Entrepreneurial Businesses In The Past- And Post-Millennial Knowledge Management Eras:

A Comparative Study

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ABSTRACT:

The paper is a comparative study of the entrepreneurial phenomenon in the eighties versus entrepreneurialism in the post-millennial knowledge management era. For this reason, it first concentrates on the historic evolution of the entrepreneurial phenomenon of the eighties and then, by shifting away to more practical issues on small business studies, the paper examines a number of personal, sociological, and environmental factors that have influenced small businesses. Ending the retrospective analysis of the eighties, the paper examines a number of questions that were then considered as the reference points in small business studies and juxtapose the influence they have had in the post-millennium era.

Approaching the issue from a knowledge management perspective, the paper investigates ways by which small businesses can be assisted to adapt to today's knowledge economy. It takes a speculative look into questions like: "How should innovative entrepreneurs use knowledge?"; "Should they be capable of using knowledge management at strategic, tactical or operational level?" or "Could knowledge management instruments *per se* assist them to acquire, develop and share knowledge?" Upon answering these questions, the paper proposes a knowledge organisation philosophy which may affect the way in which innovative small businesses work in today's global economy.

Keywords: *Entrepreneurship, Small-business, Comparison study, Past- and post-millennium era, Knowledge management and organization*

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1. Introduction

Authors of the pre-1980s' business management books tended to perceive entrepreneurs as the individuals who create a new small business that flourishes and generates new employment. Under their point of view, not only the eighties but every decade before or after the eighties, could equally be labelled as entrepreneurial decades. The term 'small business', in this paper, is used in place of the phrase 'small- to medium-sized enterprise' (SME) introduced by the EU administration.

In time, the view points changed: To some, entrepreneurs are those who form new businesses that prosper and create new employment, like Bill Gates of Microsoft and

Steve Jobs and Steve Wozniak of Apple. Others also view as entrepreneurs corporate managers who achieve outstanding success for their firms, like Harold Genin of IT&T and Lee Iacocca of Chrysler. Irrespectively of the definition one may acknowledge, facts indicate that: In the USA economy, 21 million jobs were created in the 1980s, with a 94% of those generated by the 15% of young, entrepreneurial and rapidly growing companies; during the same period, 3.5 million were eliminated by Fortune 500 companies (Birch, 1987). In central and eastern Europe approximately 7 million entrepreneurs were striving, during the 1990s, to transform the command economies of the post communist nations into free markets and, recently, China has recognised the importance of entrepreneurs by accepting them as members of the communist party.

In today's economy 'entrepreneurs engage in any enterprise in the hope of creating wealth' and they 'contribute to our economic progress and well being by moving resources from less to more valuable employments'; they are 'willing to risk their wealth and reputations to challenge the prevailing views of the possible, and who, when they succeed, turn one generation's fantasies into the next generation's necessities' (Clark and Lee, 2006, p. 1). In a free market economy environment, knowledge is the factor with which entrepreneurs can distinguish themselves from their competitors. In the western –and not only– knowledge economy, the increasing interest for individual entrepreneurship has given birth to technological and scientific developments that follow each other at a very fast pace. The evolution of knowledge and its management has drastically changed the prism under which entrepreneurial businesses are scrutinised in the post-millennium era.

2. Small Business Economics

We are focusing on small businesses from the economic theory perspective under which entrepreneurs obtain a sense of purpose and accomplishment, and are recognized as the persons who perceive an opportunity and create an organisation to pursue it. The economics of entrepreneurship are very important to the economic development and social welfare of a country, as they affect the two major questions about society: how a society creates new wealth and how this is distributed among its members (Kirchhoff, 1994a). Upon answering these questions, distinguished economists have acknowledged the role of entrepreneurship as a major mechanism for ensuring the two economic transactions, above.

Under the neoclassical perspective –many buyers and many sellers who interact so as to ensure that supply equals demand– the entrepreneurs were practically deleted. Neoclassical theory which does not take for granted the origin of 'new demand' has always had its critics; many classical economists objected to the absence of entrepreneurship from the neoclassical model. It was the classical capitalism theory – owners of land, buildings, machinery and capital can create profits for themselves– that spawned entrepreneurship and gave to entrepreneurs a sense of purpose and accomplishment. Joseph Schumpeter, the Austrian born economist, first saw innovation –the use of an invention to create a new commercial product or service– as the driving force for creating new demand for goods and services. According to Schumpeter, entrepreneurs start their business with little personal assets and the ambition to create wealth for themselves taking advantage of innovations that challenge the established few suppliers who dominate the markets. He called this process 'creative destruction' because entrepreneurs create new wealth through the process of destroying existing market structures (Schumpeter, 1951).

