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Title: An investigation into the development of  
entrepreneurship in the UK

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## Abstract

The study will be focusing specifically on the impacts that these entrepreneurs have had on the UK (regional) economy. In the last 20 years we have seen a wealth of studies analyzing the *determinants* of entrepreneurship. Though some of these studies are theoretical (e.g. Holmes and Schmitz, 1990), others are empirical (e.g. Evans and Leighton, 1990). The *impacts* of entrepreneurship, in terms of economic growth, have also generated a base of extensive literature. Recent technological development, deregulation, globalization, shifts in the labour supply, variety in demand, and the resulting higher levels of uncertainty have caused a shift in the industry structure away from greater concentration and centralization towards less concentration and decentralization. This has indicated that the industry structure is shifting towards an increased role for small firms. “The function of entrepreneurs can be described as to reform or revolutionize the pattern of production by exploring an invention, or more generally, an experimental

technological possibility for producing a new commodity or producing an old one in a new way” Audretsch (2002). The aim of the research is to identify the development of entrepreneurship in the UK region and the results showed that there was a divergence between the leading and the lagging regions. The study also discussed the underlying reasons for this divergence and its policy implications. Focus will also be laid on the policy initiatives that have been undertaken by the UK government in promoting entrepreneurship in lagging and also extending it in already well off regions. The study also looked into the development of male and female entrepreneurship and identified a divergence in entrepreneurial activity between the genders. The underlying factors for this divergence are also identified and discussed

## Research proposal

### Objectives

- *To examine the regional division of entrepreneurial activity in England.*
- *To examine what underlying factors contribute to this division and its policy implications.*
- *To explore the differences in male vs female entrepreneurial activities in relation to objective 1 and 2.*

### Background

The study will be focusing specifically on the impacts that these entrepreneurs have had on the UK (regional) economy. In the last 20 years we have seen a wealth of studies analyzing the *determinants* of entrepreneurship. Though some of these studies are theoretical (e.g. Holmes and Schmitz, 1990), others are empirical (e.g. Evans and Leighton, 1990).

The *impacts* of entrepreneurship, in terms of economic growth, have also generated a base of extensive literature. Recent technological development, deregulation, globalization, shifts in the labour supply, variety in demand, and the resulting higher levels of uncertainty have caused a shift in the industry structure away from greater concentration and centralization towards less concentration and decentralization. This has indicated that the industry structure is shifting towards an increased role for small firms.

The institutions and policies of the country have been identified as a catalyst for technological change and globalization by shifting to a more decentralised and dispersed industry structure. Entrepreneurship has been identified as being at the heart of national advantage Porter (1990). There is ample evidence which suggests that economic activity moved away from large firms to small firms in the 1970s and 1980s, these are believed to have contributed greatly to the current strong position that the UK economy finds itself in. This is further illustrated by the performance of London in particular which has been dubbed the financial capital of the world.

Carlsson (1992) propounds two reasons as to why this shift occurred. The first relates to the fundamental changes in world economy during this period. These changes relate the intensification of global competition, an increasing level of uncertainty and the growth in market fragmentation. The second relates to the change in the character of technological process. Furthermore Piore and Sable (1984) argue that “uncertainty of production market in 1970 resulted in a decrease in mass production and promoted flexible specialisation”

Entrepreneurs are of utmost importance to any given economy, especially those based on the capital system. As was argued by Hodgetts and Kuratko (1995) that “small businesses not only create employment but are the economic engine driving the global quality of life”. Furthermore entrepreneurship is argued to constitute the bulk of enterprises in all economies of the world (Storey 1994). This is further highlighted by Timmons (1994) who propounded that entrepreneurs and SME’s play a major role in the world economy. The individual entrepreneurs are the driving force, “without the commitment, vision enthusiasm, and energy tolerance of risk and ambition of the entrepreneurs the process would not occur”. SME will hence be entrepreneurial if the individual in charge possess these above mentioned characteristics. Enterprises will hence be entrepreneurial only if its management is consistently so.

### *Literature review*

#### **Economic growth**

Economic growth has been explained in the realms of microeconomics Krugman, (1991); Romer, (1990). Schumpeter (1942) however introduced the concept of linking economic growth to industrial organization. In his treatise Schumpeter (1942) proposed the concept of creative destruction where newer firms with entrepreneurial spirit replaced the old and incumbent ones eventually leading to a higher degree of economic growth. Furthermore Schumpeter went on to argue that large organizations tend to oppose change ultimately leading to

entrepreneurs starting new firms leading to innovative activity.

Entrepreneurs are classified in the neo classical economic growth theory as “agents who are (expected)-utility maximizers taking an occupational choice decision to become employees or entrepreneurs. They are characterised as being both in-puters of entrepreneurial skills and risk bearers”. Hill and McGowan (1999)

“The function of entrepreneurs can be described as to reform or revolutionize the pattern of production by exploring an invention, or more generally, an experimental technological possibility for producing a new commodity or producing an old one in a new way” Audretsch (2002). Sometimes it is difficult for organizations to undertake such activity because of the culture of resistance to change; it constitutes a distinct economic rationale primarily due to the un-familiarity of the process and the internal environment’s resistance to change.

Entrepreneurship inter-links with economic growth through the spill over effect. Romer (1986) in his endogenous growth model argued that new technological knowledge is assumed to automatically spill-over. The aim of the knowledge spill over theory is that economical activity will be higher in areas where technological knowledge spill-over’s occur and will generate entrepreneurial opportunities by the exploitation of potential spill-over of that knowledge in regional a context. This is supported by what Glaeser et al. (1992) stated namely that “compelling empirical evidence suggests that a greater degree of knowledge spill-over leads to higher growth rates of cities.

## UK regions

The regions in the UK experienced a great divergence in the economic performance of its different regions during the late 1990's. The reason for this divergence between leading and lagging regions was traditionally believed to be due to the differences that exists between regions in cost of setting up, producing and reaching market with an interventionist policy aimed at overcoming some of these difficulties Armstrong and Taylor (1990), the development of these policies during the post war era were at large aimed at large mobile firms. However Lawson (1999) argued that these policies were ineffective at solving the predicament of the lagging regions. Hence a new approach to the regional divergence was introduced which had dependency on the operation of the market for its success. The underlying factors in the policy were to create ways both in regional and national context of attracting investment in particular to the lagging regions. The expectation is that new and innovative enterprises will emergence from these regions which would have profound effect on the region and the nation as a whole. Despite the fact that these new firms will all have some sort of contribution to the growth figures it is acknowledged that the SME's that will have the most profound effect are the technologically innovative firms Storey et al (1987). If a significant amount of these technologically innovative firms could be encouraged to expand in the lagging regions then they could have considerable effect on long-term local employment and output. The importance of technology in the local economic development was discussed by Malecki (1997):

*“Technology is central to regional change, positive and negative, and to economic change, job-creating and job*

*destroying. It is the most obvious cause and effect of the cumulative wealth of rich nations [and regions]. Technology also promises, more than any other phenomenon, to bring poor nations [and regions] out of poverty”.*

The function of technological innovation in regional terms is that it acts as an avenue for new industries. It creates and integrates regional firms by acting as a substitute for the current and competing goods which provides a broader choice of products which consumers can spend their scarce resources on. As was illustrated by the Industrial revolution countries that are first to generate, implement and adapt to new technology will have a competitive advantage. The UK became industrial leader when they replaced the hand-made textiles with new machinery which could mass produce the textiles allowing them to obtain a competitive advantage. In a similar way the regions that implement and adapt to new technology can gain a competitive advantage over others making slower progress which will be reflected in their economic growth.

The importance of small innovative firms to the UK's technological development has been discussed by Pavitt et al 1987. They stated that small firms have significantly increased their contribution to the development of new technology in the UK over time. The south east region in particular has been singled out in the literature as being the leading region in terms of output and economic growth. This region has a high concentration of innovative firms which attracts investments into the region Harris (1992). These firms are attractive to potential takeovers; furthermore in terms of job creation the literature shows that the south east significantly increased employment in comparison to the other regions. Firm growth was also greater in the south east the median growth for south east firms was 6.2% in comparison to other regions

who experienced a negative growth of -3.6% during period 1968-1978. Firms in the south east were also responsible for a much higher export percentage than the its counterparts in other regions the median growth for SME'S in the south east regions experience a growth of 255% in contrast to a 75% growth in the other regions during the same period. Fast growing firms are more likely to be competing in overseas markets Storey et al (1987). Significant innovation is more likely to emerge from the south east than other regions. The disparity between regions requires government attention in the forms of policies aimed at reducing this divergence in growth through investment in lagging regions and incentives such as lowering the barrier to entry in struggling regions.

### **Entrepreneurship and economic growth**

There have been many studies carried out on entrepreneurship. Much of these studies have focused on investigating the characteristics of entrepreneurs in general. These studies have attempted to explain the entrepreneur by looking at characteristics of successful entrepreneurs. Characteristics such as personality, attitude, educational attainment and ethnic origin (Storey (1994), Reynolds et al (1994), Armington and Acs (2002), Saxenia (1999), Kirchhoff et al (2002).

Others have focused on the regional variations in new firm births. These studies have propounded that regional variation in new firm formation is related to factors such as human capital, industrial structure, population agglomeration, university research, availability of financing and entrepreneurial characteristics (Stuart and Sorensson (2003) p229).

They looked at the impact of social ties on new firm formation rate, they propound that new firms are attracted by other firms "because entrepreneurs find it difficult to leverage the social ties necessary to mobilize essential resources when they reside far from those resources" It has been theorised that cities and regions acts as an attraction for

entrepreneurs and talented people from various backgrounds. They argue that these cities and regions act as incubator of technology, innovation and creativity also that human capital in particular has a great role to play in causing growth and development in these cities and regions Park et al (1925), Jacobs (1961), Thomson (1965), Lucas (1988). These researchers have built on each other's theory; Park et al (1925) initiated the concept of cities having a role in concentrating and spurring human knowledge and capital. Jacobs (1961) then built on that theory and stated how cities act as an open system in where talented individuals from different backgrounds are attracted enabling them to stimulate their creative capabilities. Lucas (1988) provided a framework using Jacobs (1988) theory arguing that cities acts as attractions for human capital hence generating new ideas and economic growth.

