the life span of the firm.

On the contrary, the founder of Sphinx showed overconfidence, in their initial business model adequacy; such overconfidence caused Sphinx to be insensitive, hence unresponsive to business model to opportunity disturbance. For example, in 2009 Sphinx to enhance their products appeal, they invested in packaging molds with designs outshine the competition. The entrepreneur expressed at many times how proud and ambitious he was for the impact of the new designs. The design indeed appealed to customers initially but was soon rejected due to major industrial design deficiencies "…. it was a crisis; packages cracked and ruined the warehouses for all the retailers as well as their stocks of other products" (Sphinx Interviews). Such deficiency resulted in a serious market rejection to the entire brand.

Package deficits led to market collapse: "The customers were very angry, and we had to pull back all our products from the market and replace them with good products to restore our reputation. It was very hard like you are starting from zero again [because we lost the market]."

Even at such crisis, the entrepreneur limited his focus to solving the immediate -stressing- problems, and did not track the profound causes of the crisis and its possible consequences on other business model components. Instead, Sphinx limited its response to redesigning deficit packages and compensate the complaining customers, without making permanent changes in the business model to prevent similar problems from achieving in the future. For example, they did not change the product development practice that allowed such deficit design in the first place. Nor they enforced their customer relations activities and channel relation to avoiding delay in detecting similar market problems, such delay that caused the deficit package spread to affect almost all the customers before they noticed. Soon the disregarded business model changes led to dramatic consequences. For example, poor customer relations management activities led to another collapse in channels relations

"While we were trying to amend our image after what happened [design deficit]. Salespeople found it was easier to lie and over promise [to the customers]. That had a negative impact on the company's credibility, reputation, and reliability."

Even after this incident entrepreneur did not restructure for sales department but depended on handle angry customers on a case by case basis. Moreover, Sphinx was not carefully monitoring the already irritated market and skeptic customers for market changes. And soon, a competitor used their market struggles to take over their share: "the competing brand started to take over our markets…. It was one cake, and we could already take some pieces of each one of them. So growth becomes very hard to achieve in that year, and it was even harder to gain back our trust."

Overall it was clear that collapsing case was overconfident inappropriateness of their business model. Hence, the were not sensitive to its shortfalls and inattentive to business model reconfiguration requirements.

4.3 Capacity Optimization Drive Short Term Growth.

Our analysis shows that entrepreneurs enabled and stimulated growth by balancing between the following activities:

- Capacity acquisition: enabled further growth by overcoming capacity shortage, and scale-up the future sales fulfillment function.
- Capacity Utilization invested in sales generation in order to optimize capacity utilization; this process prevented the interruption of sales growth in the short term.

4.3.1 ***Capacity Acquisition Enable Growth***

Production Capacity (i.e. Sales-fulfilment-Capacity) represent the firm's capabilities to fulfill sales orders. That includes production capacity, number of sales people, number and size of shops…etc. At many times in the three cases, growth was overwhelming, and the pivotal determinant for growth become how responsive the entrepreneurs to the growth opportunity. And how fast they were able to acquire additional capacity and overcome the shortage. Both TGB and GNP actively acquired additional capacity to meet the overabundance of sales orders and deal with capacity shortage.

In 2010, TGB founders planned to penetrate the middle-class through in-store bakery corner in a famous Supermarket chain "… sales boomed, achieving 3 to four times the targeted operation. ….we had to increase operational capacity to serve these sales." (TGB Interviews).

In 2013 TGB upon the launching of the new service to cater restaurants and coffee-shops with bakery products: "We received more than 300 requests, but we supplied only five or six… we are working very hard to finish the catering unit to serve such a stream of orders."

Similarly, GNP responded actively for overabundance of sales orders. In 2010 when developed new generation of elite stores and new product portfolio targeting the higher class segment. The entrepreneur estimated the required capacity conservatively and used the historical sales data that was underestimation "… The new generation of the stores was a shock. Traffic was incredible; people started to buy before we opened, and we could not handle the traffic. We doubled our number of sales reps and still couldn't handle the traffic. We even tripled this and for months, we could not control the traffic in the store…….we had to stop two-thirds of the in-store activities to be able to serve the traffic." Accumulatively, GNP acquired new capacity (i.e. Stores, personnel, production capacity) to fulfill such demand. Such acquisition of capacity continued until in 2011 when the capacity exceeded demand, and they had to.

Sphinx -the collapsing case- responded to the overabundance of sales orders conservatively. For example in 2009, During the detergent market booming that accompanied swine flu pandemic the market demand exceeded their expectations, and sales orders exceeded the available capacity. But in contrast to other cases, the entrepreneur did not try to seize the opportunity and acquire more capacity.

"Interviewer: so, did you consider increasing your production capacity?

Entrepreneur: no, why should I? I was already achieving good results. I did consider buying machinery, but it was too expensive, and we canceled it."