Finally, towards the end of the twentieth century the vagueness around entrepreneurship was elucidated. Since 1979, the year that David Birch, the MIT business demographer, published results of an economic analysis demonstrating that 'small firms dominate job creation and economic growth in the United States', entrepreneurs are considered the creators of wealth through innovation; they are at the centre of job and economic growth; they are believed to represent a mechanism of fair wealth distribution that depends on innovation, hard work and risk taking.

3. Critical Factors

Very often we hear or read the comment that success in starting a small business, entrepreneurial or not, is to a large extent a matter of luck. But that is not true. Do we believe that becoming a good medical doctor, an engineer or an actor –just to mention a few professions– is a matter of luck? The truth is that there is no more luck in becoming a successful entrepreneur than in becoming successful in anything else. To be successful in entrepreneurship, one must be prepared.

Here is where the next question arises: Is entrepreneurship a talent or a science that can be taught? Although as recently as in the mid eighties many academics maintained that entrepreneurship could not be taught, it needed less than ten years for it to become a very fast-growing subject in the major business schools curricula. The process of creating a new, innovative business is well understood and, thus, it can be taught; early enough, even at the People's University of Beijing, courses on free enterprise and entrepreneurship were introduced (Bygrave, 1994). Moore (1986) presented a model of the entrepreneurial process that starts with the innovative idea of the entrepreneur and is almost always followed by a triggering event that gives birth to a new organisation that will implement the idea, in the hope that significant growth will eventually close the circle of the model.

Bygrave, to whom "the *entrepreneurial process* involves all the functions, activities, and actions associated with perceiving opportunities and creating organizations to pursue them" (1994, p. 2), recognizes a number of personal, sociological, and environmental factors that are critical upon establishing a new enterprise. While entrepreneurship has been studied extensively, research findings have not been consistent regarding the entrepreneurial personality. This may partly be due to the fact that different types of entrepreneurs are revealed in the relevant literature. Miner (1997) makes the distinction among four personality types of successful entrepreneurs: the personal achiever, the real manager, the expert idea generator and the emphatic salesperson; Reynolds et al –Bygrave being one of them– (2003) differentiate between 'opportunity' and 'necessity' entrepreneurs. Whether or not a certain type of entrepreneur will go ahead with his innovative idea and will create a new business, very often depends on factors like family status, role models to which he/she is exposed, alternative career options, the economical situation and, last but not least, the availability of resources.

External, environmental influences are considered as important as the personal attributes for a would-be entrepreneur. Some distinct areas of the world are definitely more entrepreneurial than others. The region of East Cambridge that is adjusted to MIT was characterised as ‘The Most Entrepreneurial Place on Earth’ by *Inc.* magazine and the Stanford University sociologist Everett Rogers (1984) explains in a very vivid way why so many people around her school catch the bug she names *Silicon Valley Fever*. Having successful entrepreneurs in their close home or work environment is another strong factor that generates the desire to would-be entrepreneurs to become one, as well. Bygrave (1994), reports that at Babson College, where he teaches, more than half of the students studying entrepreneurship come from families that own businesses.

Family businesses, of course, existed long before the evolution of entrepreneurship and even before the genesis of historians and economists. Wang et al (2007), who studied the financial performance of small family businesses in the UK, mastered by their founders or their descendants, notice that the lack of a consistent definition of family business can cause confusion. The authors give the example of Astrachman and Shanker (2003), who proposed three operational definitions, taking into account different modes of family involvement. Accordingly, the number of businesses that are labelled as family firms varies from 3 to 24.2 million in the US only.

Finally, there are some sociological factors, connected with the entrepreneur’s age and family responsibilities that play an important role in the decision of a would-be entrepreneur to start a company. Career decisions are much easier for a person in his mid twenties to take, than for somebody in his mid forties, with family, children and the responsibilities that come along with them. Critical factors, sociological or not, appear to be strongly influenced by the socio-economic environment, in certain parts of the globe; Nair and Pandey (2006), who surveyed 46 entrepreneurial firms in India, are listing the religious community of the entrepreneurs, the economic status of their family, their age and, only at the bottom of the list, education and training as the most important factors that affect entrepreneurship.

