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I hereby declare that the project is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at USM or any other institutions.



(Signature)

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DATE: 10TH JULY 2009

**Delving Into Intrapreneurial Behaviour among Knowledge Workers:
The Effects of Individual and Organisational Factors**

By:

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Research report in partial fulfillment of the requirements for the degree of
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ABSTRAK

Tujuan kajian ini dilakukan adalah untuk menyelidik tentang faktor-faktor di peringkat individu dan organisasi yang mempengaruhi pembangunan 'intrapreneurship' (perilaku intrapreneur: berinovasi dan proaktif) di dalam organisasi. Faktor-faktor di peringkat individu melibatkan ciri-ciri psikologi iaitu percaya pada kekuatan diri sendiri (locus of control), keinginan untuk sesuatu pencapaian (need for achievement) dan kecenderungan untuk menanggung risiko (propensity to take risk). Manakala, faktor-faktor di peringkat organisasi yang diselidik adalah suasana di dalam organisasi (organisational climate), sokongan daripada pengurusan (management support) dan ganjaran and sumber yang diperuntukkan (reward and resource availability). Penyelidikan ini menggunakan data-data yang dikumpul daripada 213 orang "pekerja berpengetahuan" (knowledge workers) dari sektor perkilangan. Hasil kajian ini menunjukkan hanya keinginan untuk sesuatu pencapaian (need for achievement), kecenderungan untuk menanggung risiko (propensity to take risk), sokongan daripada pengurusan (management support) dan ganjaran and sumber yang diperuntukkan (reward and resource availability) mempunyai pengaruh positif terhadap "intrapreneurship". Dengan ini, kajian ini mencadangkan kepada organisasi untuk mengenalpasti pekerja yang mempunyai ciri-ciri keinginan untuk sesuatu pencapaian (need for achievement) dan kecenderungan untuk menanggung risiko (propensity to take risk). Di samping itu, pihak pengurusan perlulah memberi sokongan (management support) serta memastikan ganjaran and sumber diperuntukkan untuk membantu membangunkan "intrapreneurship" di dalam organisasi yang merupakan unsur utama dalam pengembangan dan kelestarian organisasi pada masa jangka panjang .

ABSTRACT

The purpose of this study was to provide an empirical base to demonstrate that there are factors at individual level and organisational level which have influence in shaping intrapreneurship (intrapreneurial behaviour: innovative and proactive) in the organisation. Factors at individual level encompassed psychological characteristics of locus of control, need for achievement, and propensity to take risk, whereas, factors at organisational level were examined in terms of organisational climate, management support, and reward and resource availability. Data were collected from a total sample of 213 knowledge workers (e.g. engineers and programmers) from manufacturing sector. The results revealed that only the need for achievement, propensity to take risk, management support, and reward and resource availability have positive impacts on intrapreneurship. With this, this study suggested that organisation should employ high need achievement and propensity to take risk workforce accompanied by offering greater management support, and adequate reward and resource availability in fostering intrapreneurship development which is considered vital for the organisation growth and sustainability in long term.

DELVING INTO INTRAPRENEURIAL BEHAVIOUR AMONG KNOWLEDGE WORKERS: THE EFFECTS OF INDIVIDUAL AND ORGANISATIONAL FACTORS

Chapter 1

INTRODUCTION

1.1 Background of study

Nowadays, many organisations are competing towards organisational sustainability by producing high quality and innovative products or services. In order to achieve this, organisations need to emphasize on boosting and enhancing intrapreneurial spirit among employees (i.e., those who are innovative, creative, and proactive) to obtain long-term profit gain and competitive advantages. This is consistent with Foba and Villiers (2007) who claim that the heightened demands of globalisation have increased the pressure on existing organisations to employ, develop, as well as retain employees with intrapreneurial spirits. The intrapreneurs (entrepreneurial employees) are vital human resources required by organisations to gain competitive advantage and sustain in the long run. Based on this premise, this study seeks to understand the individual (psychological characteristics) and organisational (internal) drivers of intrapreneurship.