4.3.2 Capacity Utilization Motivate Investment in Growth Activities

Underutilized capacity was a motive for growth, especially on the short term. In the growing cases, the underutilized capacity stressed entrepreneurs to invest in sales generation activities, and drive firm's growth in the short term.

In 2009, GNP was coming out of severe crisis that forced the company to terminate the majority of its operation (i.e. By pulling back from Pharmaceutical market). Nevertheless, the remaining operation (i.e. production capacity, shops, and employees) generated too much financial distress for the current level of sales. A Substantial growth in sales of health products was a prerequisite for survival. Such stress had a positive and motivating effect on growth. GNP grew up from 1.4 million USD in 2008 made in two markets (pharmaceutical, and healthy products), to reach 1.6 USD in 2009 achieved only by focusing on the healthy products markets with no addition of new stores. As an entrepreneur stated: "we had to increase sales with the remaining people. We worked day and night to increase sales, doing promotions and training sales people on products and sales skills….this year; we have doubled sales without expanding with a single new store."

Such excess capacity distress take place once more in 2011, After two years of the success of second-generation stores, GNP kept acquiring new capacity to meet the excess of demand. And ironically after a threshold, capacity state flipped and they had to invest in sales-generation to utilize the capacity: "… these efforts began to reward us back, and the store that used to have average traffic of 15 customers a day, it started averaging 50 customers a day." Such Investment in sales generation again helped the business to keep growing, and GNP resumed growing with 23% by the end of 2011.

On the contrast to growing cases, When Sphinx faced underutilized capacity, entrepreneur did not invest in sales generation. Instead, it gave up on the current resources that could not be utilized immediately and reduced his ambition of sales target to the available level of sales orders. For example, in 2012, Sphinx lost 40% of the sales to drop to 309,000 USD (going down from 501,000 in 2010 and 419,000 in 2011). In response, the entrepreneur did not invest in sales generation but terminated the excess capacity. Sphinx sold out its entire distribution fleet and rented cars when needed to deliver an order. Although such termination meant that sales people to proactively do their sales visit, but only respond to orders. In other words, the entrepreneur sacrificed the firm's potential growth on the longer term to avoid immediate risks.

4.4 An Inclusive Dynamic Model of SMEs Growth

In this study, we aimed to develop a dynamic model that can explain the growth of some small and medium enterprises and not the others. By studying both growing and collapsing cases, we identified three distinctive processes that drive the growth.

—— Please insert Figure 4 ——

4.4.1 Capacity Optimization Drive Short Term Growth

In this study, we used the words capacity, sales fulfillment capacity, and productive

capacity as equal to each other. Capacity represent the firm's capabilities to fulfill sales orders. That includes production capacity, number of sales people, number and size of shops…etc.

Our analysis shows that capacity expansion and utilization were considerable influences on the growth especially in the short term. Capacity expansion enabled the firm to grow by fulfilling more sales orders. While Capacity utilization formed financial and psychological distress, that pressured the entrepreneurs to invest in sales generation.

Capacity acquisition decisions suffered high demand uncertainty due to the lack of reliable sales forecast. Moreover, in the founding stage the founders reported having vague idea about the market structure, the consumer's preferences and market size. Our analysis shows that firms swung between excess and shortage of capacity in different episodes of its life. In the start-up phase and episodes of new opportunities exploration, entrepreneurs minimized risks by investing in small capacity that quickly came to shortage. Therefore, growth at such Capacity shortage state was merely determined by the firm's investment in capacity expansion. However, at many times entrepreneurs accumulated capacity to meet demand until capacity exceeded demand. Such state of underutilized capacity distressed the entrepreneurs financially and psychologically to invest in sales generation and promotion activities. Therefore, Investment in sales generation retained the growth pace uninterrupted at the short term and contributed to the accumulative acquisition of market share.

Our analysis shows that responsiveness to capacity acquisition and utilization formed another distinction between growing and non-growing entrepreneurs. Entrepreneurs in the growing cases promptly invested in capacity acquisition and utilization in order to enable/resume growth. On the contrary, the collapsing case was not responsive. Sphinx tended to be more conservative in acquiring additional capacity to meet increasing demand. For example, in 2009 during the swine flu pandemic, Sphinx experienced capacity shortage but they explicitly mentioned that they are not willing to expand the capacity because " we are already achieving our target". Another example in the catering business that composed 30% of Sphinx's business, the business-to-business (i.e. catering) sales efforts were limited to the founder's limited time and capability. Despite the growth potential, the founder did not establish a business to business sales team/person to expand his customer reach and exploit the opportunity. Similarly, entrepreneur acted conservatively when experienced underutilized capacity. The entrepreneur did not invest in sales generation and promotion activities. Instead, he preferred enduring short term loss; he sold out the under-utilized resources (i.e.the distribution fleet) and sacrificed the firm's potential growth on the longer term to avoid immediate risks.