### **Literature on entrepreneurship**

Classical studies on entrepreneurship have been focused on the individual and the characteristic that he/she possesses. Storey (1994) stated that these studies tend to focus on factors such as individuals personality, human capital and ethnic origin. Studies on personality has found that entrepreneurship is associated with individual features such as alertness to business opportunities, entrepreneurial vision, pro-activity and family tradition (Blanchflower and Oswald (1990, Chell et al 1991). Studies on human capital have found that entrepreneurship is related to work experience and educational attainment (Evans and Leighton 1989) as is expected research has illustrated that people with higher educational attainment are more likely to found a business than those with lower educational attainment. Other studied have propounded that entrepreneurship can be associated with ethnic origin. Lee (2001) found that Jews and Koreans tended to be more entrepreneurial than

African-Americans due to them enjoying better access to capital via family and ethnic networks. This argument is reversed by Yoon (1997) where he stated that immigrants are highly likely to be entrepreneurs this is because immigrants tend to lack the networks and contacts in existing businesses and suffer from discrimination, tend to be poor in communication skills which makes them more likely to start new firms and become self employed as a result.

Evans and Leighton (1989) used data from the national longitudinal survey of young men to illustrate how men with more confidence in their abilities and who possess more financial resources are likely to start new firms and be self employed. Other areas of research have focused on the regional factors that affect the formation of new firms. They identified local tax rates, transportation costs and economies of scale at regional level Bartik (1989) Kieschnick (1981). The regional variations in entrepreneurial activity that arise within a country can be caused by several of factors. Unemployment, population density, industrial clustering and availability of financing are important variables in explaining the regional variations in firm birth. Armington and Acs (2002) propounded that industrial intensity, income growth, population growth and human capital have a close correlation with new firm births. Furthermore Kirchhoff et al (2002) propounded that academic research and development expenditure to be closely associated with rates of new firm formation across regions. Immigration has also been stated to have a correlation with the level of entrepreneurship (Reynolds et al 1995, Saxenian 1999, Kirchhoff et al 2002)

An entrepreneur's social network is important in establishing links with

other entrepreneurs and critical in obtaining access to resources. One social cohort who has proven to be very entrepreneurial is immigrants. The probability of immigrants starting up new business increase the more educated they are. This because they are risk takers in an environment which is competitive and in where they may face disadvantage due to their foreign status. Research has shown that immigrants were responsible for 20-25% of all new high technology business start ups in the Silicon Valley. Saxenian (1999) noted the importance of extensive networks of Chinese and Indian workers helped people start up businesses by providing contacts and financial support in the Silicon Valley. Moreover Stuart and Sorensson (2003) p229 propound that firms cluster because geographical proximity enables them to use “social ties essential to mobilise necessary resources”. The way in which businesses cluster in the context of entrepreneurship has been theorised and developed throughout the years by many authors. Jacobs (1961) built on Park et al (1925) theory of the role of cities in concentrating and spurring human creativity, Jacobs (1961) elucidated how cities act as an open system to attract talented people from different backgrounds to stimulate their creativity and capabilities. He propounded the open and culturally diverse cities attract the most talented people hence spurring creativity and innovation which are constituents of entrepreneurship.

Furthermore Desrouchers (2001) puts forward the idea that economic diversity acts as a key constituent in city and regional growth as creative people from different backgrounds come together to new and innovative combinations of existing knowledge and technology to create innovation and as a result new enterprises. Moreover diversity, creativity and human capital have been proven to have a positive relationship with

regional innovation when measured in per capita patent production Lee (2002). Furthermore Florida (2002) argues that creativity is an important constituent in regional economic success. More over Florida and Gates (2001) concluded that diversity has a positive relationship with high regional technology output and growth. The social environment in where creativity and diversity come together to spur and encourage entrepreneurship are said to be more important to the development of entrepreneurial activity in a region than venture capital, tax rates and human capital. The question then arises, how can diversity and creativity promote and encourage entrepreneurship? It has been propounded that diversity and creativity are interlinked. The more diverse regions will tend to have lower barriers to entry which in turn makes it easier for human capital from different background to enter the region and stay with it. Lower barriers to entry means that individuals with the right resources and networks can more easily start new firms without taking great risks due to low barriers of entry. These individuals will also have low barriers to exit hence creating an attractive proposition for would be entrepreneurs which would spur economic growth in the region. Hence a more diverse region would benefit from its diversity by attracting and retaining creative human capital. The relationship of entrepreneurship and creativity has been discussed by Sternberg (1999) he propounds that creativity is defined as the ability to create work that is both novel and appropriate. Furthermore entrepreneurship is a type of creativity this is because most new businesses are useful and are original Sternberg and Lubart (1999). Creativity can be acquired by “associating with creativity” Cattell and Buthcer (1968, p285). this further agrees with what Desrouchers (2001) concluded that the concentration of talented and creative individuals in an area creates an environment that attracts other types of talented and high human capital individuals

which promotes business creativity.

### **Spatial dynamics in regions**

The Schumpeterian definition of entrepreneurship has had the greatest impact on the entrepreneurship literature. Schumpeter (1934) proposed that entrepreneurship is a dis-equilibrating phenomenon rather than being an equilibrating one. In his (1934) classical treatise labelled theory of economic development Schumpeter propounded the theory of creative destruction in where new firms with innovative spirit displace less innovative incumbents which ultimately leads to a higher rate of economic growth. Moreover even in his subsequent treatise in (1942) labelled capitalism and democracy Schumpeter argued that “established large corporations tend to resist change forcing entrepreneurs to start new firms in order to pursue innovative activity”. He went on to state “the function of entrepreneurs is to reform or revolutionise the pattern of production by exploiting an invention or more specifically an untried technological possibility for producing a new commodity or producing an old one in a new way”. The undertaking of such task would be difficult for these corporations not only because they are outside of the routine tasks that everyone understand but also because the environment tends to resist change. Another area of literature has tried to focus on the impact of entrepreneurship on economic growth. These studies have been concentrated on examining the spatial dynamic or regional dynamics of economic growth in relation to entrepreneurship. The most widespread measure of entrepreneurship is through growth. The previous studies have tried to link different measures of entrepreneurial activity to usually firm start up rates to economic growth. Other ways of measuring entrepreneurship also include rate of self employment in a region and relative share of SME’s.

Audretsch and Fritsch (1996) used a database to identify all new business start ups and closures from the social insurance statistics in Germany to examine whether greater degree of disequilibrium or turbulence leads to greater degree of economic growth as was suggested by Schumpeter (1942). This database records the each new enterprise start up and also the establishment at which an individual is employed. Audretsch and Fritsch (1996) results were surprising as they contradicted the Schumpeterian theory. They showed that a higher degree of turbulence in a region subsequently lead to lower rate of economic growth in both manufacturing and service sectors during the (1980's). Both the start up and closure rates had a negative relationship with economic growth. The areas with high start ups displayed a low growth rate and the same was also true for the opposite the regions with high closures rate also displayed low growth rates. In contrast Reynolds (1999) found in his study that there was evidence to suggest that higher rate of turbulence leads to a subsequent increase in economic growth at regional level in the United States.

Audretsch and Fritsch (1996) speculated that the reason for this disparity between Schumpeter's theory and their findings may be due to the role of innovative activity has in each country. It may be that new firms did not have the same role for Germany as it did for SME's in United States. Hence it can be stated that regional growth arises only when SME's serve as agents of change through innovative activity. The results from Audretsch and Fritsch (1996) were based on data from 1980; it could be argued that entrepreneurship was a still a developing phenomenon at this stage. Large established corporation were seen as

the largest contributors to economic growth. Germany was not as developed as the United States in terms of entrepreneurial activity. These divergent findings between the two countries were perplexing. Nevertheless it illustrated the existence of distinct and different systems between developed nations. However in an updated study Audretsch and Fritsch (2002) find different results emerged for the 1990's. The regions in Germany with high start up rates exhibited a higher growth rates in contrast to previous results. This indicates that Germany's growth patterned changed over time from focus on corporations to higher focus on entrepreneurial activity as a source of economic growth. This change in growth patterns would suggest that a convergence was taking place between the United States and Germany. The United States in particular exemplify the importance that entrepreneurial activity can have on regional and national economic growth the success of innovation centres such as silicon valley in where entrepreneurs from all over the world converge further substantiate this status. Furthermore Foelster (2000) went beyond just looking at the new firm start up rate he explored the overall link between self employment and total employment in Sweden between 1976-1995. He used Layard-Nickel framework which enabled him to provide a relationship between micro behaviour and macro economic performance in which he illustrated that increase in self employment rate had a positive relationship with Swedish regional employment figures. The SME'S no doubt are expected to create jobs in the market. The relationship between SME`s start up and employment growth was explored by Hart and Harvey (1995). They looked at three regions in the United Kingdom during the 1980`s. Their findings showed that employment creation came largely from SME`s as expected; they also found that most job losses emanated from SME`S. Moreover the new start up firms have been shown to have had a positive

impact on a regions total factor productivity rates. Callejon and Segarra (1999) studied data sets from Spanish manufacturing industries between 1980-1992 they tried to link new firm birth and exits to total factor productivity growth in regions. They employed a model based on the vintage capital framework in where new firms are expected to represent the edge technology available and existing firms representing marginal obsolete plants. They also used a hall type of production function which takes into consideration imperfect competition and the extent of economies of scale; they found that both new start up firms and those closing down have a positive contribution to total factor productivity growth in regions and industries.

### **Entrepreneurship as source of innovation**

Innovation and technological change are two out of many measurement of economic performance. Technological change has the means to revolutionise an economy bottom up. New inventions or new ways of production are could constitute total factor productivity. The industrial revolutions illustrate how new innovations can stimulate a country's economy. All three revolutions vitalised the world economy and created a period of extreme growth in output. Inventions such as the steam engine to the personal computers change the way in which people dealt with each other and proved to be the initial step towards globalisation and convergence between nations. The literature have attempted to establish ways to quantify technological change, these involve either measuring the inputs into the innovative process i.e. measuring R&D expenditure or the shares of employees that are involved in the R&D process: (2) the number of inventions which have been discovered: (3) or the direct measure of the number of final product or output produced. SME's have proven to be focal points of innovative activity. Innovation

centres such as the Silicon Valley have a long lasting record of SME's who engage in innovative activities, this region has produced much technological innovation ranging from computer software programs to everyday items.

Harhoff and Licht (1996) undertook a study on the role of German SME's in the innovation process. They used the findings from the Mannheim innovation database which measured the extent of innovation in German firms between period 1990-1992, their analysis showed that 12% of the R&D that came from West Germany during this period can be attributed to SME's with 500 employees or less.