The concept of intrapreneurship is rooted from entrepreneurship literature and that it refers to the entrepreneurial behaviours among employees within existing organisations. An intrapreneur is said to have many similarities with entrepreneurs, especially in terms of the behavioural aspects which include proactiveness, creative, innovative, opportunity exploration, and risk taking (Jong & Wennekers, 2008). The

authors further add that intrapreneurship is the way employees behave entrepreneurially in the existing organisation through the pursuit of opportunities, risk-taking, resource acquisition, proactiveness, and innovativeness whereas entrepreneurs normally focus on resource acquisition, risk-taking, and the pursuit of opportunity outside the existing firms. Similarly, a survey conducted by Utsch and Rauch (2000) reveals that entrepreneurs are those with high need for achievement and they are persisting in facing of problems and barriers. They take initiative and try as much as possible to improve their work procedures. The authors conclude that achievement orientation is positively related to innovativeness and initiative. Hence, the entrepreneurs have particular characteristics such as internal locus of control, high need of achievement, autonomy, change and risk taking (Caird, 1993)

In addition, Dictionary.com (1995) highlights a slight difference between entrepreneur and intrapreneur, in which, an entrepreneur refers to a person who organizes and manages any enterprise, usually a business, with considerable initiative and risk whereas an intrapreneur refers to an employee of a large corporation who is given freedom and financial support to create new products, services, systems, etc., and does not have to follow the corporation's usual routines or protocols.

To clarify further, entrepreneurship is a process where a person creates something new by taking the risks and the opportunities and receiving the rewards. However, intrapreneurship or internal entrepreneurship or corporate entrepreneurship which is generally accepted as interchangeable term is a process where an employee applies entrepreneurial behaviour and activity within an existing business structure. Most of the studies used corporate entrepreneurship as an alternative term for

intrapreneurship because both terms share the similar criteria, e.g. entrepreneurial activities. However, Jong and Wennekers (2008) argue that there are slight differences between corporate entrepreneurship and intrapreneurship. Corporate entrepreneurship can be defined as the entrepreneurial activities conducted at organisational level and it is a top-down process for instant a strategy that the management can adopt to encourage more initiative efforts from their employees and organisation. On the other hand, intrapreneurship is related to the entrepreneurial activities conducted at individual level and it is bottom-up process where an individual having proactive initiatives to improve work procedures or exploit and explore business opportunities. For the purpose of this study, intrapreneurship (at individual level) will be examined and both terms of corporate entrepreneurship and intrapreneurship will be used interchangeably.

Clearly, the study of intrapreneurship is very much relevant given the dramatic changes in today's business landscape, in particular the increasing competition posed by the globalisation. Intrapreneurship is perceived important, not only because it assists organisations to obtain a better competitive position but also contributes to the economy of a country at large. The increasing pressure to compete in the globalised economy has also caused organisations to increase their employees performance by encouraging intrapreneurial activity. Furthermore, empirical study from Fitsimmons, Douglas, Antoncic and Hisrich (2004) demonstrates that intrapreneurship is important for firm's growth which involve investments in marketing research, new capacity and new market.

As such, to maintain the competitive advantages and to survive in the new global environment in present state, effective leadership which emphasizes the intrapreneurship spirit must be promoted. In addition, management support, organisation structure or organisation climate as well as resources availability are crucial keys that influence the successfulness of shaping intrapreneurship (Hornsby, Kuratko & Zahra, 2002; Jong & Wennekers, 2008 ; Kuratko, Montagno & Hornsby, 1990).

Even though it has been acknowledged that fostering intrapreneurial behaviour is very much prevalent, the research on intrapreneurship remains uncharted, particularly in the context of Malaysia. In the light of the above realisation of the importance of intrapreneurship, this study attempts to examine the factors that could influence the shaping of intrapreneurial behaviour in the organisation.

1.2 Problem statement

The blueprint that outlines the road towards a K-based economy (2002) states that in order to achieve Malaysia Vision 2020, Malaysia should aim for obtaining an average annual growth of 7 per cent. To achieve this, Malaysian government need to focus on enhancing the knowledge and the quality of its human capital via cultivating innovative, creative, and proactive behaviours among the workers, in particular, knowledge workers. The central mission of Malaysia's K-based economy is therefore to ensure that all sectors of the economy concentrate in encouraging optimal and ever-increasing application of knowledge to create high value-added knowledge intensive industries in Malaysia.