4.4.2 *Sustain Fueling Opportunity for Growth*

Entrepreneurs fueled-up the sales engine with more demand through balancing the investment in two distinctive strategic orientations: Exploiting current opportunities, to sustain demand generation over the medium term. And exploring new opportunities, to fuel up the firm's growth potential over the long term. Our analysis shows that growth on medium and short term were driven by the firm ability to hold ambidextrous (i.e. balanced) orientation, while ambilevous (opposite to ambidextrous) orientation Interrupted growth, or caused collapse.

Our analysis shows that firms established ambidextrous orientation through

temporal separation of exploration and exploitation. Growing firms explored opportunities until it reached successful business model to capture it. Then firms redirected its investment into exploitation and expansion of the business. Eventually exploitation drains the untapped potential, and the entrepreneurs initiate another exploration for untapped opportunities.

Entrepreneurs sustained growth over the medium term by investing in exploitation activities such as: enhancing company's offering; expanding customer base and penetrating more geographical locations; and making the most of the current customers base by providing related products and/or services. On long term, exploration of new opportunities was the primary source of growth. Exploration occurred upon the recognition of potential opportunity (e.g.. new promising product, new potential market segment).

We define ambilevous orientation as firm is being at a disadvantage in both exploration and exploitation simultaneously. In the cases we present in this paper; firms showed ambilevous orientation by over-exploration of new opportunities and under-exploitation of the current opportunities. Nevertheless, theoretically more forms of ambilevous orientation can be identified, for example, Over-exploitation and under-exploration.

Firms experienced "over-exploration" by being distracted in diversified trajectories of growth, and not allocating sufficient resources and mindful attention to each trajectory. In most cases, over-exploration was accompanied with "under-exploitation" i.e. superficial skimming for the current opportunities and prematurely directing away the resources and attention before the thoroughly exploiting the current opportunities. Our analysis showed that while timely ambidextrous orientation leads to sustain growth over the medium and long term, Ambilevous orientation led to shoot and collapse behavior. Such collapse that at many times threatened the existence of the firm.

4.4.3 Sustain Business Model to opportunity Balance

Our analysis shows that balancing business model and opportunity (BM-OP) enforced opportunity driven growth. At first entrepreneurs experimented with different configurations until they reached business model that they believe can capture the prospected opportunity. Entrepreneurs started to expand their market presence upon establishing such balance between business model and opportunity (BM-OP). However, the balance of BM-OP was eventually disturbed when entrepreneurs drifted to explore radically new market opportunities that require different business model. For example, when TGB explored market opportunity in the mainstream market they needed to alter the entire business model. Moreover, BM-OP balance was disturbed when the firm introduced radical change in one of its business Model components. For example, when GNP introduced the international procurement activity, a chain effect run through the business model components until it radically redesigned.

Entrepreneurs supported both explorative and exploitative growth initiatives by investing resources and attention into business model reconfiguration. Exploitative driven business model reconfiguration aimed to enhance the value appropriateness to opportunity through enhancing business model components. GNP exploitation of health products market opportunity implied enhancing product range, applying new ingredients, introducing international procurement activities, reviewing cost and prices,, ..etc. On contrast, explorative driven business model reconfigurations aimed to deliver new (rather

than enhanced) value to capture new opportunities. To deliver appropriate value to exploring the mainstream market, TGB had to develop new products, different prices levels, new production facility, a new channel and entirely new brand name.

Attentive to BM-OP balance made a clear distinction between growing and collapsing cases. Our analysis shows that entrepreneur's in growing cases showed a high level of attentiveness to the possible disturbance of BM-OP balance. Such mindful attention drove the development of value appropriateness, hence influenced growth. On contrast, the founder in the collapsing case showed a low level of attentiveness to business model shortfalls to capture opportunities. Hence was not responsive to business model reconfiguration demands. Even when firm experienced crisis, the entrepreneur was trying to find a workaround to solve the immediate stressing problem (e.g. Angry customers or problematic sales person) without attending to the possible consequences on other business model components (e.g. Competitive position, monitor and control system for sales department). This inattentive behavior repeatedly occurred and amplified the effect of the crisis. Ultimately led to the collapse of the firm.

4.4.4 Overall Dynamics and growth Patterns

Putting it all together, we developed a dynamic theory to explain the growth of SMES. Our theory identifies different dynamics that drive growth. Short-term growth is driven by capacity expansion optimization. Medium term growth is driven by the exploitation of the current opportunity. While, long-term growth is driven by the exploration of the new opportunities. Our theory explains different patterns of the growth: 1) Staged growth (i.e. swinging between periods of stagnation followed by periods of growth). Occur when the firm experience delay between different balances (i.e. Capacity expansion and utilization, exploration and exploitation or business model search and stabilization). 2) Stagnation emerges when the current opportunities growth potential is exhausted, and the firm do not (successfully) explore new opportunities to fuel further growth. 3) Dwarfism -early stagnation- emerge when firm under-exploit the current opportunity. 4) Shoot and collapse (i.e. short episode of growth followed by a collapse) can emerge due to holding ambilevous orientation. e.g. when firm stop early from expanding the current successful business model and rush into diversifying products and markets without allocating sufficient resources and attention to each opportunity). 5. Finally, perfectly smooth exponential growth curve emerges (theoretically) When all dynamics are in equilibrium (Capacity Expansion is optimized, perfectly timed ambidexterity and balance between business model, and opportunities are perfectly sustained).