3.1. Start-Up Capital And Leadership

Raising the start-up capital needed in order to get the business generate a positive cash flow, was another critical question that needed to be answered by the entrepreneurs of the eighties. Some striking examples, where young entrepreneurs started their small business with very little start-up capital have been given special attention: Olsen and Anderson started DEC with only 70,000 US $ and built a company that ranked in the top 25 of Fortune 500. Jobs and Wozniak used as start-up capital for Apple the 1,300 US $ raised by selling Job’s Volkswagen and Wozniak’s calculator. But for the majority of the entrepreneurs, having exhausted their personal savings and those of their family or friends, there are two options left: debt or equity. Entrepreneurs who choose debt start-up capital maintain total business ownership but are burdened with bank interest and eventually have to pay back the initial capital. Those who choose equity prefer to give up some of the business ownership in order not to have to repay the start-up capital.

Leadership is another behavioural attribute that largely differentiates the entrepreneur from the non-entrepreneur. Although personnel selection and training have been formalised for most of the routine aspects of managerial skills, based on comprehensive job analyses, this is not the case for the leadership tasks of the entrepreneurs. Human resource management researchers distinguish two roles that an effective owner-manager of a small business should undertake. The *charismatic role* that is often split into envisioning, empowering and energising and the *architectural role* involving the design of the organizational structure and the setting of the appropriate control and reward systems (Kets de Vries and Balazs, 1999). Each one affects different functions of the organization and, thus, they are critical for the success of the enterprise. The entrepreneurs who manage to balance amid the above two roles and, at the same time, possess a good mix of basic managerial skills have the best credentials to success.

4. Small Business Problems

In an effort to better understand the problems that small businesses and entrepreneurs faced during the eighties and nineties we take a close look at certain questions that Murphy (1996) considered as the reference points in small business studies in the UK. In order to enrich our study and enable the comparison with the post-millennium knowledge management era, we juxtapose findings and comments from relevant studies in Europe, the US, Canada and other developing countries, wherever appropriate.

Can start-up be encouraged by a state enterprise policy?

According to Murphy (1996), regional aid policies designed to encourage new businesses have failed to attract dynamic, new technology, high productivity businesses with export potential. He recognises, though, that the attempt to get people off the dole or a stable job and force them to accept responsibility for their own employment can be seen in governmental Enterprise Allowance Schemes.

Gatewood and Hylton (1994) portray Small Business Administration (SBA, established by the USA Congress in 1953) as the independent federal agency charged with aiding, counselling, assisting, and protecting the interests of small businesses. SBA had 110 offices already in 1994 and covered every state supporting diverse activities with its development programs like the Small Business Development Centers, National Innovation Workshops, Manufacturing Technology Centers, etc.

Looking into the issue from a reverse angle, Clark and Lee (2006), emphasise on the entrepreneurial freedom and the way it has been tolerated by the state. The authors are very critical to governments ‘distorting market activities by expanding beyond the minimal role necessary for maintaining a properly functioning market order’ and urge them to find the ‘fragile balance between ... the freedom and discipline upon which a market depends’ (p. 13).

Is government support for small businesses sufficient?

The nature of government support varies among countries and economies. For Murphy (1996) the financial support provided by the UK government is limited and he considers the multi-agency provision (Training and Enterprise Councils, or Local Enterprise Councils) responsible for the noted lack of coherence in enterprise policies.

In the USA, according to Gatewood and Hylton (1994), it appears that there is a wealth of external assistance provided at Federal, state and local government levels, together with some non-profit institutions; SBA and the university-supported Small Business Institute (SBI) program being the most widely spread. White and Reynolds (1996) maintain that one of the few ways in which governments might be involved in the creation and support of new business is through the provision of a variety of business assistance programmes, which may be either operated by the public sector or just aided by government advertising. According to the authors, these programmes have flourished in the US and may be considered as an important contributor to entrepreneurship.