Basically, the K-based economy Strategic Plan is guided by seven important thrusts; among them are to cultivate the human resources and to make certain that the private sector is the vanguard of the K-based economy's development. Therefore, the private sector especially manufacturing industry is seen as playing an important role in providing or upgrading knowledge and the skills of their workers to boost quality of human capital. In addition, private sectors also need to foster entrepreneurship, innovative and emphasis on R & D as well as risk management proficiency in realising the success of the transition toward the K-based economy.

As illustrated by an article entitled "The Road to the K-based Economy" (2002), it is reported that the demand of knowledge workers for the future development of Malaysia is between 40% (estimated based on existing production economy) to 80% according to the forecast from Human Recourse Ministry. In line with such demand, Gilbertson (2002) noted that knowledge economy requires all employees to contribute their know-how for the organisation to compete and this know-how is never replaced when employees leave the organisation. Thus, knowledge worker is vital to the organisation and can be defined as, a professional who performs knowledge task or anyone who earns a living by using knowledge. According to Neo, Hollenback, Gehart and Wright (2008), knowledge workers are those who own the intellectual means of producing a product or service and posses specific knowledge in implementing the job. Thus, they must be viewed and treated as an intangible asset which cannot be imitated.

As mentioned in the road to the K-based economy (2002), Malaysia was rank 36th in productivity and 29th in corporate performance among 47 countries from the

Competitiveness Yearbook 2000. This illustrated that, Malaysia must improve the competitiveness in order to sustain in long run in the global market. Hence, all the sectors of economy must value the knowledge workers in strengthening the competitive position. In other words, private sector managers need to be trained to encourage the intrapreneurship or corporate entrepreneurship in competing in new economy. Besides, human resource management of private sector needs to review their strategy to manage knowledge workers and create a good working environment to shape the innovation and creativity.

A successful company must be able to manage and retain their human capital (knowledge workers). As urged by Former Prime Minister Malaysia Datuk Seri Abdullah Badawi, professionals are important to build to human capital for country's future development. Besides, he also highlighted the importance of developing the human capital with high value and quality for Malaysia's future progress ("Help Boost, " 2008). Further more he emphasized that mostly the foreign investors are looking for the skill workers and innovation especially in the manufacturing sector in Penang and Johor. He also mentioned that acquiring skill is not enough, a person should continuous learning and improving to be innovated ("Investor Keen," 2008).

However, recently the global economic crisis had coursed Malaysia government to unveil a fiscal stimulus package amounting to RM60 billion to prevent the country from slipping into a recession (Package to Handle Economic Crunch, 2009). The major focuses in this package is to reducing unemployment and boost the domestic economy. Thus, government and private sector such as electrical and electronic, welding, robotics and construction should cooperate to create the job

opportunities (“Congrats You’re,” 2009). As mentioned by Prime Minister Malaysia Datuk Seri Najib Tun Razak, training opportunities will be undertaken as joint collaboration between government and private sector to enhance the workers skills to meet industry requirements. Hence, it is clearly shown that these training programmes can help in formulating the intrapreneurial behaviour among the workers and enhancing their skills as well as increasing their working opportunities in private sector.

Inline with the Malaysian government aspiration to boost knowledge workers in the transition process towards K-based economy and to prevent Malaysia’s economy from slipping into a recession, it is deemed timely that a study to be undertaken to understand the factors that contribute towards intrapreneurial behaviour (which is characterized as proactive, creative, and innovative) among knowledge workers. Thus, the key objective of this study is to investigate the individual and organisational factors that could influence intrapreneurial behaviour.

1.3 Research Objectives

As mentioned, hypercompetition has forced Malaysia government and all the economy sectors especially organisation in manufacturing industry to foster intrapreneurial behaviour in order to grow and sustain in the future. Hence, the objectives of this study are:-

- (1) To investigate the psychological factors that influence intrapreneurial behaviour among knowledge workers.

- (2) To investigate the factors at organisational level that influence intrapreneurial behaviour among knowledge workers.

1.4 Research Questions

In order to achieve the above-mentioned objectives, the present study sought to answer the following research questions:-

- (1) Do psychological traits (i.e., locus of control, propensity to take risk, and need for achievement) influence intrapreneurial behaviour among knowledge workers?
- (2) Do organisational factors such as management support, organisational climate and reward and resource availability influence intrapreneurial behaviour among knowledge workers?