5. Discussion

This study contributes to the literature on SMEs growth (Davidsson e.t. al, 2010; L This study contributes to the literature on SMEs growth (Davidsson e.t. al, 2010; Levie and Lichtenstein, 2010; Bessant et al., 2007) by developing a dynamic process theory that link the change in the growth curve with the ambidextrous entrepreneurial orientation, business model innovation, and capacity expansion optimization. We provide a dynamic alternative to the conventional stages model that generate dynamically different stages in an idiosyncratic, non-deterministic pattern and path driven sequence. The theory extends the current body of knowledge by identifying the dynamics processes that fuel growth, and explains various patterns of growth (i.e. perfectly exponential growth and staged

growth), stagnation (i.e. growth plateau and dwarfism) and collapse (i.e. overshoot and collapse).

This study provide theoretical comprehensiveness by connecting multiple streams of literature (i.e. opportunity, exploration and exploitation, capacity expansion optimization, and business model innovation); and by providing multiple-level opportunity centric framework that connect factors on entrepreneur's level (e.g. believes, market expectations, proactiveness), firm's level (e.g. business model, resources and capacity), and environmental level (market opportunity, hence competition and industry dynamics…etc). Such comprehensiveness provides the theoretical preparedness that Davidsson et al., (2010) argued might be a pre-requisite for the feasibility of large-scale quantitative investigation of the growth processes.

We contributed to the discussion of the ontological nature of the opportunity (Shane 2012; DeJong and Marsili 2010; Short et. al., 2020; Klein, 2008) by introducing an opportunity pipeline framework. Opportunity pipeline connect different conceptualizations of opportunity (i.e. exogenous, discovered, imagined and created opportunity) not as alternative constructs, but as different transformtions to the same opportunity, such transformations happen by passing through different phases (i.e. opportunity emergency, opportunity discovery, business idea innovation, project implementation). The opportunity pipeline conceptualization paves the road for further investigation of the drivers of effective transformations, and pipeline optimization.

The conceptualization of opportunity pipeline allowed us to use the opportunity as the unit of analysis. Therefore, it allowed us to disassemble the growth curve into different trajectories of growth (i.e. opportunities). Zooming on growth phenomenon with the lens of opportunity enabled us to obtain fresh insights on growth processes, we were able to isolate the effect of different processes on each trajectory of growth. On the contrast, previous studies tend to use growth on an aggregate level including blend of all successful, mediocre, failure and aborted opportunities. We argue that such studies may have been subject to bias toward long exploited opportunities as it has the heaviest contribution to sales, and underrate the newly explored opportunities due to its possiblly smaller contribution.

We contributed to the literature of exploration and exploitation (Lavie et al., 2010; He and Wong, 2004; March, 1991) by empirically investigating ambidexterity in the SMES. We identified the importance of entrepreneur's attention and personal passion as scarce resources in SMEs that both orientations compete for. Moreover, to ease the competition for the scarce resources, entrepreneurs showed a consistent tendency toward temporal separation of exploration and exploitation by sequential shifting between the two orientation over time. Our findings highlight the importance of timing the shift from exploitation to exploration (or the opposite) in sustaining and interrupting growth. Moreover, we introduced the concept of ambilevous orientation where firms are at a disadvantage in both exploration and exploitation simultaneously (different than biased orientation where firm is effective in one orientation but not the other.

Our theory contributes to the growing knowledge of business model evolution (Chesbrough and Rosenbloom, 2002; George and Bock, 2011; Rivkin and Siggelkow, 2003) by providing empirical investigation for the business model search and stabilization in SMEs. Our analysis shows that business models evolution was opportunity driven, which confirms George and Bock (2011). The study support Levie

and Lichtenstein (2010) by providing empirical evidence that business models evolve through a series of reconfigurations that seek to maximize the firm's ability to capture the prospected opportunities. Moreover, we extend such evolutionary framework by highlighting the moderating role of 'attentiveness to business-model-to-opportunity disturbance'.

Our study shed new light on business model evolution by connecting the business model literature with the exploration and exploitation literature. We identified distinctive patterns of business model reconfiguration to support explorative (by radical innovation) and exploitative orientations (by incremental innovation). The distinction between explorative and exploitative driven business model reconfiguration is important because it indicate that business model inherit the paradoxical relation between exploration and exploitation. Especially in the case of multiple opportunities with radically different business model design requirements, a conflict may appear between reconfigure the business model to satisfy one opportunity but not the other. Such conflict over reconfiguring business model led to the collapse of one of our cases.