In their study they found that 52% of firms with 50 employees or less were not innovative where as only 15% of firms with over 1000 employees showed not to be innovative indicating that innovation increased with the size of the firm. Furthermore 25% the smallest firms that do engage in innovative activity do so without undertaking formal R&D in contrast to 3% of the larger firms that do not undertake formal research and development expenditure. Whether or not a firm undertakes innovative activity may be due to factors beyond their control, there may be certain barriers to entry which could impede their potential for innovative activity. Beise and Licht (1996) studied the Mannheimer Innovations panel which is a database consisting of 43 000 innovative firms in order to identify the underlying barriers to entry for innovative practise that German SME's faced. The main barrier to entry for the years 1992 and 1994 was identified as to long development period required for innovative activity. They also identified legal restriction, restrictive government policies, the length of time taken to acquire government approval for a new product, shortage of financial

capital, lack of competent employees and high risk taking. As was argued above small firms however have been at the forefront of innovation in recent decades. Rothwell (1996) proposes that the aspects that give smaller firms the advantage in innovative activities are generally derived from the difference in management styles between large firms and small ones. Scherer (1991) believes that the bureaucratic structure of large firms is not favourable to undertaking risky R&D. The spirit to innovate must endure layers of bureaucratic opposition resistance regarding risk taking this result in a prejudice against undertaking new projects. Whereas in small firms the decision to innovate is made by rather few people which lessens the bureaucratic constraints, moreover innovation flourishes in an environment free of bureaucratic restraints Link and Bozeman (1991). Smaller firms also attract creative and talented employees from larger firms who are dissatisfied by the bureaucratic restraints in larger firms. Because of the nature of smaller their activities tend to be centred around innovative activity in order to gain competitive advantage Scherer (1991).

### **The effect of entrepreneurship on macro economics**

Scholars have attempted to establish an empirical link between entrepreneurial activity and its effect at national scale. Thurik (1999) studied 23 nations who were all members of the organization for economic co-operation and development (OECD) from the year 1984-1994. His empirical evidence illustrated that increased entrepreneurship in terms of business ownership was correlated with higher rate of employment growth at national level. Furthermore Audretsch et al (2002) and Carrie and Thurik (1999) concluded that OECD nations that exhibit higher rate of entrepreneurial activity have also had higher rate of economic growth and lower rate of unemployment.

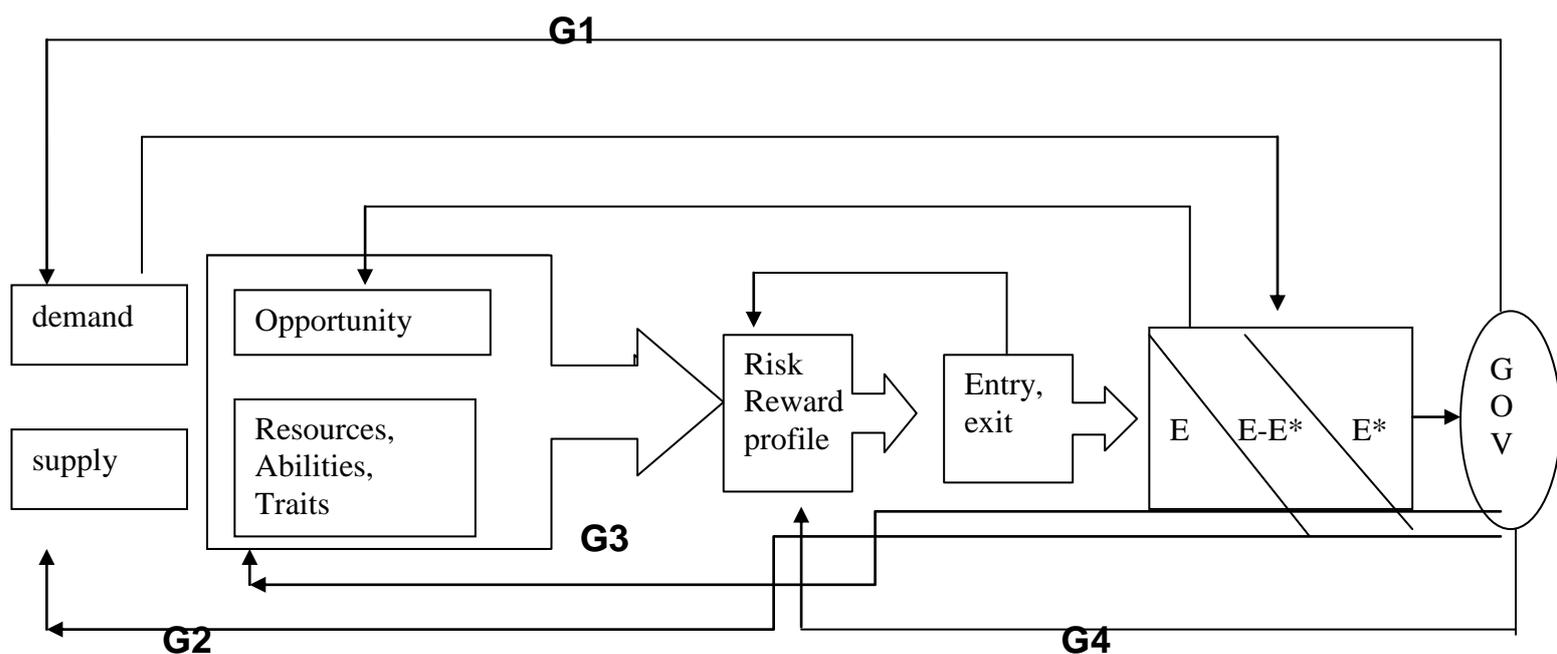
Moreover Audtetsch and Thurik (2002) undertook an empirical study to examine the effect that entrepreneurship has on economic growth and unemployment. They each used different measure of entrepreneurship and different set of samples from OECD countries, which strengthen the methodology as it is cross sectional and measures different time periods. The first method measures the relative share of economic activity accounted for by SME's. It looks at the changes in entrepreneurship in 18 OECD countries over a five year period attempting to test the hypothesis that increased entrepreneurial activity leads to increase growth at national level. The second method measures the level of self employment as an indicator of entrepreneurship and attempts to link entrepreneurship to unemployment figures over a five year period. The different samples both illustrated a consistent trend. They concluded that increase in entrepreneurial activity tends to result in increased economic growth at the national level and decreased unemployment.

Furthermore empirical evidence from Reynolds et al (2000) also finds a positive correlation between increased entrepreneurial activities with economic growth in terms of employment.

### **Factors of entrepreneurship**

Whether an individual becomes an entrepreneur or wage earner through regular employment is decided by many different factors. Factors such as the economical framework in terms of supply and demand and opportunities and threats all interlink. Entrepreneurs are risk-takers they observe an opportunity in a market which they are willing to invest in. If the circumstances are right their investment will prove fruitful. On the other hand there is a great risk of failure within the early month of start up. All this depends on the circumstantial factors such as finance

available, barriers to entry, resources, networks and individual characteristics. Audretsch (2002) developed a framework to analyse the determinants of entrepreneurship. The focus is on identifying factors that influence the supply side of entrepreneurial activity and those influencing the demand side of entrepreneurial activity. The supply side of entrepreneurship is fashioned by the characteristics of population including the demographical features, income level, unemployment, cultural norms and educational attainment. Entrepreneurial activity on the supply side depends to a great extent on the resources and capabilities of individuals along with their attitude towards entrepreneurship. The supply side is also affected by institutional factors such as access to finance available for entrepreneurs and the tax policies in place. In contrast the demand for entrepreneurship reflects the opportunities to engage in entrepreneurial activities for would be entrepreneurs. It is defined as the opportunity for individuals and firms to “invest, develop, pursue and ultimately implement entrepreneurial activities”.



Audretsch (2002)

The model explains the whole process of entrepreneurial activity. The rate of entrepreneurship ( $E$ ) is determined by both macro and micro factors. The supply side would consist of entrepreneurs that take advantage of opportunities depending on whether they have the necessary resources, abilities and personal characteristics to undertake entrepreneurial activities. The demand side creates opportunities for would be entrepreneurs depending on which kind of goods and service that are needed and wanted by the market. The framework considers both external (macro) conditions and individual (micro) individual conditions.

The risk-reward profile examines the different types of employment and is built on the opportunities offered by the demand side and the resources and abilities offered by the supply side. Individuals make their choices based on their risk-reward profile to either enter into entrepreneurship or other forms of employment such as wage employment or unemployment.

If there is a disparity between the actual level of entrepreneurship ( $E$ ) and targeted level of entrepreneurship ( $E^*$ ) government intervention would be required to alter this disparity with policies intended to maintain an equilibrium in entrepreneurship. As can be seen from the figure above this action is through either altering the components in the demand side, supply side or the risk-reward profile directly. Other forms of action that the government may take is through altering the factors determining opportunities for entrepreneurship, these policies may include privatisation of services, making it easier for firms to enter markets through deregulation, allowing greater access to government

sponsored procurement programs that are promoting agglomeration and providing access to global value chains.

G2 and G3 encourage entrepreneurship by altering the factors shaping the supply side. The policies involve encouraging firms and individuals and facilitating access to resources. This entails increasing the supply of would be entrepreneurs through immigration and diversity which would enable creative minorities to be involved in entrepreneurial activities (G2). Another policy option would be enhancing the capabilities and skills of individuals through training and education or making different types of financing available to individuals (G3). The government could also change entrepreneurship perceptions in the risk-reward stage directly via taxes deregulation, subsidies and bankruptcy regulation (G4).

### **The individual entrepreneur**

Another important factor in examining the different factors and determinants of entrepreneurship is the individual and the characteristics that they possess. There have been numerous studies in different fields ranging from psychology, sociology and economics on the features and characteristics of successful entrepreneurs.

The economic literature has proposed a framework first propounded by Knight (1921) which was updated by Lucas (1978), Kihlstrom and Laffont (1979), Holmes and Schmidt (1990) and Jovanovic (1994). The model of income choice proposes the idea that individual have the option of either earn their wages through employment in an enterprise or from profits gained through starting an own firm. The basis of the income choice model is comparing the wages that an individual is expected to

earn through regular employment  $W^*$  with profits that the individual is expected to make through firm start up  $P^*$ . The probability of starting a new firm  $Pr(s)$  can be calculated with the equation

$$Pr(s) = f(P^* - W^*)$$

The probability of an individual making the choice of starting a new firm in the USA increases with unemployment as was concluded by Evans and Leighton (1990). Foti and Vivarelli (1994) also came to the conclusion that unemployment has a positive correlation on entry into self employment when they analysed self employment in Italy.