Co (2004), after surveying 200 small and medium sized firms from different sectors in Philippines, notices ‘significant differences in the views of government support institutions and entrepreneurs as to whether the programmes were responsive to the needs of the entrepreneur; whether they encouraged entrepreneurship and helped in the success of a firm’ (p. 185). Based on her study findings, the author proposes for the programmes to be periodically reviewed, mainly from the perspective of its users who have to ensure that they are tailor-made to their needs; otherwise the institutions offering them may very well become self-righteous. In India, support from financial institutions is in dismal state and this, according to Shukla (2004), is responsible for a considerably lower growth rate noted in the country’s construction sector, as compared to the ones of China, Brazil and Taiwan, all four rapidly developing countries. The author notes the ‘need for governmental support through incentives like a rational power tariff, regular electricity and water supply, rational tax structure and financial system and infrastructure’ (p. 89); services that are all taken for granted in every western economy.

Do small businesses generate significant employment opportunities?

For Murphy (1996), whose study focuses on the UK, the question as to whether or not small businesses generate employment opportunities is controversial. He also has certain doubts regarding the quality and other features of the jobs created by small businesses: if they are full-time and offer secure conditions and reasonable payment. Murphy also reports the belief noted in the UK that small businesses are more labour intensive and, thus, more likely to create jobs, while large enterprises are more likely to utilise new technologies to achieve efficiencies and economies of scale, thus reducing jobs.

The situation appears clearer in the USA. We have already referred to Birch who, in 1987, published results of an economic analysis demonstrating that small firms dominate job creation and economic growth in the United States. According to SBA, small businesses create two out of every three new jobs; over 20 million small companies provide work and income for 57% of the private USA work force (Gatewood and Hylton, 1994).

How are small businesses related to technology and technological innovation?

The contrasting and rather heterogeneous nature of small businesses is the main reason for which Murphy (1996) is not giving a clear answer to the question. He quotes plenty of evidence for the emergence of new technology firms in computing and software applications, but he also gives examples of small business sectors that are labour intensive.

Bygrave (1994), talking for the USA, states that entrepreneurial firms are great innovators and big USA firms rely increasingly on strategic partnerships with smaller entrepreneurial businesses in order to get access to desirable R&D. He gives a number of examples that support his statement.

Finally, questioning Schumpeter's (1942) rather old posture that innovation capabilities increase proportionally with firm size, Roy and Sikdar (2003) propose an empirical research to ascertain 'that small enterprises have certain learning characteristics which enable them to adopt new technologies faster than large enterprises' (p. 183). The authors appear quite sure about the confirmation of their hypothesis and they believe –in compliance with Bygrave (1994), above– that this 'would venerate models on organising large enterprises in the lines of small entrepreneurial firms so as to bring in flexibility, learning ability and higher responsiveness' (p. 196).

How important are the managerial skills of small businesses owners?

Murphy (1996) recognises the need to improve the skills of small businesses owner-managers, something that appears also to be of strong interest to training organisations, consultants and academics. At the same time he admits that the development of skills should have as a prerequisite an adequate definition of what constitutes 'managerial tasks' for small businesses owner-managers. And Coulson-Thomas (2000), underlines that educators and trainers should define relevant competences and take appropriate steps to equip would-be entrepreneurs with them.

For Bygrave (1994), the ideal entrepreneur in the US should have management experience, preferably with responsibility for budgets, or better yet, accountability for profit and loss. Kanungo and Menon (2005), who questioned 485 human resource managers in the Quebec region of Canada, reveal three basic competencies: affective, intellectual and action-oriented. According to the authors, when these three are combined with the very essential goal and problem orientation, may form the basic components of an entrepreneur's resourcefulness.

In central and eastern Europe, entrepreneurs who manage small and medium sized, domestically owned private enterprises have to deal with the challenge of internationalising their business operation within the changing business environment of this transitional economy. Lloyd-Reason et al (2005), upon examining the extent to which an infrastructure of formal and informal provision is developing to match the above demand in four countries –Bulgaria, Czech Republic, Hungary and Romania– have identified the lack of professionalism within the business support infrastructure and poorly developed management skills among the key functional areas of concern in the organisations interviewed.

What is the ideal balance between small and large enterprises in an economy?

In Western economies little attention has been given to the implications embedded in the question of balance, while in the late eighties early nineties, the former command-led economies of Central and Eastern Europe have recognised the need for small businesses. According to Murphy (1996), a simple answer to the question of the right balance could be that no one knows, as in a demand-led economy it is the market that decides. But he also recognises that, from another point of view, the balance between large and small is a question of innovation and efficiency, as an overdependence on small businesses would harm these two critical features of a nation's economy.

Do barriers to growth exist?