Finally, our theory connected the literature of capacity expansion optimization and the literature of entrepreneurial opportunity. We developed a framework where potential sales (i.e. sales orders) are the central stock of growth. Growth of potential sales is fueled by the exploration and exploitation of opportunities. And potential sales is realized (i.e. transformed into fulfilled sales) through capacity. Therefore, growth is sustained through simultaneous expansion of both opportunity and capacity. We extended Sterman's (2002) market growth model by the inclusion of demand uncertainty, and finite market potential. We developed an optimization algorithm that combine the systematic optimization algorithm of capacity expansion with the heuristic optimization algorithm for the demand maximization using exploration and exploitation under uncertainty.

6. Future Research

In order to reach an inclusive theory of growth, further investigation needed for the evolution of business model and the changing role business model evolution in different episodes, and in multiple opportunity contexts. Moreover as entrepreneur is the central agent in SMEs growth, more investigation needed to understand his the evolution of passion toward growth, emotional maturation, and regulation, and how entrepreneurs believes evolve over time shaping their strategic orientation, practices, and market expectations.

7. Appendices

7.1 Tables

Table 1: Overview of Cases

	TGB	GNP	Sphinx
Country of origin	Egypt	Egypt	Egypt
Period covered in the study	2008-2013	2004-2013	2007-2013
Number of events	117	64	79
Total number of interviews	7	6	8
Number of archival	9	22	5

	TGB	GNP	Sphinx
documents			

Table 2: TGB Business Evolution Timeline

	Pre-Launch (01-2008 to 06-2008)	First Store (07-2008 to 09-2008)	Scale-up Back Operation (10-2008 to 02-2009)	Scale-up Commercial Presence (03-2009 to 03-2010)	Multiple Trajectory exploration (03-2010- 02-2011)	Managerial Crisis (12-2010 to 07-2011)	Strategic - Re-orientation (08-2011to 02-2012)	Smooth exponential growth (03-2012 to 06 2013)
Customer Segments	• Exploring gourmet segment	• Exploiting current gourmet segment success.	• Exploiting current gourmet segment success.	• Exploiting current gourmet segment success. • Perception of the limitation of gourmet market opportunity	• Exploiting gourmet segment. • Exploring Mid-class segment.	• Exploiting gourmet segment. • Exploiting Mid-class segment	• Exploiting gourmet segment. • Exploiting Mid-class segment	• Exploiting Mid-class segment. • Exploring B2B Carting Market
Value Propositions	• Initial Offering Development.	• Menu Refinement.	• Standardising and automating Value delivery processes to enable scaling up.	• Exploitation of recent success by enhancing menu variety.	• Exploring new affordable offering for med-class segment.			• Innovating New B2B Carting offering.
Channels		• Store Development.			• Explore Home Delivery Channel.	• Optimise Delivery channel.		• Establish B2B Sales Force.
Revenue Streams		• Establish In-store Sales.		• establish delivery revenue stream.	• Establish supermarket corner revenue stream.			• Experiment B2B Catering revenue stream.
Key Resources		• Acquire Basic equipments. • Acquire Basic Human Resources.	• Invest in Central Production facility enable exploiting expected demand.	• Invest in Acquiring more bakery shops to generate enough sales to operate profitably.	• Invest in New Production facility to tackle the new offering targeting mid-class market segment.		• Invest in HR and obtain enough skills to operate effectively.	• Invest in HR Training and in Production equib.emts refinement to sustain capacity scaling up
Key Activities	• Products and operation Designing. • Business Planning.	• Menu items refinement. • Operation design refinement.	• Acquire 'Bake-Off' technology to reach scalable operation design.	• Bake-Off Technology Deployment optimisation.	• Innovate new operation design to serve new market segment more efficiently.		• Radically re-engineer managerial functions to increase managerial capacity.	Continuous refinement and optimisation to managerial capacity and operation design.
Key Partnerships	Perform Partnership with Famous Chef to assure delivering gourmet offering.			Being Partially acquired by Large Coffee Shop Chain aiming to be managerially served on a professional level.	Initiating joint project with famous supermarkets chain to have med-class bakery corner inside each supermarket.			