Individuals are also motivated by the wage differences between regular employment and self employment. Diwit and Van Winden (1989) studied data on a panel of individuals who were contemplating whether to enter into regular employment or into self employment in the Netherlands.

Their findings were that the probability of self employment is favourably influenced by the differential earnings between self employed individuals and those earning wages from regular employment.

Numerous studies conducted by Klandt (1984) and (1996), Kulicke (1987) and Boegenhold (1985) have examined the fundamental characteristics possessed by Entrepreneurs in Germany. They found that the characteristics of entrepreneurs in Germany vary from those who are in regular employment; they found also that the most important characteristic of an entrepreneur is independence. This is because these entrepreneurs tend to be more independent than employees in regular jobs. Responsibility and leadership were other characteristics identified in these studies which entrepreneurs valued and possessed.

Furthermore Klofsten and Jones-Evans (2002) propounded that

personal characteristics such as age, gender, work experience, previous entrepreneurial experience all contribute to the probability of individuals starting up new firms.

### **The firm and its industry**

The external environment must be favourable in order for a new start up firm to prosper. The literature has discussed the different determinants of entrepreneurship which underline the important factors that entrepreneurs need to consider. Geroski (1995) mentions that barriers to entry such as economies of scale, capital requirements, advertising intensity and R&D determine the success of new enterprises. Wagner (1994) illustrated in his longitudinal study that the successful start up of new firms in Germany during 1979-1989 were based in high concentrated and high growth industries. He also found that start up activity was not significantly influenced by capital and R&D intensive industry. His result contrast those of Geraski (1995) which imply that potential entrepreneurs are not discouraged to start new firms in industries which are capital intensive and where R&D plays a vital role.

### **Female entrepreneurship**

Another area of focus in the entrepreneurship literature is on the development of female entrepreneurship. Empirical evidence show that female entrepreneurship in the US increased during the 1990's and has contributed positively towards growth in entrepreneurial activity Mukhtar (2002). He also showed that female entrepreneurship increased between 14% and 37% within the EU in the 1990's. This increase slightly narrows the gap between male and female entrepreneurship.

Female entrepreneurship in 2004 was about 46% which is just below half of all male entrepreneurship in the UK. This percentage was the highest ever reached by females indicating a growing interest amongst females to start their own business in a male dominated business world. The differences between male and female leadership and management styles have been highlighted by Mukhtar (2002). He used data from the United Kingdom and he found that there are significant variations between male and female managers management styles, in terms of their organisational structure, managerial approach and the level of delegation within the organisation.

Another important aspect which concerns female entrepreneurship is finance. Verheul and Thurik (2001, p.329) used a panel of 2000 Dutch entrepreneurs starting new businesses including 500 females, they found that female start ups will experience specific barriers when attempting to acquire start up capital and that female entrepreneurs do tend to use lower amount of start up capital on average than their male counterparts.

Cowling and Taylor (2001) used the British household panel survey which is a data set consisting of 5500 British household and 9000 individuals to establish the difference between male and female entrepreneurs. They found that in general female entrepreneurs are better educated than their males' correspondents also that entry into self employment was considerably higher for males in comparison to females in 1990's

Why are women underachieving in the entrepreneurship sector in comparison to men? Du Rietz and Henrekson (2000) attempted to identify the underlying reasons why men are more likely to start up new

firms. They analysed a sample of 4200 Swedish entrepreneurs in where 405 were females. They discovered large structure difference between male and female entrepreneurs. They also used a multivariate regression analysis with a large numbers of control factors they showed that women underperformance in comparison to men disappears for most of the performance criteria's except in sales growth where they lag behind men.

### **Methodology**

The methodology adopted in researching the objectives consisted of secondary research in the form of literature reviews and data collection from various sources on entrepreneurship which was then analyzed to establish developments and trends in entrepreneurship over time. The literature review included reviewing published journals and previous research which allowed me to gain in-depth information about the research area. This gave me not only historical data but also enabled me to grasp a better understanding of the development of both national and regional entrepreneurship.

### **Secondary data**

The initial aim was that studying the literature would enable me to formulate a hypothesis based on available data to either accept or reject the hypothesis. I would have arrived at my hypothesis using a deductive method as opposed to an inductive method. This is where one deduces a hypothesis from prior theory the other option would have been to use an inductive approach which would have entailed formulating a hypothesis without reference to prior research.

However because of the change in methodology a focused researched question was used instead of a hypothesis.

The nature of the project was desk research (secondary research). Hence I relied heavily on already published data from government sources and other institutions, who annually release data about the economic performance growth projections such as the GEM consortium and the Department for Business Innovation & Skill.

This consisted of raw data which I sought to interpret using computer system such as excel by creating graphs and tables in order investigate the development of entrepreneurship both regionally and across genders. The main source that was used to collect raw data was the Department for Business innovation & Skill which is a government website. This website has registers on regional and national yearly VAT registrations and de-registrations. The data consists of business VAT registrations, each regions new firm start ups are listed as is the total national and UK registrations. This source was used because it is deemed to be rather unbiased. This is because it is official government website furthermore it has raw data on firm registrations and de registration which I put through excel spreadsheet and analyzed, creating graphs and tables. The disadvantage of this is that it lists only firms that are vat registered and does not include non VAT registered firms. These are called the grey firms as they mostly operate illegally and sometimes involve criminal activity; they nevertheless do have some impact on regional economies.

The benefits of using the department for Business Innovation & skill are that the VAT registrations and de-registrations are the best official guide to the pattern of business start-ups and closures. They act as an indicator of the level of entrepreneurship and of the health of the

business population in a regional context. As such they are utilised widely in regional and local economic planning. However these figures do not show the complete picture of start-up and closure activity in the economy due to some VAT exempt sectors and businesses operating below the threshold for VAT registration.

Nevertheless some firms do voluntarily register for VAT even though their turnover is below the threshold. To make the data as comparable as possible over time, a number of adjustments are carried out by The Department for Business Innovation & Skill. The registration figures for recent years are slightly increased to facilitate for the small number of registrations that take more than a few months to be updated. Similarly, the de-registration figures are slightly decreased to take into consideration the dormant of businesses which were classified as de-registered, but that have been found to be in operation again.

Another source that was used was the Gem consortium which is an independent research institute. The Gem gives complete analysed data in the form of graphs on the development of male and female entrepreneurship for the years 2002-2008. The data is collected yearly through telephone interviews with a sample of the adult population in the UK. The sample is stratified at a regional level by variables such as gender, age and ethnicity. Participants are aged 18-64 years old hence the sample is representative of the UK population. The Gem reports are annually released online. GEM measures the trends of individuals in particular countries who are involved in entrepreneurial activity according to their current social, cultural and economic framework and the prevalent conditions in that country. The Gem also underlines the

different procedures and policies that the government have introduced and implemented in recent years to enhance entrepreneurial activity.

### **Primary research**

The research was meant to have been both primary and secondary research based. This would have been in the form of interviews conducted with a British government official whether this was a civil servant or a government minister. I also intended to interview an entrepreneur in the hope of collecting information about their experience in setting up their business. The interviews would have been open-ended structured as I was intending to explore a “general area in depth” (Saunders 2003). This would have generated valuable information as these entrepreneurs are the ones that are assumed to have contributed to the growth of the regional entrepreneurial activity in the UK. Hence they would have greater understanding of the process and challenge in setting up a business in Great Britain. It is vital to get a more valuable understanding of the contributions of these entrepreneurs to the British economy.

I would have limited myself to interviewing one entrepreneur and one civil servant during the primary research stage. Interviewing more than just one entrepreneur would have been better and given more fruitful results as I would be able to gain different perspectives of the entrepreneurial process from different SME’s entrepreneurs which would hold more credibility and weight but as time and budget constraints existed due to the deadlines in place, one single entrepreneur would have been targeted which would be more feasible. I however felt that the best method for this type of study would have been longitudinal study in which information is collected from a series of interviews with civil servants and entrepreneurs until a pattern emerges regional

development and policy considerations, as was propounded by Hill and McGowan (1999)

The advantage of using interviews would have been that I would be able to control the interview which would yield detailed feedback. Interpreting raw data does not always give one the complete picture and interviews would give me the opportunity to follow up questions and probe further. The interviews would also have acted as a supplementary to the secondary research. Furthermore this type of research could have “comfortably accommodate substantial in-depth interviewing of the small firm entrepreneurs with perhaps the application of an adapted grounded theory approach and case study methodology to manage the qualitative data amassed” Hill and McGowan (1999)

The target population of the research was entrepreneurs. There is no unanimous definition or clear understanding in the literature of who the entrepreneur is or what it is they do. Entrepreneurship is in all probability best understood as a process, the “constituents of which are the entrepreneur, their persistent search for opportunities, usually grounded in the marketplace, and their efforts to acquire the resources needed to exploit those opportunities” Hill and McGowan (1999). Due to time constraint and budgetary limitations the study originally sought to limit itself to entrepreneurs within particular regions of the United Kingdom. Wallen and Fraenkel, (1991) state that a “research of such nature requires a researcher to spend a great deal of time in a few, even one, entrepreneurial small firms collecting primarily firsthand data”. This is because as was argued by Grant and Fine (1992) that this “research

approach is flexible and typically evolves contextually in response to experiences in the research setting”.

Limiting my research to selected regions enabled greater focus on the development of entrepreneurial activity between these vital regions such as London, the south west and the north east. However expanding the research to include different regions in Wales, Scotland and Ireland could have been valuable in identifying greater depiction of the impact that entrepreneurs have on the regional growth of new firms in the United Kingdom. Nevertheless focusing on particular regions was the most viable option in this study.

I utilised computer systems such as Microsoft Excel to interpret the raw data collected during my secondary research.

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings Saunders (2003).

This means that in order for the results to be reliable they would need to yield same results if the study was replicated. Due to time limitations the results was not replicated to ensure reliability. Validity has been defined as the extent to which data collection method accurately measures what they were intended to measure Saunders (2003)

Reliability and validity of the research could have become a threat without careful structure and control of the research. These could have been overcome by conducting pilot testing of interview prior to the commencing of research and also to establish that the right instruments are used to interpret the data. Piloting the questions to be used in the interview on a small scale sample would have helped me to iron out any

flaws identified. However the need did not arise due to change in the original methodology.