1.5 Significance of Study

Innovative workforce is a valuable intangible asset or viewed as knowledge worker who must be shaped and retained by the organisation to gain the competitive advantage. Hence, the importance of this study is to assist top management to obtain better insights into how to promote intrapreneurial behaviour among the knowledge workers such as determine the areas where training may be needed if a company is considering to initiate intrapreneurship activities.

In order to gain competitiveness and to survive in long term, intrapreneurship is a key success factor in leading the organisation as well as the country to develop and strengthen the future economy. As Malaysia heading to the transformation of K-based

economy, the country required the private sectors especially manufacturing sector to promote intrapreneurial behaviour among the workers.

Thus, based on the findings of this research, the manufacturers in Malaysia will realise the individual factors and organisational factors that will influence the shaping of intrapreneurship. In addition, this study can enhance our knowledge on intrapreneurship and serve as the foundation for a more developed theory to guide the introduction and diffusion of intrapreneurship in an organisation.

1.6 Organisation of Report

In Chapter 1, the introduction of background of the study, research problem, research objectives, research questions and the significant of study were discussed. This is followed by Chapter 2 to highlight the related literature on intrapreneurship as specially the psychological characteristics and factors at the organisational level which have influence in stimulating intrapreneurship. Besides, the theoretical framework and hypotheses also will be presented in this chapter. Next, in Chapter 3, the research design and methodology procedures will be discussed. Subsequently, Chapter 4 will test on the hypotheses and report the findings form the statistical analysis. Lastly, Chapter 5 will focus on the discussion of the findings, implication and limitations of current study, recommendations for future research as well as the conclusion on the overall study.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

This study is an evaluation of the variables associated with intrapreneurial behaviour among knowledge workers within an organisation. Specifically, it looks at the individual and organisational factors that contribute towards intrapreneurial behaviour in organisation.

2.2 Intrapreneurship

There is some degree of ambiguity surrounds the construct of intrapreneurship and how different or similar this concept to the long-researched concept of entrepreneurship. Hence, a review of the literature that compares and contrasts the concepts of intrapreneurship and entrepreneurship is first presented in order to paint a clearer picture of these terminologies. Intrapreneurship or entrepreneurship within existing organisations refers to employee initiatives in organisations to start or undertake something new although he or she is not being asked to do so. Opportunity pursuit, resource acquisition, risk taking, proactiveness and innovativeness had been believed as key elements of entrepreneurial behaviours in existing organisations (Jong & Wennekers, 2008). This definition is derived from the literature review found by the authors, where there are various definitions of intrapreneurship share a number of similarities as listed bellow:-

- (1) intrapreneurs are proactive individuals who are self-starters or having an initiatives to generate the new ideas. They usually have strong desire for action, ignore disapproval or without asking for permission in pursuing their ideas.
- (2) Intrapreneurs often find a way to pursue the opportunities regardless to the resources controlled by them currently.
- (3) Intrapreneurs always undertake something that considered as “innovative” or “new” and their actions and behaviours are deviated from customary ways of doing business in existing firms.

In many previous researches, intrapreneurship and corporate entrepreneurship are accepted as interchangeable terms. This can be viewed by a summary of the definitions exist for the construct of these terms in Table 2.1.

Table 2.1
Definitions of Intrapreneurship and Corporate Entrepreneurship

Source	Definition
Gilberstson (2002, p.3)	Intrapreneurship is “the process of entrepreneurship inside an organisation. They ‘put ideas into action’. To be an intrapreneur the ideas do not have to be new, but they do need to make a focused effort to action an idea. Intrapreneurial innovation is the process of staff putting new ideas into action inside their organisation”.
Wunderer (2001)	Internal entrepreneurs are co-operating organisation member who innovate, create and identify opportunities and gather resources to increase corporate value by optimizing benefits to stakeholder.