Table 3: GNP Business Evolution Timeline

	Pre-Launch (01-2008 to 06-2008)	First Store (07-2008 to 09-2008)	Scale-up Back Operation (10-2008 to 02-2009)	Scale-up Commercial Presence (03-2009 to 03-2010)	Multiple Trajectory exploration (03-2010- 02-2011)	Managerial Crisis (12-2010 to 07-2011)	Strategic - Re-orientation (08-2011to 02-2012)	Smooth exponential growth (03-2012 to 06 2013)
Customer Segments	• Exploring gourmet segment	• Exploiting current gourmet segment success.	• Exploiting current gourmet segment success.	• Exploiting current gourmet segment success. • Perception of the limitation of gourmet market opportunity	• Exploiting gourmet segment. • Exploring Mid-class segment.	• Exploiting gourmet segment. • Exploiting Mid-class segment	• Exploiting gourmet segment. • Exploiting Mid-class segment	• Exploiting Mid-class segment. • Exploring B2B Carting Market
Value Propositions	• Initial Offering Development.	• Menu Refinement.	• Standardising and automating Value delivery processes to enable scaling up.	• Exploitation of recent success by enhancing menu variety.	• Exploring new affordable offering for med-class segment.			• Innovating New B2B Carting offering.
Channels		• Store Development.			• Explore Home Delivery Channel.	• Optimise Delivery channel.		• Establish B2B Sales Force.
Revenue Streams		• Establish In-store Sales.		• establish delivery revenue stream.	• Establish supermarket corner revenue stream.			• Experiment B2B Catering revenue stream.
Key Resources		• Acquire Basic equipments. • Acquire Basic Human Resources.	• Invest in Central Production facility enable exploiting expected demand.	• Invest in Acquiring more bakery shops to generate enough sales to operate profitably.	• Invest in New Production facility to tackle the new offering targeting mid-class market segment.		• Invest in HR and obtain enough skills to operate effectively.	• Invest in HR Training and in Production equib,emts refinement to sustain capacity scaling up
Key Activities	• Products and operation Designing. • Business Planning.	• Menu items refinement. • Operation design refinement.	• Acquire 'Bake-Off' technology to reach scalable operation design.	• Bake-Off Technology Deployment optimisation.	• Innovate new operation design to serve new market segment more efficiently.		• Radically re-engineer managerial functions to increase managerial capacity.	Continuous refinement and optimisation to managerial capacity and operation design.
Key Partnerships	Perform Partnership with Famous Chef to assure delivering gourmet offering.			Being Partially acquired by Large Coffee Shop Chain aiming to be managerially served on a professional level.	Initiating joint project with famous supermarkets chain to have med-class bakery corner inside each supermarket.			

Table 4: Sphinx Business Evolution Timeline

	Pre-Launch (01-2007 to 12-2007)	Startup (01-2008 to 12 2008)	Expansion (01-2009 to 11-2009)	Product Crisis (12-2009 to 01-2010)	Focus and survive (02-2010 to 01-2011)	Revolutions Market Turmoil (01-2011 to 05-2012)	corruption Crisis (06-2012 to 06-2013)
Customer Segments		• Close by rural territories. • Export market trial.	• Penetrate more rural territories. • Explore main stream market. • Explore Business to Business Market.	•Pulling back from the main stream market.	• Penetrate more rural territories.	• Pull back from catering market. • Open Libyan Market.	Loosing the Libyan market due to political factors.
Value Propositions		• Offering Basic consumer detergents variation at affordable pricing point and above average design.	• Offering low cost B2B detergents Range. • Enrich The consumer variation to exploit the swine flu market opportunity.		• Terminate B2B Product range due to market collapse that accompanied Egyptian revolution .	• **Launching affordable liquid soap range.**	
Channels		• Wholesale unit.	• Establishing 'Retail Distribution' unit. • Penetrate Hyper markets. • Establish online presence to support export activities.	• Closing retail distribution Unit.	• **Enforcing the wholesale unit.**		
Key Resources	• Factory Establishment. • Failure to acquire automated production line.	• Hiring First Technical and Commercial professionals on board.	• Increasing Management levels and acquiring more Human Resources. • Acquiring retail Distribution Fleet.		• Lay off employees.	• Sell Out Distribution Fleet and use rented cars.	• Major financial loss due to corruption and taxes problems.
Key Activities	• Business Planning. • Construction Supervision. • Sourcing and Deployment of Machinery.	• Product Development and Design. • Hiring Technical and Commercial Team. • Wholesales Activities. • Export Activities.	• Marketing Activities. • Acquiring ISO Certificate. •Retail Distribution.	• Review and adjust product designs to avoid previous deficiencies.	• Downsizing activities. • Customer Relationship enforcement. • Increase wholesale activities. • Export Activities.	• Export Activities. • Product Development.	• Centralising Management to control over corruption. • Handling Taxation and financial Problems.