Threats to reliability includes

- Subject or participant error i.e. biases views could have influenced the answers gained.
- Observer error- this is associated with observer bias, which can create
- one-sided opinion on what they thought they felt in comparison to another person who might have interpreted the very same stimuli in a different way.

Below are some of the threats to validity identified

Validity

There could have been threats to the validity of originally planned research method. I have identified a few potential threats and how these could have been minimised.

These include lack of time and maturation.

- Due to the lack of time available for civil servants and government ministers there is a threat that the answers produced at the interviews may be affected by the time constraints of the participants which runs the risk of the participant's answers being rather vague. To counter this threat I would have pre-informed the participants in regards to the time of the interviews.
- Maturation if the interviews were carried out at a time when economic downturn and recession was in process. The question arises whether the same results would be produced if the interviews were carried out

during an economic boom in which entrepreneurial activities are expected to be on the increase.

### **Discarded methodology**

As was stated the initial methodology included in person interviews which would have required me to travel to the United Kingdom to carry out these interviews with an entrepreneur and civil servant. The reason for abandoning this method was both due to limitations in budget and time. Furthermore considering the busy schedule of policymakers it would be difficult to arrange an interview. It would be of utmost important to carry out the interview with the person who is to some extent involved in policy decision rather than any person in the civil service which could have affected the validity of the results.

### **Results and analysis**

This section will outline the major findings of the research. The results are presented in quantitative manner and each objective is addressed accordingly.

#### **Objective 1**

##### ***To examine the pattern of regional division of entrepreneurial activity in England***

The data used was extracted from official government sources in the form of raw data. This data was then analysed through excel to give a clearer picture on the development of entrepreneurship in England. The first objective was to examine the pattern of regional division of entrepreneurial activity with the sub-objective being to explore the policy

implications for this division. Data on new firm registration is used as an indicator of entrepreneurship this is then contrasted with de-registrations during the period 1998 – 2007 which produces a net change between the two variables. This 10 year period was chosen due it being in the same business cycle and overall firm start ups in England as a whole has seen a linear increase over the period observed.

England experienced a positive net change between firm registrations and de-registrations during the 10 year period from 1998 to 2007 (see table 1, chart 1.2). The percentage of new firm registrations increased by 13% (see table 1, chart 1.2) whilst de-registration of firms increased by 6% (see table 2, chart 2.2). The yearly net change between new firm registrations and de-registrations increased by 35% from 9.1 new firm registrations per 10 000 adult population in 1998 to 12 new firm registrations in 2007 (see table 3 chart 3.2) which indicates that the environment became favourable and the likelihood of new firms surviving increased. There was however a slight decrease in the number of registrations during and immediately after the turn of the millennium which was experienced across the whole of England (see graph 1.1). A significant event that could be attributed to this downturn in registrations is the global dot com crisis which affected many capitalist economies alike. The importance of entrepreneurship was mentioned by Hodgetts and Kuratko (1995) where they stated that “small businesses not only create employment but are the economic engine driving the global quality of life”.

The regional picture in England has seen a significant change over the 10 year period. Looking at the data we can observe that the London

area in particular has been the leading region in terms of number of registered firms per 10 000 adult population (see table 1). New firm registrations in London increased by 11% (see table 1, chart 1.2) whilst de-registrations increased by 6% (see table 2, chart 2.2) over the 10 year period leaving an overall positive net increase in firm registrations of 25% (see table 3, chart 3.2). South East and South West are the second and third leading regions in terms of number of registered firms, both these regions increased their new firm registrations by 8% and 9% respectively (see table 1, chart 1.2) whilst the de-registrations in these regions also increased by 7% and 3% respectively during the period observed (see table 2, chart 2.2 ). London also had the highest number of registered firms with 67.6 new firms per 10 000 adult population registered in 2007 whereas the South East and South West had 47.5 and 39.9 firms registered (see table 1).

The North East is the lagging region in terms of the number of registered firms in the region; however this region also saw a 42 % increase in new firm registration (see table 1, Chart 1.2) and a mere 6% decrease in firm de-registrations (see table 2, Chart 2.2) leaving an overall net increase in firm registrations of 299% over the 10 year period (see Chart 3.2). This is the highest percentage increase in firm registration across the whole of England which is encouraging for the region and suggests that policy incentives to increase entrepreneurship and new business formation in the region has been successful in its aim and that the North East is heading towards convergence with the better performing regions. Other regions that have exhibited substantial growth in net firm registrations are North West (148%) and Yorkshire (111%) (See chart 3.2). The North East has nonetheless exhibited the highest percentage

increase in net firm registrations over the 10 year period.

The North East region however is still the lagging region in terms of overall number of registered firms, the reasons for this will be outlined in the discussion but suffice to mention is the fact that the northern region has been and is an industrial region where large firms operate and lack the agglomeration of firms that exist in the London and the South East regions. Other reasons for this can also be the differences that exist between regions in cost of setting up, producing and reaching market (Taylor and Armstrong 1990). London and the Southern regions benefit from the fact that there is a large working and middle class population. These areas have high density in people that are easily reachable. There is also the high clustering of businesses and academic institution in which there is higher possibility of knowledge spill-overs. As was argued by Romer (1986) who propounds in his endogenous growth model that new technological knowledge is assumed to automatically spill-over. Glaeser et al (1992) propounded that “compelling empirical evidence suggests that a greater degree of knowledge spill-over leads to higher growth rates of cities. Hence we see the figures for London and the South East regions.

Regional variations in business dynamism is one factor explaining regional differences in start up rates, other factors such as local awareness and delivery, presence or absence of government agencies or bodies in regions are other factors that need to be considered when looking at the variations between regions. Furthermore as was discussed in the literature review in order for government policies and investment to have the maximum benefit in a certain regions; the region

must possess the capabilities and resources in order to benefit from this investment. The benefits do not last long when targeted at lagging regions in comparison to leading ones hence policies are needed to aid in building necessary resources and capabilities so that the investment achieves its maximum potential in the region. The different channels and avenue that the government can utilise when intervening is outlined in Audretsch (2002) model which is discussed in the literature review section

The North region is a peripheral industrial region; it has a history of lagging behind the other regions. The underlying factors for this lagging behind is its economic peripherality and its distinct geographic and economic history is composed of a number of elements including its focus on mature manufacturing industry, branch plant employment and a general poor history in entrepreneurial activity.

Overall the North-South gap is narrowing, Patricia Hewitt a member of parliament stated “the UK is one of the most entrepreneurial countries in the world and is a better place to start and grow a business than ever before”. She further mentioned that “the number of small and medium sized businesses in the UK has grown by 300 000 in the past 7 years and employment in small business has grown by 600 000”. She concluded by stating “I am pleased we are narrowing the gap between male and female start ups”.

## Objective 2

### *To examine what underlying factors contribute to this division and its policy implications*

Many factors affect the pattern of business start-ups. Among the most vital are economic growth (supporting new firms and creating demand for business and personal services), the level of industrial reformation and subcontracting, and the collection of individuals with management or small business experience. The British government launched a number of initiatives during 2000 aimed at promoting entrepreneurship and innovation in the UK. The initiatives and schemes are wide and include areas of finance provisions and management. The government launched the Enterprise Capital Funds which is modelled on the US Small Business Investment Companies model which is aimed at closing the equity gap in the provision of start-up financing of firms between amounts £250,000 and £2million. Other financial schemes include fiscal measures to improve Venture Capital Trusts and the Enterprise Investment schemes to make businesses more attractive to investors. These schemes are of utmost important to small to medium sized business in particular. They lessen the barriers to entry for small firms and would act as an encouragement for would be entrepreneurs. As was propounded by Geroski (1995) that barriers to entry such as economies of scale, capital requirements, advertising intensity, and R&D determine the success of new enterprises. Moreover the government sponsored Graham Review of the Small Firms' Loan Guarantee Scheme (Sept 2004) recommended that a re-orientation of the scheme be carried out with the goal of reducing bureaucracy with the focus being on services for start-ups and young businesses in particular. The aims of the new

policies were to reduce the barriers to entry both in terms of the availability of finance and also the improvements of R&D incentives for small businesses to encourage innovation.

Furthermore the government introduced changes to the R&D tax credit system to facilitate and encourage entrepreneurial and small firms into R&D activities. As was pointed out by Storey (1994) that since investment capital for expanding business is primarily generated from retained profits, taxation reduces the funds available to small business owners for investment in their businesses. This is utmost important for new start up firms as they are most likely to be operating at below break-even point for quite some time, hence all financial help they can get will work towards alleviating the difficulties associated with start up of new firms. The government also simplified the calculation of VAT and a discounted rate of 1% below the normal rates for newly registered businesses aimed at facilitating and aiding new start ups.

Another initiative that the government undertook was the comprehensive spending review which allocated substantial resources that were put into the Science and Innovation Investment framework and entrepreneurship. As was mentioned in the literature review; the likelihood that a firm innovates increases with the lessening of barriers to innovation such as, legal restriction, restrictive government policies, the length of time taken to acquire government approval for a new product, shortage of financial capital,

The government sponsored the launch of the *Enterprise Insight 2003* which is a coalition of business organisations. It has been promoting

entrepreneurship and was given extra resources to run 'Enterprise Week' and the 'Make Your Mark' campaign which was aimed at kick-starting an enterprise culture among young people by giving them the opportunity and inspiration to turn their ideas into reality.

The National Council for Graduate entrepreneurship was set up to promote co-operation between academic institutions and businesses in order to support graduates into business and to foster a more entrepreneurial culture amongst UK's graduate community and universities. Kirchhoff et al (2002) propounded that academic research and development expenditure to be closely associated with rates of new firm formation across regions hence underlying the importance of co-operation between universities and businesses.

The government also introduced schemes aimed at increasing entrepreneurship generally and social entrepreneurship in particular amongst excluded or deprived groups such as immigrants and females. It has already been mentioned in the literature how Jacobs (1961) elucidated that cities act as an open systems to attract talented people from different backgrounds to stimulate their creativity and capabilities. He propounded those open and culturally diverse cities attract the most talented people hence spurring creativity and innovation which are constituents of entrepreneurship. This is important scheme considering what Desrouchers (2001) mentions that economic diversity acts as a key constituent in city and regional growth as creative people from different backgrounds come together to new and innovative combinations of existing knowledge and technology to create innovation and as a result new enterprises. Moreover diversity, creativity and human capital have been proven to have a positive relationship with regional innovation

when measured in per capita patent production Lee (2002). Finally the more creative businesses and regions are the more economic success they will realise Florida (2002).