Source	Definition
Hayton and Kelley (2006, p. 407)	Corporate entrepreneurship is referred to “the discovery and pursuit of new opportunities through innovation and venturing. It is an important source of competitive advantage. Corporate entrepreneurship involves a diverse set of activities such as innovation in products and processes; the development of internal and external corporate ventures; and the development of new business models, which require an array of roles, behaviours, and individual competencies.”
Antonic and Hisrich, (2003)	Intrapreneurship can be defined as emergent behavioural intentions and behaviours of an organisation that depart from the customary or routines ways of doing business in exiting organisation. This means an intrapreneur will constantly searching activities at frontier or doing new things regardless of its starting base in terms of routines and resources. Intrapreneurial processes go on inside the existing organisation despite the organisational size.
Holt, Rutherford and Clohessy (2007)	Corporate entrepreneurship is defined as acting entrepreneurial activities and behaviours in larger or well established organisations. It is explained by overall individual characteristics, contextual (knowledge and learning orientation) and process characteristics (e.g management support, rewards concern and time availability).
Thornberry (2003)	Corporate entrepreneurship or intrapreneurship is a weapon of choice for the organisation to take both the skill set and mindset demonstrated by successful entrepreneurs and inculcate these characteristics into the activities and culture of the organisation.
Rutherford and Holt (2007)	Corporate entrepreneurship is the process of enhancing the ability of the organisation to obtain and utilize the innovative skills and abilities of the existing employees.

From all these definitions, it is clear that the intrapreneurship or corporate entrepreneurship is related to the conduct of the entrepreneurial activities at individual level in the established organisation and it is consistent to this study purpose which will investigate the entrepreneurial activities at individual level.

Nevertheless, Jong and Wennekers (2008) argue that corporate entrepreneurship differs from intrapreneurship. Corporate entrepreneurship is defined as the entrepreneurial activities conducted at organisational level and it is a top-down process. For instance, a strategy that the management can adopt to encourage more initiative efforts from their employees and organisation. In contrast, intrapreneurship is related to the entrepreneurial activities conducted at individual level and it is bottom-up process where an individual having proactive initiatives to improve work procedures or exploit and explore business opportunities.

Stopford and Baden-Fuller (1994) further argue that corporate entrepreneurship comprises of three different types or stages. The first type is individual entrepreneurship or intrapreneurship which refers to the creation of new business by employees in the existing organisation. The second type is the renewal of existing organisation or transformation which altering the organisational resources pattern to achieve better economic performance. The last type is have frame-breaking change (which includes the behaviour of transform the enterprise as well as competitive environment –the industry, into something significantly different from what it was) and to be the industry leader in the hostile environments with intense competition. According to the authors these three types of corporate entrepreneurship can be viewed as three stages which need time to evolve from individual entrepreneurship within the

organisation to renewal and finally to be frame breaking change. All these stages are sharing five attributes (proactiveness, team oriented, aspirations beyond current resources, learning capability and capacity to resolve the dilemmas) where each these attributes were progressively become more importance from the initial stage to final stage. The result in this research shown that most of the firms be investigated on all the attributes have certain influence in the first stage except one of the attribute of capacity to resolve the dilemmas which is not explicitly addressed.

In addition, Antoncic and Hisrich (2001) clarify that intrapreneurial organisations are those that engage in new business venturing, continuously renew themselves, innovative and proactive. The authors added further that intrapreneurship may be even more important for organisation's profitability and survival in transition economies which aim to move towards to the more developed economies' standards of doing business and growth may not yet be the primary goal.

However for the purpose of this study, only the first stage; individual entrepreneurship within the organisation will be examined to align with this study objectives in examining the factors that influence intrapreneurship. The focus on individual-level is due to two reasons as stated in the study of Rutherford and Holt (2007). First, it is necessary to identify the entrepreneurial activities carried out by individuals in existing organisation. Second, the analysis at individual level is needed in examining organisational or work group level of innovative abilities and skills.

Furthermore, in this study intrapreneurship will be treated as an alternative term or interchangeable of corporate entrepreneurship to describe entrepreneurial behaviour inside an organisation.