Murphy (1996), based on a report published by the Institute of Chartered Accountants in UK, reports funding and lack of managerial skills as the strongest barriers to growth. Bureaucracy (compliance with the UK or the EU legislation and exporting issues) and poor perception of the economic environment and market issues are also quoted as major inhibitors to growth.

Bureaucracy is also recognised as a major barrier in India, together with the export-import policies, excise duty and continuous increase in sales tax (Shukla, 2004).

What kind of small businesses fail, why and at what point in their life-time?

Murphy (1996), who sees 'failure' as either voluntary or forced liquidation, emphasises on why small businesses fail and whether or not trends can be detected which will help managers to avoid failure. The author relates small businesses mortality to barriers to entry and comes to two broad conclusions: where barriers to entry are low then survival is low, and where barriers to entry are high then there is a greater chance that a business will survive. Storey (1994) identifies eleven factors which influence the probability of business failure, with size and age at the two top positions. Gangulay (1985) claims that almost 50 per cent of the firms fail in the first four years of their life.

Kirchhoff (1994a) who also analyses the term 'failure' in depth, states that SBA administrators often use the alliteration that 'four out of five small firms fail in their first five years' in the USA. He adds, though, that no statistical sources or analyses report such high failure rates. Kirchhoff (1994b) also claims that the survival rate of the small firm is one out of two, when ownership changes are included, while 28 percent survive with their original owners.

Through a survey among ninety British and forty-eight Indian entrepreneurial ventures, Manimala (2002) observes that 'the consequences of a new venture failing in West are not as serious as it is in India' (p. 168). According to the author this is due to the relatively good employment situation in the West as compared to the rather grave one, in India.

In the previous sections, we have completed our retrospective analysis of the entrepreneurial phenomenon of the eighties and have made certain projections into today's state of affairs. We have taken a close look at the economics of small businesses and examined a variety of factors that are considered critical for their start-up. Focusing on interesting previous research findings has helped us better understand the problems they face. As we are now aiming to connect the above raised entrepreneurial problems with knowledge and its management, we must first define a certain number of 'knowledge domains in which the entrepreneur can target himself in particular' Beijerse (2000). In his study, Beijerse defines three such domains: organisation, marketing and technology. Knowledge in the organisation can be applied to all levels of management –strategic, tactical and operational– policies, company culture, and human resources. Knowledge, in the area of marketing, can be related to markets, competition, customers, sales, distribution channels and target groups. Finally, technological knowledge is closely associated with core competences, product research and development, information and communication technologies. The importance of the above knowledge domains for the would-be entrepreneur, is leading us to take a closer look into the knowledge management issue in the following section.

5. Small Business In The Knowledge Economy

Knowledge management owes its inspiration to the work of the philosopher Michael Polanyi and the Japanese organization learning 'guru' Ikijuro Nonaka. Both theorists argue that knowledge has two forms: explicit and tacit, which bears some similarity to Thomas Stewart's hard and soft knowledge assets and the perspective of von Krogh and Roos who assert that knowledge differs in many ways from what they call traditional resources (i.e. financial, physical, organisational, technological, intangible, and human). Explicit knowledge is the obvious knowledge found in manuals, documentation, files and other accessible sources. Tacit or implicit, knowledge is found in the heads of an organization's employees. It is far more difficult to access and use, for obvious reasons. Typically, a small business or an entrepreneurial organization does not even know what this knowledge is.

There is no doubt that the world economy, during the last two decades, has demonstrated unique characteristics such as the critical role of information and communication technologies and the extent of globalization. The new knowledge-based economy, which is inhabited by knowledge-intensive firms employing knowledge workers, has its own economic structures and rules although it does not fundamentally differ from the industrial economy which preceded it. Grant (2000, pp. 29-30) juxtaposes a list of characteristics of the new, knowledge-based, postindustrial economy that he considers closely associated with the increasing interest in knowledge management:

- ♦ The principal factor of production in the new global economy is knowledge, as opposed to capital (industrial economy) and land (agrarian economy).

- ♦ The primary assets of firms are intangible (like technology, patents and brands) rather than tangibles (land, machines, and financial assets).

- ♦ It is digital, fully networked (through Intranets, Extranets and the Internet), and thus virtual. Grant describes the ‘virtual’ organization as one “… that lacks either formal structure or authority” (2000, p. 29).

- ♦ The new economy is fast moving (compressed product life cycles) and better performing, in developed countries where the demand to appreciate the benefits of the new economy is not stagnant.