It has been propounded that the probability of an employee working in a small firm starting his own business is 10 times higher in comparison to a worker employed in a large firm (Storey and Johnson 1987). It is hence reasonable to conclude that regions with a high proportion of employment in small firms will have higher new firm formation rates than those with a low proportion of employment in small firms.

### Objective 3

#### *To explore the differences in male vs female entrepreneurial activities and its policy implications*

The final objective was to examine the respective role of male and female entrepreneurship on the growth figures and its policy implications. The results show that female entrepreneurial activity is considerably lower than male entrepreneurial activity. This picture is generally true across the regions and nations of the UK (Gem). We can also observe steady increases in female entrepreneurial activity in particular regions of the UK, such as the East Midlands (Gem).

Furthermore total female entrepreneurial activity in the UK has seen a steady rise during the latter half of the decade. Table 4 shows that female entrepreneurship is still half the level of male entrepreneurship and this has to be a concern because it necessitates a waste of entrepreneurial talent. We can see from the table 4 that the index for

female entrepreneurship has not reached beyond 3.8 whereas male entrepreneurship ranged in the 8.85 as highest.

It is well known that attitudes towards entrepreneurship amongst individuals and the perception of one's own ability to become an entrepreneur are important drivers of entrepreneurial activity. Males tend to have a greater belief in their abilities compared to females.

Research carried out by the GEM consortium on female entrepreneurship has showed that Females are substantially less likely to be expecting to start a business, to know an entrepreneur, to see good business opportunities, or to think that they have the skills to start a business than their male counterparts. They also found that females are half as likely to be involved in either independent or job related firm start-up activity as men. Independent start-up activity amongst females is 3.1% of the female adult population but is 6% amongst males. Furthermore Gem questioned respondents about their current turnover and also both the previous three years turnover and the expected turnover in three years time. The results were interesting and showed that female entrepreneurs have a lower business growth expectation over the coming three years period from start up. Females expected their business to have a turnover in the regions of two fifths higher than its initial starting turnover in three-year time. Whereas their male counterpart expected their businesses to have doubled in size within the three-year's period from initial start up.

What are the underlying reasons why women underperform compared to their male counterparts? Cowling and Taylor (2001) mentioned that in general female entrepreneurs are better educated than their male

counterparts. Furthermore studies on human capital have found that entrepreneurship is related to work experience and educational attainment Evans and Leighton (1989) as is expected research has illustrated that people with higher educational attainment are more likely to found a business than those with lower educational attainment. Hence academically women are outperforming men however academic qualification is not necessary a factor which necessitates that an entrepreneur will be successful. On the contrary Verheul and Thurik (2001, p.329) stated that female start ups will experience specific barriers when attempting to acquire start up capital and that female entrepreneurs do tend to use lower amount of start up capital on average than their male counterparts. The liquidity of any business is important especially to new start up firms in where cash flow is initially limited and possibly negative and breakeven point has not been reach. Being able to raise finance is of utmost importance for the survival of any business it can be the deciding factor between success and failure. Hence the difficulties that women experience in raising finance through loans should be considered when looking at the disparity in performance between males and females. Furthermore Mukhtar (2002) propounded that there are significant differences between male and female managers in regards to the way they manage their enterprises, in terms of their managerial style, organisational structure and the level of delegation within an organisation. However it cannot be concluded that men are better managers than females as Mukhtars (2002) data does not support such a conclusion rather it identifies a difference between male and female managerial mode.

This is supported by what Du Rietz and Henrekson (2000)found where they attempt to identify the underlying reasons why men are more likely

to start up new firms. They found large structure differences between male and female entrepreneurs. Using a multivariate regression analysis they were able to show that female underperformance in comparison to male disappears for most of the performance criteria's except in sales growth where they lag behind men.

### **Conclusion**

London, the South East and the South West regions have been shown to be leaders in regional entrepreneurial activities when measured by the number of registered firms. These however have shown rather small growth in net firm registrations between 1998 and 2007. Regions such as the North East, North West and Yorkshire have shown the highest increase in firm registrations during the 10 year period. They nevertheless still lag behind London, the South East and the South West in terms of the number of registered firms in the region.

The literature has discussed the different underlying reasons why regional variation in firm registrations occurs. The North East region is a peripheral industrial region; it has a history of lagging behind the other regions. The underlying factors for this lagging behind is its economic peripherality and its distinct geographic and economic history is composed of a number of elements including its focus on mature manufacturing industry, branch plant employment and a general poor history in entrepreneurial activity. London and the South East however laid emphasis on SME's in accordance to Schumpeter's theory of creative destruction where newer firms with entrepreneurial spirit are said to replace the old and incumbent ones. Schumpeter (1991) also mentioned that large firms oppose change ultimately leading to entrepreneurs starting new firms which leads to innovative activity. The data also revealed that the North East has been the fastest growing

regions when measured in new firm registrations some of this can be attributed to the catching up effect. Moreover the government has sought to facilitate this growth through investment in the region and through other various policy initiatives. To sum up; regional variation in new firm formation is related to factors such as human capital, industrial structure, population agglomeration, university research, availability of financing and entrepreneurial characteristics. The role of cities as incubators of innovation and spurring knowledge was identified by Park et al (1925), Jacobs (1961), Thomson (1965), Lucas (1988). The government of the United Kingdom introduced a number of initiatives to try to encourage entrepreneurship across regions. These have been extensively mentioned in the analysis.

Overall the north-south gap is narrowing; the results illustrate that there is more action needed to bridge the gap between leading regions and lagging ones in particular in the North East region. This may consist of encouraging further investment in these areas, tax credits. Some of these schemes have already been introduced by the government changes to the R&D tax credit system to facilitate and encourage entrepreneurial and small firms into R&D activities.

The results also showed that female entrepreneurship was half that of male during period 2002-2008. There are some indications that show females have increased their role in UK entrepreneurship nevertheless they still substantially lag behind their male counterpart.

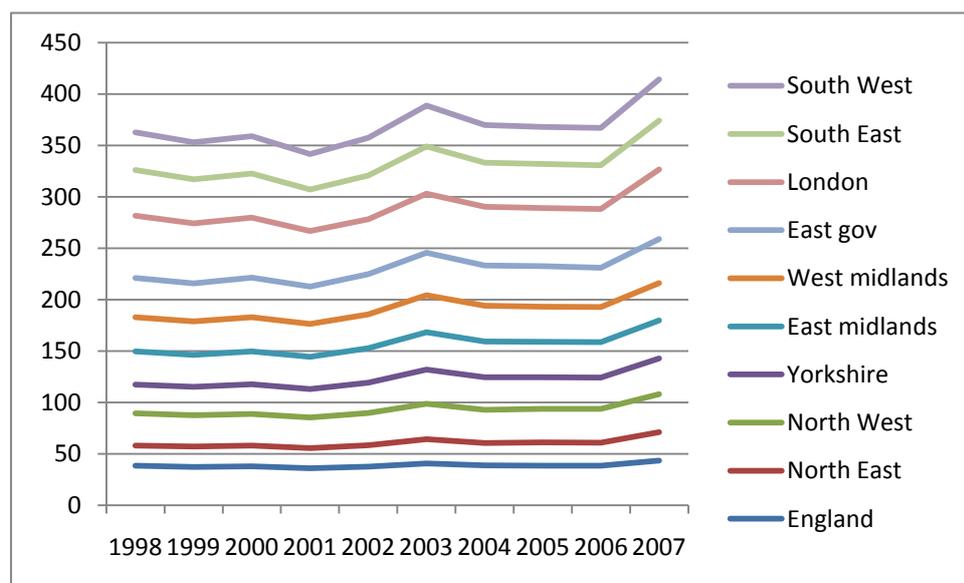
## Appendices

### Table 1 New firm registrations

	England	North East	North West	Yorkshire	East midlands	West midlands	East gov	London	South East	South West
1998	38,40844	19,45238	31,48231	28,0216	32,09332	33,29716	38,20043	60,71657	44,16204	36,73206
1999	37,29589	19,88095	30,1953	27,81941	31,14448	32,55825	36,78156	58,37281	42,88306	36,02725
2000	37,84493	20,2619	30,74431	28,64007	32,26077	32,97388	38,46238	58,59407	42,75665	36,36791
2001	35,88891	19,7619	29,6103	27,79562	31,32587	31,94634	36,44321	53,96391	40,42177	34,21825
2002	37,44793	20,92857	31,31131	29,62725	33,26543	33,13552	38,92078	53,37387	42,54101	36,7673
2003	40,66493	23,5	34,65035	33,23105	36,0701	36,19507	41,14732	57,57789	46,04334	39,49254
2004	38,78131	21,59524	32,55333	31,54214	34,70265	34,84425	39,14999	57,00424	43,06152	36,66158
2005	38,50619	22,57143	32,49932	30,94745	34,33985	34,20925	39,49925	56,52074	42,64511	36,12123
2006	38,45309	22,45238	32,69733	30,44792	34,5352	34,13998	38,21135	57,0698	42,63024	36,42664
2007	43,41735	27,57143	37,15237	34,55125	37,005	36,29898	43,04643	67,62493	47,5454	39,9859
Percentage change	13%	42%	19%	21%	15%	9%	13%	11%	8%	9%