7.2 Figures

Figure 1 opportunity pipeline

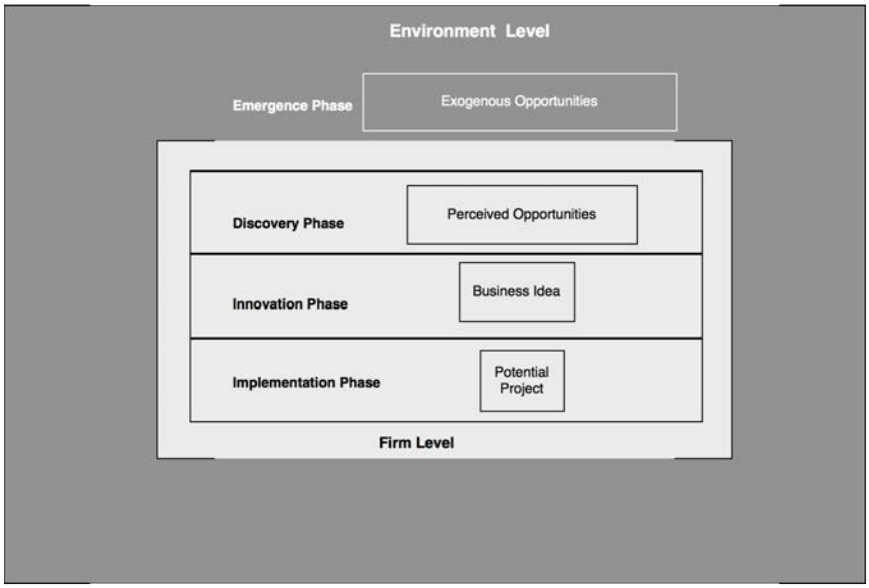


Figure 2: Theoretical Growth Dynamics

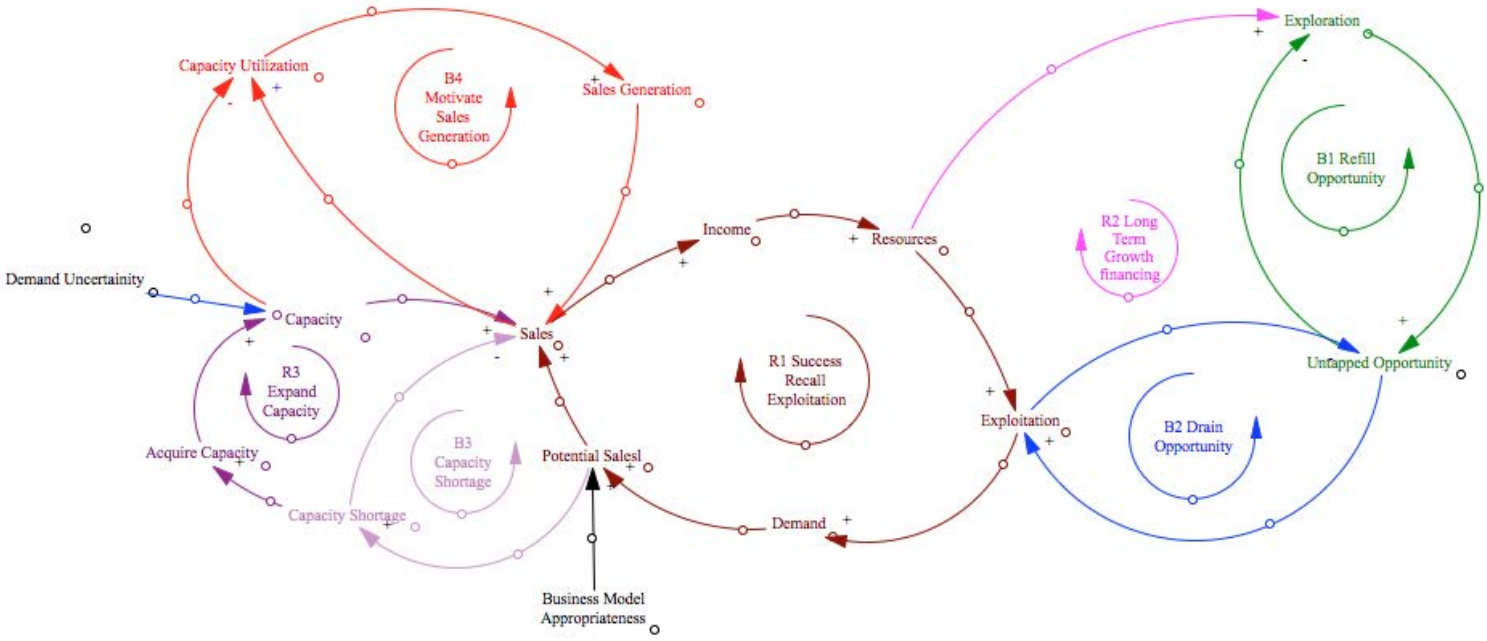