The combined effect of these characteristics has resulted to a number of structural changes within the business sector that are affecting small businesses and entrepreneurial organizations. Dissolving the boundaries between firms and markets, making gradually less clear the distinction between producers and consumers and, last but not least, globalization are among them. But, as Grant warns, by accumulating every significant change that has occurred in the new economy and accrediting them all to the new knowledge economy we run the risk of failing to analyze contemporary trends. And this analysis is very important if we are to understand small business entrepreneurship and plan its traces into the future.

Under Nonaka's perspective, any entrepreneurial small business that would like to be a knowledge creating company needs to understand the nature of knowledge it seeks or it possesses and the systems which are used to create, maintain, and disseminate its organizational knowledge base. According to Freeman (1982), the knowledge creation that has gained greater association with the entrepreneurial firm is related either to 'invention' (the original conceptualization of an idea, drawing or model) or to 'innovation' which is the first commercial application of an invention. The role of the entrepreneur, as a leader, is to provide the conceptual framework that will allow his employees to innovate by using the information and knowledge they posses.

Innovation, by its nature, destructs the equilibrium and causes uncertainty in today's competitive markets. In order to survive, small businesses have to innovate further and although this competition driven innovation may keep large corporations alive, it creates difficulties to small businesses (Cantner et al, 2004). Despite that, recent research findings from different areas are positive: Van Auken et al (2008), upon analysing the relationship between the degree of innovation and performance among 1,091 Spanish SMEs, report that innovation positively impacts SMEs performance in low and high technology industries and that it is more important in achieving a competitive advantage for high technology rather than low technology firms. MacAdam et al (2008), who studied the innovation incorporation in SMEs as a key sustainable source of competitive advantage among 2,086 SMEs in the UK, report that innovation is most strongly related to government grant aid, firm size, industrial sector, and the approach taken by the firm to organise how it develops products and processes. On the other hand, Vyas (2005, p. 107), argues that 'for a small business, imitation rather than innovation provides a better chance of survival in competition with a mature firm'. The author admits that profits from an original innovation may be much higher than those from an imitation, but they may be well balanced against the risk and possible losses that quite often follow an unsuccessful innovation.

Entrepreneurial firms are destined to innovate for yet another reason; it is the new skills and competences developed along side with the innovative process that enables them to perform fine and survive in the market (Cefis and Marsili, 2005). In the following section, we are taking a close look at certain research findings that may shed light to our major hypothesis: the extent to which knowledge management may assist small businesses to be converted into knowledge organizations in the post-millennium era.

5.1. Recent Research Findings

Careful reading between the lines of the main findings of certain rather recent researches will help us understand how knowledge management and its tools are used by small, entrepreneurial businesses in the past- and post-millennium eras. The first is an ongoing research project that has been contacted by the Centre of Competitiveness at the University of Luton. It demonstrates a rapid development in the way that small businesses in the UK exploit knowledge and intellectual capital. It was initially addressed to 2,000 companies and 500 professional firms, in the UK, covering a very wide range of services (accounting, advertising, management, information technologies and engineering). Answering the question ‘what is being done to create information entrepreneurs?’ Coulson-Thomas (2000, p. 198) states that ‘far too little effort is being devoted to the critically important areas of e-business, business development and entrepreneurship’ and that ‘not one of the companies examined devotes development resources to creating any form of intrapreneur’. Perrin (2000) reports that none of the organizations surveyed ‘exploited more than a handful of the 20 categories of intellectual property examined’ under a side research within the same research project. What is interesting, though, is that Coulson-Thomas (2004, p. 1), reporting on more recent research findings of the same project, notes an ‘enormous potential for knowledge entrepreneurship …’ and the ‘need to step up from information management to knowledge entrepreneurship’. And he refers to a number of small, innovative entrepreneurs (Avaya, B&Q, Dana, Eyretel and Friends Provident among others) that ‘have used knowledge-based support tools that help people to be more effective in their jobs’.

Research findings of Beijerse (2000) who paid special attention to the relationship of knowledge management and small businesses are also very interesting. Upon answering the question ‘How do innovative entrepreneurs use knowledge’, through the analysis of the results of an extended survey among twelve innovative companies from the Dutch industrial and business service sectors, Beijerse concludes that: There have been hardly any systematic knowledge management policy noted on strategic or tactical level within the twelve small businesses studied. That means that there were no goals included in the company strategy, not even any structure on a tactical level related to knowledge development, acquisition, sharing or evaluation. On the other hand, Beijerse reports that there were an astonishing number of 79 different instruments used in order to evaluate, develop, acquire and share knowledge on operational level among the companies studied.