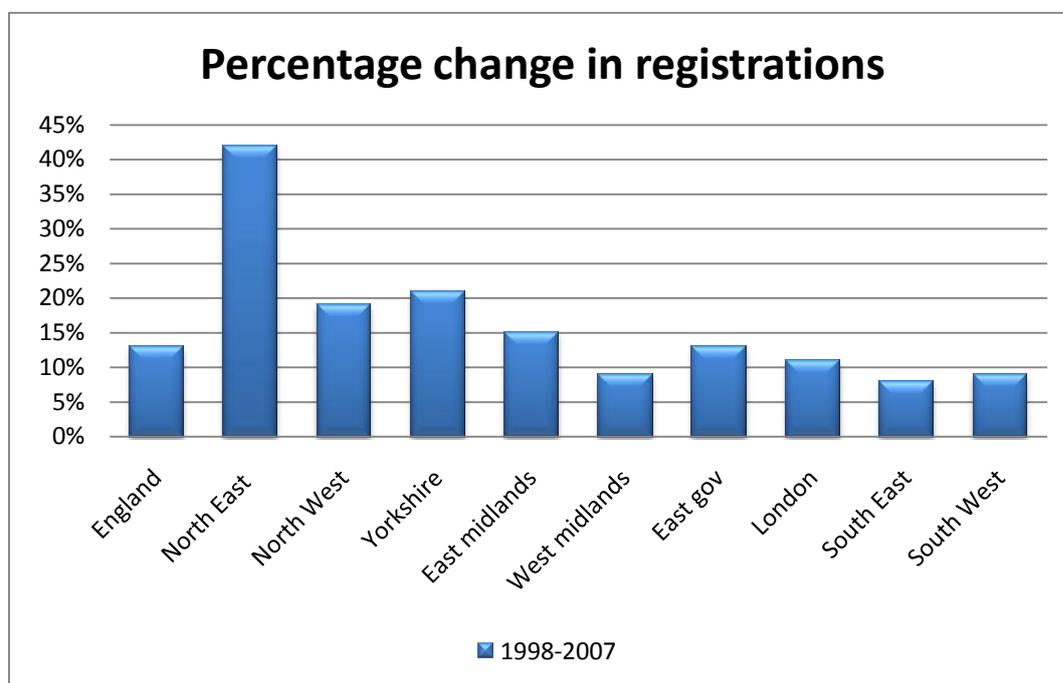
Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

### Graph 1.1 New firm registrations



Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

Chart 1.2 Percentage change in new registrations



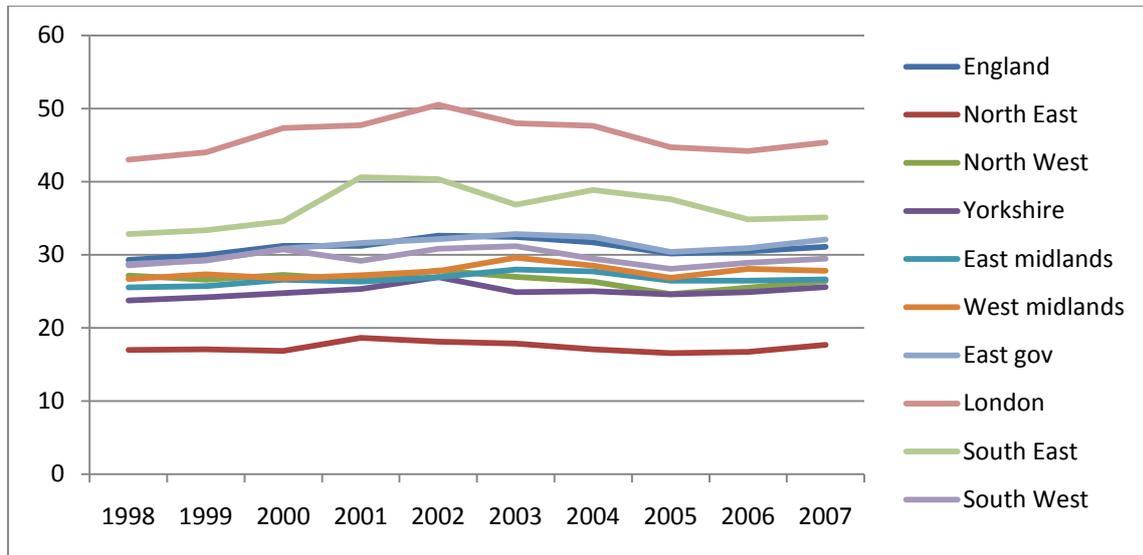
Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

Table 2 Firm de-registrations

	England	North East	North West	Yorkshire	East midlands	West midlands	East gov	London	South East	South West
1998	29,27513	16,97619	27,16227	23,75175	25,54907	26,6816	28,71581	42,99084	32,83208	28,53283
1999	29,9388	17,07143	26,59527	24,20372	25,70256	27,33969	29,21787	43,99882	33,33333	29,30812
2000	31,21063	16,83333	27,22527	24,73893	26,5956	26,77396	30,81138	47,30139	34,58647	30,71773
2001	31,21184	18,64286	26,56827	25,32173	26,31652	27,1896	31,5863	47,72753	40,6015	29,16716
2002	32,62123	18,11905	27,85528	26,93927	26,93048	27,77842	32,13202	50,48924	40,35088	30,83519
2003	32,43782	17,83333	26,99127	24,89355	27,96305	29,59106	32,80871	47,96519	36,84211	31,1876
2004	31,69572	17,07143	26,34326	25,01249	27,71189	28,50578	32,43762	47,6128	38,84712	29,47257
2005	30,15359	16,54762	24,62425	24,56053	26,44211	26,83169	30,39663	44,679	37,59398	28,08646
2006	30,45284	16,7381	25,47925	24,89355	26,44211	28,0786	30,88778	44,1873	34,83709	28,88523
2007	31,08393	17,69048	26,42426	25,57149	26,60955	27,8246	32,07745	45,3346	35,08772	29,46082
Percentage change	7%	4%	-2%	7%	4%	4%	11%	6%	7%	3%

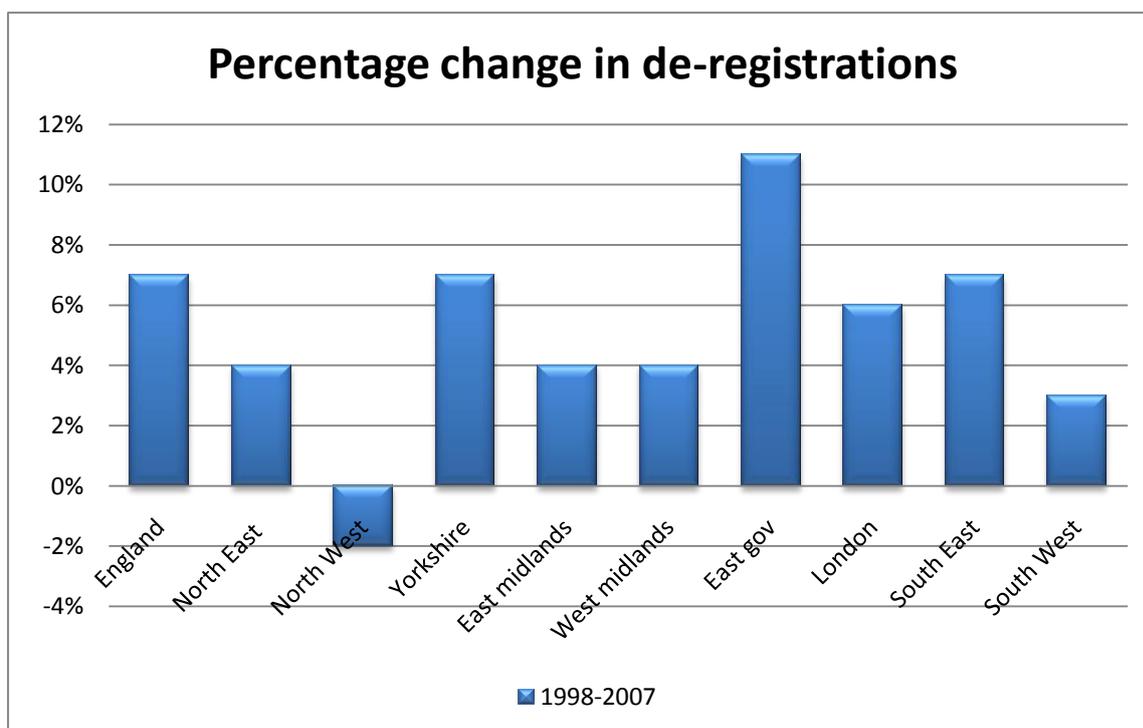
Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