2.2.1 The Link between Entrepreneurship and Intrapreneurship

Entrepreneurship is the process of eliciting value from new and unique combinations or rearranging the resources in an uncertainty environment (Wunderer, 2001). Entrepreneurs refer to the individuals who ready to make technical change and innovation by exploring new ways of doing business (Wong, Cheung & Venuvinod, 2005). Likewise in the entrepreneurship literatures conducted by Caird (1993) and Becherer, Mendenhall, Eickhoff (2008) disclose that psychological characteristics of an entrepreneur are: high need for achievement, change, autonomy, internal locus of control and risk taking. Olm and Eddy (1985) also mention that self –generating enthusiasm and excitement in developing the products or process, tenacious use of energy towards goals, willingness to bear calculated risks, high degree of concentration and alertness on market’s trends are characteristics of successful entrepreneur.

Entrepreneurship can be seen as outcome-based behaviour or its intentions such as breakthrough innovation and new venture formation (Antoncic & Hisrich, 2003). The authors outline that in comparing to intrapreneurship, intrapreneurship is referred to entrepreneurship in existing organisation and it is considered as a sub-field in entrepreneur research. Entrepreneurial individuals inside an organisation own some entrepreneurial characteristics such as innovative, risk taking and proactiveness.

The concept of intrapreneurship is rooted from entrepreneurship literature and that it refers to the entrepreneurial behaviours possessed by the employees inside the established organisation. This is supported by the literature reviews from Jong and Wennekers (2008) and Foba and Villiers (2007) which reveal that the intrapreneur

shares many behavioural characteristics of an entrepreneur such as taking initiative or proactiveness, creative, innovative, opportunity pursuit and risk taking.

2.2.2 The Differences between Entrepreneurship and Intrapreneurship

Entrepreneurs who are self employed will try to search for potential financiers and business partners. They will probably invest personal financial and this exposes them to the risk of bankruptcy, loss, fluctuation of income and other financial risk. However, they have high degree of autonomy in making decision such as hiring personnel and forming the start-up team. Intrapreneurs on the other hand are those who are employed or employees working in an organisation. Normally, they have less authority and autonomy in making decision and only take fewer personal risks (e.g. risk of failure and loss status) due to the nature of their tasks that often require them to act within the organisational boundaries (Jong & Wennekers, 2008).

Lau and Chan (1994) explain that business owners are entrepreneur if they display all the entrepreneurial characteristics. Meanwhile, organisational managers can be regarded as entrepreneur if they show same set of characteristics. The difference is intrapreneur will create innovation within an organisation.

In short, entrepreneurs refer to self-employed individuals while intrapreneurial employees act and behave like entrepreneurs in their existing organisation.

2.2.3 Creativity and Innovativeness

As mentioned above, an intrapreneur has the similarities with the activities and behavioural aspects possessed by an entrepreneur, such as creativity. Creativity

implies that one can produce new responses or new solutions to problem solving. The creative process can be facilitated by creative personality or traits (e.g., risk taking and internal locus of control) and environmental condition (e.g., freedom in making decision) (Selby, Shaw & Houtz , 2005).

Creativity is a personality trait which involves the ability to break away from habit-bound thinking and generate novel and useful ideas. It is essential in generating innovation which is the lifeblood of a growing number of organisations, e.g. Walt Disney, Apple Computer and 3M (Ivancevich, Konopaske & Matteson, 2008).

By referring to the research of Jong and Wennekers, (2008), creativity is one of the cognitive abilities of an entrepreneur. Creativity defined as ability to think out of the box by discovering the opportunity and eliciting the innovation by designing the product or service. Thus, innovation is one of the important elements contained in intrapreneurship. The authors added that innovative behaviours consist of:-

- (1) Opportunity exploration. This is the initial stage of innovation process which is related to opportunity discovery of the problems that need to be solved or the conditions require immediate response for improvement.
- (2) Idea generation. Idea generation is related to creative behaviour. This is treated as a part of innovative behaviours because creative ideas need to be generated to reorganise the information in problem solving or conditions improving.
- (3) Championing. It is referred to selling the ideas to other after the shaping the creative ideas. This action is surrounding with uncertainty of success to improve the conditions or solve the problems.

(4) Application. Creative ideas have to be transferred into practical actions by exploiting the opportunity, this is referred as application. E.g. developing, improving or modifying a products or services to exploit the opportunity. In this aspect, self-starting and persistence are the important behaviours to be innovative.