KPMG, in their 1998 Knowledge Management Research Report, notice that a surprising 42 per cent of the 100 British companies questioned about the various knowledge management aspects in their every day business management, admitted –at the end of the survey– that ‘We already use knowledge management, only we do not call it knowledge management’. Another remarkable finding from this survey is that 14 per cent of the companies questioned had never heard of knowledge management and only 2 per cent believed that knowledge management is a trend that means very little.

Clusters of high-technology firms are another means of sharing knowledge and have always been considered of significant influence on the innovativeness of regional economies. Bhave (1994) reports that entrepreneurial firms gain access to resources through networks and that by using these networks they gain further access to additional sources that are combined in the start-up stage. Xingang Xu and McNaughton (2006), upon examining the evolution of the Waterloo Region Canada’s Technology Triangle, identify knowledge transfer, inter-firm networking and collective learning processes as the main forces that drive high-technology clusters to evolve over time.

Finally, Schultz (2008), in a case study of a certain non-profit, nongovernmental organisation in the US which the author identifies as ‘entrepreneurial on the one hand’, notices two distinct cultures: one of central coordination and efficiency and another of localised decision-making, involved in encouraging innovation and entrepreneurship, while institutionalizing an organisation-wide knowledge management initiative. The author concludes that, although this cultural mix makes implementing knowledge management seem next to impossible, certain steps towards this direction have been recognised: knowledge activists may help facilitate explicit knowledge management on an insufficient budget; individual staff members with adequate personal motivations may offer alternative points of leverage to help institutionalize knowledge sharing and embed knowledge management practices.

The foregone analysis of the influences of today’s knowledge economy environment on small entrepreneurial businesses and the above research review leads us to draw useful conclusions in the section following.

6. Conclusions

In this paper we have assessed a retrospective analysis of the entrepreneurial phenomenon of the eighties and we have looked into its economics and the critical factors that are essential for a would-be entrepreneur in the post-millennium knowledge management era. We have demonstrated that entrepreneurship is not a matter of luck, but a talent and a science that can be taught. This does not contradict Coulson-Thomas’ point of view that ‘some knowledge entrepreneurs are instinctive or born; others possess specialist expertise, or know about particular technologies’. After all, it is the same author who states that ‘in fields or sectors in which know-how accounts for an increasing proportion of the value being generated ... corporate culture, policies, processes and practices should all be supportive of knowledge entrepreneurship’ (2004, p. 2). From the above research review we may conclude that a significant part of the entrepreneurial and innovative small businesses in Europe, the US, Canada, and certain developing countries do use knowledge management in a way. Even if they do not use it at strategic or tactical level, they make good use of knowledge management instruments in order to develop, acquire, evaluate and share knowledge.

We are, at this point, juxtaposing the important role of training or long-life education since we have demonstrated, in sections three and five, that there is a lot for a small business owner to learn in order to convert his/her entrepreneurial small business into a successful knowledge organization. A knowledge organization or a small business managed by a knowledge entrepreneur in the post-millennium era, needs to:

- ♦ Recognise the multilateral nature of knowledge and use appropriate job-support tools to capitalise on its knowledge resources in pursuit of its vision.

- ♦ Develop key competences such as the ability to collaborate with others, learn how to manage systems appropriate to store and disseminate knowledge, in a way that creates and delivers greater value.

- Exceed the traditional limits of knowledge management using all possible combinations of emerging technologies to network people and organisations in a way that communication and sharing of knowledge will increase organisational performance.

Under this perspective, entrepreneurs, who in the early eighties were identified as the individuals who create a new small business that flourishes, may, in the post-millennial knowledge management era, be seen as the engine of a nation's economic and social growth. Entrepreneurial knowledge organisations are now acknowledged as the mechanism by which new products and services enter the market and create growth, in a way that allows economists to state that the more entrepreneurship an economy produces, the better are its chances of remaining competitive in today's knowledge economy. Especially in the in the post-millennium arena of a borderless world of finance, technology and knowledge transfer that grant to small businesses access to everything that in the past only big businesses could own.

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