**Graph 2.1 Firm de-registrations**



Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

**Chart 2.2 Percentage change in firm de-registrations**

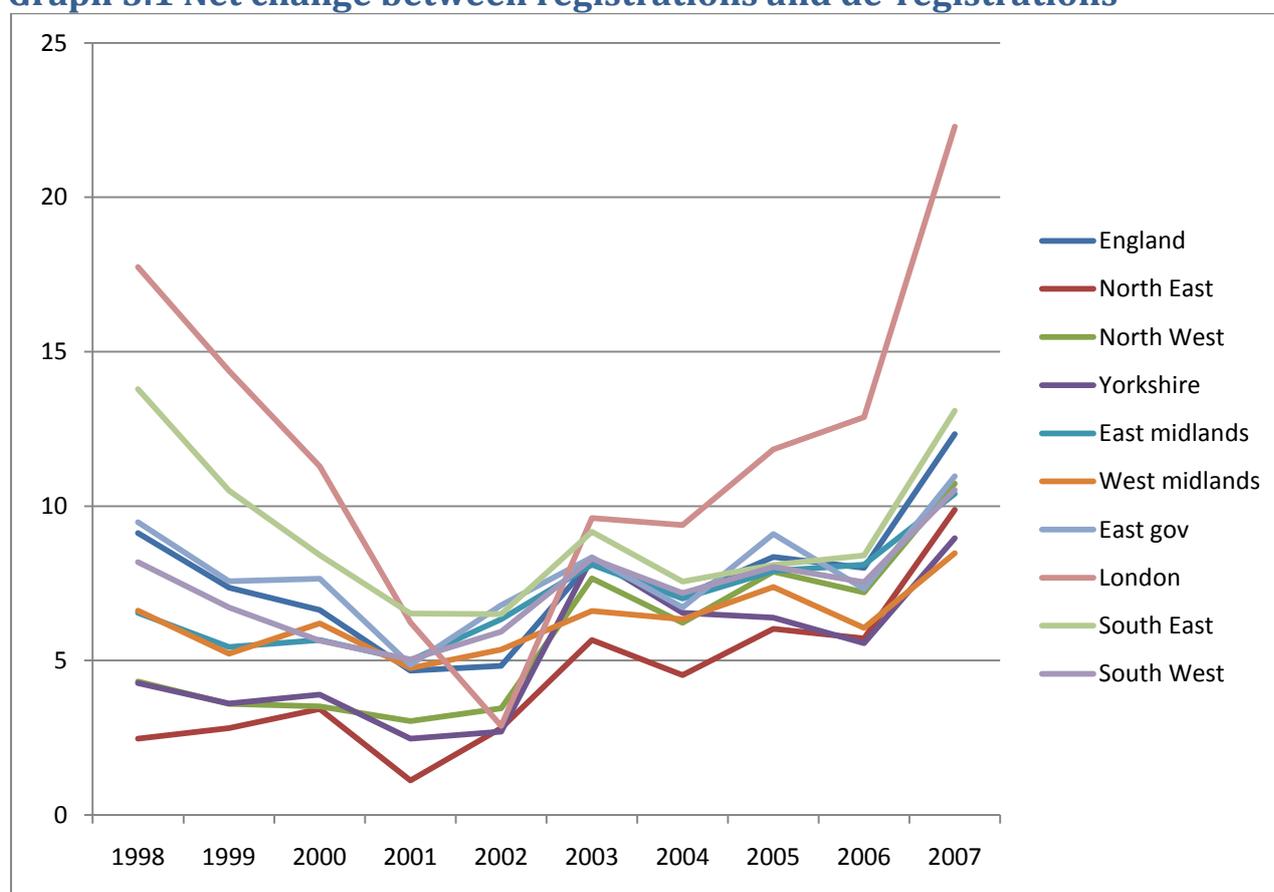


Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

**Table 3 Net change between registrations and de-registrations**

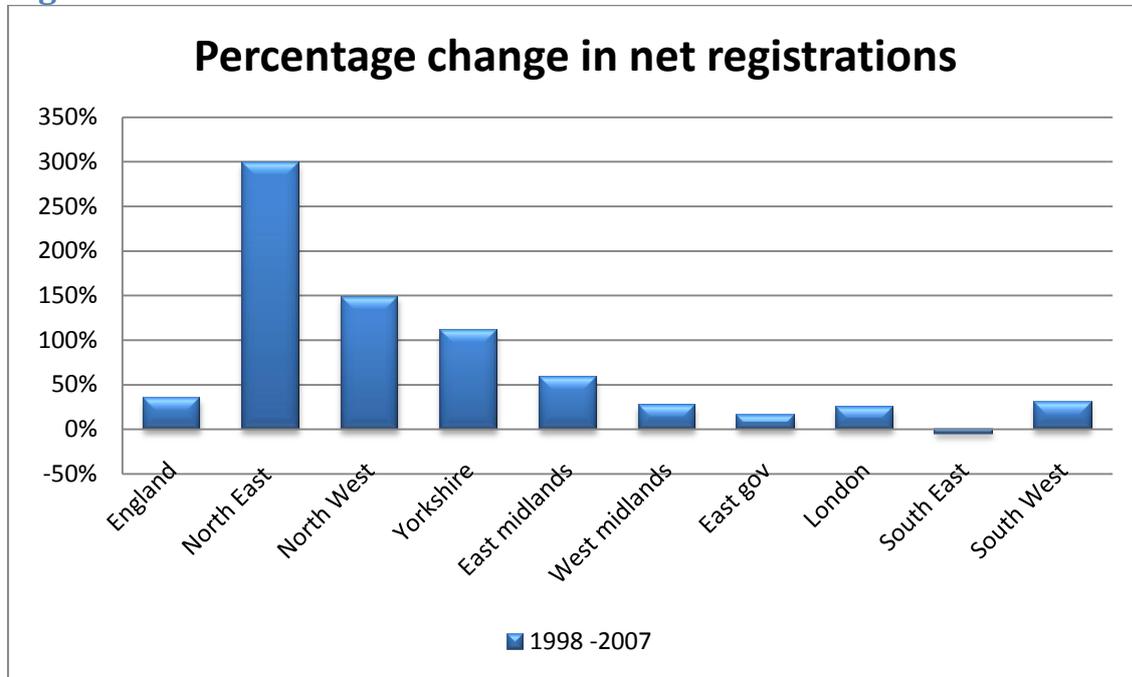
	England	North East	North West	Yorkshire	East midlands	West midlands	East gov	London	South East	South West
1998	9,133318	2,47619	4,320043	4,269845	6,544247	6,615559	9,484622	17,73393	13,79367	8,187478
1999	7,357094	2,809524	3,600036	3,603796	5,441911	5,218556	7,563686	14,38218	10,50698	6,719135
2000	6,634296	3,428571	3,519035	3,901139	5,665169	6,199921	7,651001	11,29268	8,417483	5,650182
2001	4,67707	1,119048	3,04203	2,473893	5,009349	4,756737	4,856912	6,236376	6,521319	5,039352
2002	4,826697	2,809524	3,456035	2,699874	6,334943	5,357102	6,788763	2,884631	6,499011	5,932104
2003	8,227106	5,666667	7,659077	8,337496	8,107052	6,604013	8,338609	9,612705	9,168513	8,304945
2004	7,085592	4,52381	6,219062	6,541545	7,004716	6,338467	6,723276	9,391441	7,554914	7,189005
2005	8,3526	6,02381	7,875079	6,386926	7,897748	7,37756	9,102617	11,84174	8,097738	8,03477
2006	8,000251	5,714286	7,209072	5,56626	8,107052	6,061376	7,323569	12,8825	8,410047	7,541407
2007	12,33221	9,880952	10,72811	8,967863	10,39545	8,474381	10,96898	22,28214	13,08725	10,52508
Percentage change	35%	299%	148%	111%	58%	27%	15%	25%	-5%	29%

Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

**Graph 3.1 Net change between registrations and de-registrations**

Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

**Chart 3.2 Percentage change in net between registration and de-registrations**



Source <http://stats.berr.gov.uk/ed/vat/> accessed on 23rd March 2009

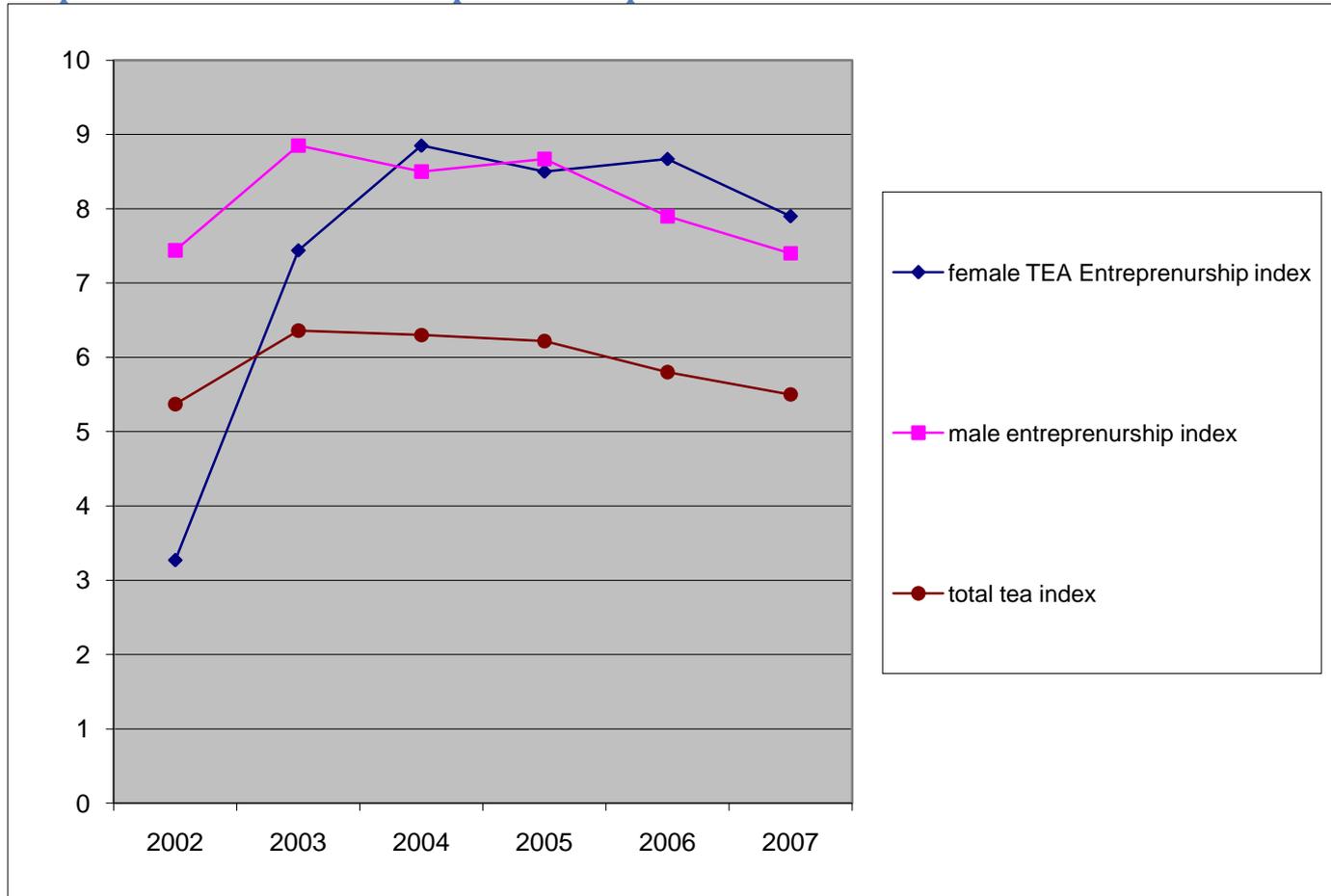
**Table 4 Total male and female entrepreneurship activity TEA**

Year	Female TEA Entrepreneurship		Male entrepreneurship	
	Index		Index	
2002		3.27		7.44
2003		3.81		8.85
2004		3.9		8.5
2005		3.74		8.67
2006		3.6		7.9
2007		3.6		7.4
2008		3.69		8.07

*Male Total Entrepreneurial Activity Index:* Measures the number of men involved in entrepreneurial activity (TEA); relative to the male adult population 18-64 years.

*Female Total Entrepreneurial Activity Index:* Measures the number of women involved in entrepreneurial activity (TEA); relative to the female adult population 18-64 years.

<http://data.ondernemerschap.nl/webintegraal/userif.aspx?SelectDataset=9&SelectSubset=45&Country=UK> accessed on 20th March 2009

**Graph 4 Male vs female entrepreneurship**

<http://data.ondernemerschap.nl/webintegraal/userif.aspx?SelectDataset=9&SelectSubset=45&Country=UK> accessed on 20th March 2009

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