In order to make a clear explanation of intrapreneurship and innovative work behaviours, the authors indicate the overlap and the difference between the two. Innovative work behaviours and intrapreneurship is overlap in term of having the innovative initiatives, with a wider meaning for the business than one's own and including overcoming the barriers with some acceptance risk. Nevertheless, innovative work behaviour differs from intrapreneurship where innovation work behaviour is more of a managerial (restricted to improving one's own work or improving thing or when no barriers or risks are involved) than entrepreneurial nature (improving things by given the resources available) in intrapreneurship. Intrapreneurship is also included imitative or replicative project rather than innovative, because it is focusing on pursuing opportunity with the imagination and initiative to realise the ideas.

Gilberstson (2002) explains that innovation is a very human process and it is derived from creative thinking. Creativity is crucial in developing the intrapreneurial capability and it is part of the learned skill. Creativity skill can be generated by the following elements (Gilberstson, 2002, p. 6):-

- (1) Principles of participating and managing brainstorming
- (2) Using metaphors, analogies, and 'what if' statements

- (3) Disrupting habitual thought patterns
- (4) Changing viewpoints and using techniques such as social atoms
- (5) Identifying and dropping hidden assumptions
- (6) Imagineering, attribute listing, morphology, and right brain exercises
- (7) Practice in creativity

Furthermore, the author also clarifies that innovation can be referred as '*new ideas put into action*'. Generally, innovation is incremental, making small continuous improvements in the firm, products, services and processes. In the process of making new ideas happen, intrapreneurs need to take several steps which are not necessarily sequential. The steps in innovation process is shown in Figure 2.1.

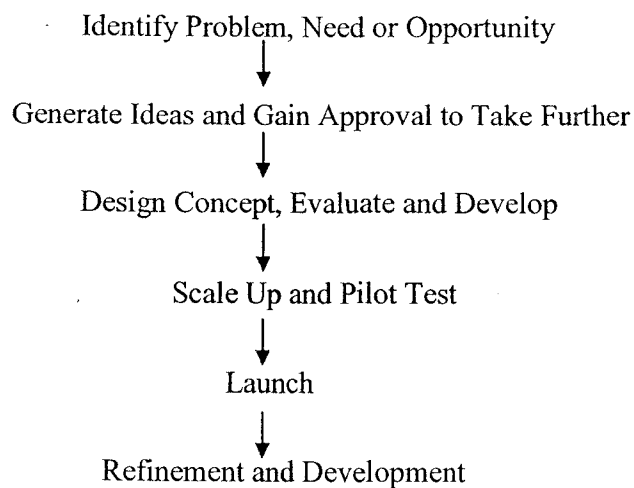


Figure 2.1: Steps in Innovation Process

Source: Gilberstson, 2002, p.15.

In turbulent times, innovation is a requisite for an organisation to remain competitive (Thornberry, 2003). Koh (1996) states that entrepreneurs have greater innovativeness as compare to those who are not. His study shows a significant result to those who are entrepreneurially inclined. Innovative is a key element in the network of entrepreneurial behaviour. It is an ability to identify new market or opportunity and combine the resources in creative and unique way (Hayton & Kelley, 2006).

Newness or innovativeness considered as a subset of intrapreneurship. Innovativeness can be distinguished as product or service innovation and process innovation which is related to technology-related innovation. However, intrapreneurship can be seen as innovative behaviour rather than only concern on organisational innovativeness. Innovative behaviours from the intrapreneurship perspective include creating new business venturing and search for the activities which are illustrated as departure form the customary (Antoncic & Hisrich, 2003).

New venture formation requires innovative ideas in creating the innovative product or service. The innovative ideas will be generated from six idea factors namely trend follower, mental inventions, need spotting, market research, solution spotting and random events (Wong et al., 2005). However, innovativeness can be illustrated as more then just having interest in innovation, but it shows the actual behaviour an entrepreneur possessed, for instance performing the activities to improve work procedures (Utsch & Rauch, 2000). Through the empirical study, the authors proved that there are strong link between achievement orientation and innovativeness.