Figure 3: Data Structure

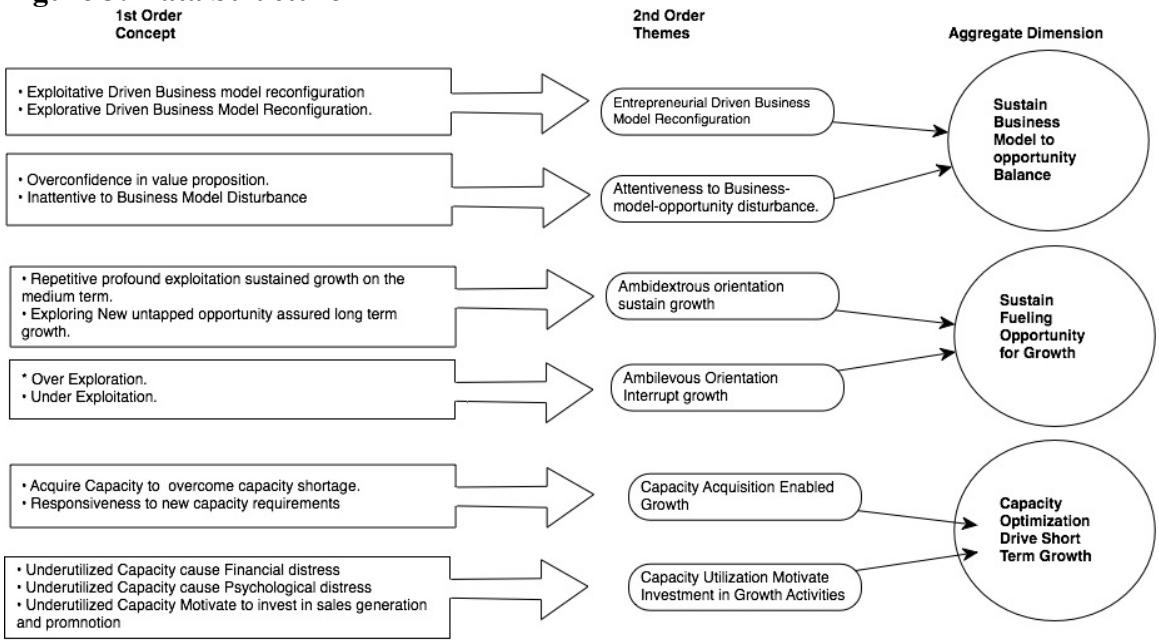
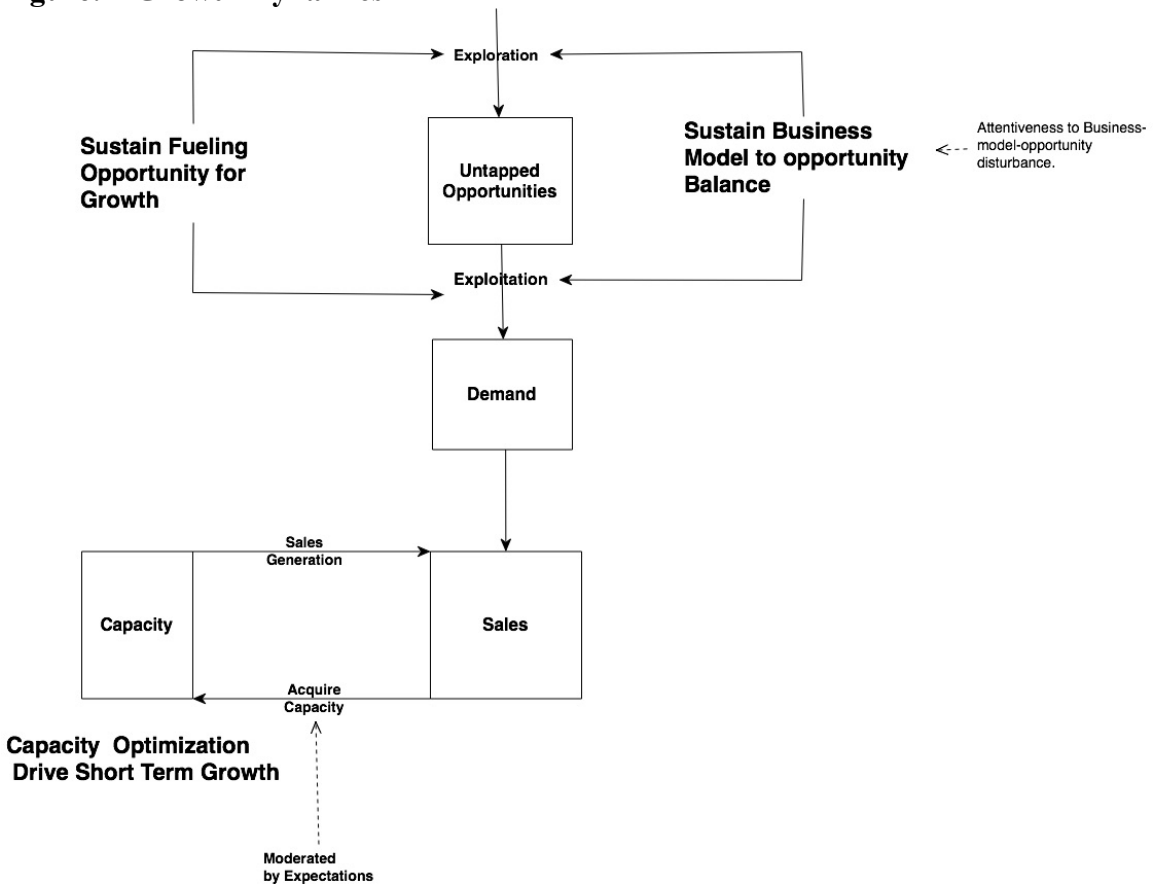


Figure: 4 Growth Dynamics



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