Jong and Hartog (2007) state that organisation should capitalize on their employees' ability to innovate in order to become more innovative organisation. Two core of innovative behaviours in contributing to the innovation process are idea generation (or creative) and application behaviour. The first stage of innovative process is idea generation which is related to initiate employees to explore the opportunity, identify the problem or performance gaps and try to produce the solutions. In the second stage, application behaviour or implementation stage allows the employees to implement the idea generated. Thus, employees are playing a vital role in the innovation process in demonstrating application-oriented behaviour by persuading or selling the idea to others and devoting their effort in developing, testing and commercialising the idea.

2.2.4 Proactiveness

Antoncic and Hisrich (2003) propose that other than innovation, intrapreneurship can be viewed in the dimension of proactiveness and risk-taking. Proactiveness includes initiative taking and pioneering whereas risk-taking emphasises the possibility of loss in pursuing new opportunities and taking bold actions quickly with the committing resources. Thus, the employees' application of innovative abilities and their willingness to introduce improved and innovative work process are crucial in corporate entrepreneurship construct (Rutherford & Holt, 2007).

Stopford and Baden-Fuller (1994) provide an empirical base to illustrate that, individual entrepreneurship within the organisation is associated with a few attributes. One of these attributes is proactiveness. The entrepreneurial employees who sense for

changes will proactively help the organisation to break from the past behaviour by generating innovativeness.

In addition, as defined by Utsch and Rauch (2000), initiative is an element included in personal behaviours of proactive and self-started. This is important element to be successful entrepreneur because it assists in eliciting entrepreneurial activities of improving and changing the given work procedures. Frese, Fay, Hilburger, Leng and Tag (1997) conclude the same and address that personal initiative is a behaviour syndrome driving an individual to be active and self starting on achieving a set of goals and work beyond what is formally required in a given job by being proactive.

Intrapreneur has proactive behaviours namely personal initiative, taking charge, issue selling and voice (Jong & Wennekers, 2008).

(1) Personal initiative

Personal initiative refers to the individuals who are self started and persistence proactive in surmounting the barriers.

(2) Taking charge

Taking charge is concerned in change-oriented and lead toward improvements in the workplace. An individual will voluntary to take efforts to influence organisationally functional change with respect to how the task is executed within the context of their jobs, work units or organisations

(3) Issue selling

Issue selling indicates that the individuals who intend to exert upward influence to get the attention or support on their ideas.

(4) Voice

Voice is defined as making innovative recommendation or suggestion for change or improvement. Voice influence things to happen and it is believed as a part of proactive behaviour because it is departed from the individual's daily work role.

2.3 Factors Influencing Intrapreneurial Behaviour

Individual characteristics and organisational factors can influence the intrapreneurial spirit. Based on the empirical research done by Rutherford and Holt (2007), three categories of variables: individual (refer to the attitudes, abilities and dispositions), process (e.g leadership support) and context (communication climate) are positively related to the perceptions of corporate entrepreneurship. Thus the following sections will discuss and review the previous researches that demonstrate the factors at individual level and organisational level that can trigger the intrapreneurial spirit within the established organisation.

2.3.1 Factors at Individual Level- Psychological Factors or Characteristics

In this study, entrepreneurs' traits will be used to detect intrapreneurial behaviour. The concept of entrepreneurship drives to the emergence concept of intrapreneurship where they have similar behaviours of innovation and proactiveness (Jong & Wennekers, 2008).

Rutherford and Holt (2007) indicate that individual variables explained a statistically significant amount of variance in entrepreneurial behaviour. Individual variables consist of dispositions and their attitudes or the trait effect are essential in examining the degree of the employees' interest in entrepreneurial activities. Thus psychological factors which influence entrepreneurial behaviour should be examined to ensure their effect on intrapreneurial behaviour.

As mentioned before, the employees' application of innovative abilities and their willingness to introduce improved and innovative work process are important in shaping corporate entrepreneurship. Therefore, the individual variables (dispositions and attitudes) have been tested and it showed significant in relation to the perceptions of corporate entrepreneurship (Rutherford & Holt, 2007). Moreover in the study conducted by Koh (1996) mentions that only the associations are addressed between psychological characteristics and entrepreneur inclination, but the causal relationship between them has not been examined.

From the literature survey of Jong and Wennekers (2008), they reveal that psychology ownership in organisation which refers to subjective feeling of individuals is formed by having control of one's job, having feelings of efficacy, investing time,