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THE RELATIONSHIP BETWEEN KNOWLEDGE CREATION DIMENSIONS AND THE ENTREPRENEURIAL PERFORMANCE OF A LOCAL GOVERNMENT INSTITUTION IN SOUTH AFRICA

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GLOSSARY OF ABBREVIATIONS

ANOVA	Analysis of Variance
AI	Active Initiative
CAP	Cognitive Analytical Propensity
CE	Corporate Entrepreneurship
CLT	Central Limit Theorem
EO	Entrepreneurial Orientation
EP	Entrepreneurial Propensity
EPI	Entrepreneurial Performance Index
LSQ	Learning Style Questionnaire
MOE	Municipal Owned Entity
PAP	Progressive Action Propensity
PE	Pragmatic Execution
RO	Reflective Observation
SAS	Statistical Analysis System
SHAPE	Spiral of Human Action for Progressive Entrepreneurship
SOE	State Owned Entities

CHAPTER 1: RESEARCH OVERVIEW

1.1 Introduction

Municipalities (cities) in South Africa are struggling with high levels of underdevelopment and are faced with the expectations of millions of people. Cities are thus under immense pressure to deliver services and improve the quality of people's lives in terms of their developmental mandate. These realities are forcing municipalities to consider alternative models and methodologies of management and in this regard entrepreneurship as a field of study could make a valuable contribution.

A research study was therefore undertaken to determine the variables related to knowledge creation and the relationship between such variables and the entrepreneurial performance of different organisational units of a local government institution in South Africa. The document reports on the research conducted at a local government organisation, which is the largest metropolitan municipality in South Africa. The chapter provides an overview of challenges in local government in general and at the specific local government organisation where the research was conducted, describes the background to the identified problem, articulates the research concepts, constructs and primary questions, and explains the focus and applicable hypotheses of the study. The research methodology and importance of the study are accordingly described, where-after an outline of the document is provided to guide the reader further.

1.2 Background: Local government in South Africa

South African municipalities (cities) had to conform to various political and legislative changes following the political transition during 2004 that altered the basic structures and working environment dramatically. Key changes originated from the Local Government

Municipal Structures Act (Act 117 of 1998) whereby former municipalities were amalgamated and new local government organisations were created, which integrated former racially based dispensations.

The following primary legislation regulates the working environment of municipalities and stipulates various requirements that need to be adhered to:

- Local Government Municipal Structures Act, 1998 (Act 117 of 1998)

In summary, the Act provides for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality; specifies criteria for determining the category of municipality to be established in an area; defines the types of municipality that may be established within each category; provides for an appropriate division of functions and powers between categories of municipality; regulates the internal systems, structures and office-bearers of municipalities; provides for appropriate electoral systems, and provides for matters in connection therewith.

- Local Government: Municipal Systems Act, 2000 (Act no 32 of 2000)

In terms of the Municipal Systems Act, 2000 (Act no 32 of 2000), each municipal council must adopt a single, inclusive and strategic plan for the development of the municipality, align the resources and capacity of the municipality with the implementation of the plan and ensure that it forms the basis on which the annual budget is based.

In addition, a municipality must establish a performance management system that is commensurate with its resources; best suited to its circumstances; and in line with the priorities, objectives, indicators and targets contained in its integrated development plan. A municipality must further establish mechanisms to monitor and review its performance management system on an annual basis.

- Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003)

The Local Government Municipal Finance Management Act, 2003 (Act 56 of 2003) provides uniform treasury norms and standards for the local sphere of government and its purpose is to:

- regulate municipal financial management,
- set requirements for the efficient and effective management of the revenue, expenditure, assets and liabilities of municipalities and municipal entities,
- define responsibilities with regard to municipal financial management, and
- determine a financial management governance framework for municipal entities, and put in place a municipal borrowing framework.

The Local Government Municipal Finance Management Act, 2003 (Act 56 of 2003) defines a process of annual budgeting for municipalities (within a framework of multi-year budgeting), including provisions for regular reporting to their councils and the national and provincial governments. In essence municipalities are required to assume responsibility for detailed budgeting, within a nationally determined macro-economic framework. The provisions regarding budgets aim to establish a clear link between the assignment of functions to municipalities and the allocation of resources to such bodies.

In terms of the Local Government Municipal Finance Management Act, 2003 (Act 56 of 2003) a municipal council's budget must include an operating and capital budget which is balanced, may not exceed the previous financial year's budget by more than any growth factor determined annually, and within the available resources, reflect the municipality's integrated development plan.

According to Ramoshaba (2005:13), South Africa's municipalities are under immense pressure to deliver services and improve the quality of life, while they are tasked with a new developmental mandate, struggling with massive underdevelopment and faced with the expectations of millions of people.

In documentation of the National Department of Cooperative Governance and Traditional Affairs, which is responsible for local government in South Africa, it is also highlighted that:-

- “20 % (58 of 283) of municipalities in South Africa are financially distressed
 - 33,5% (95 of 283) of municipalities provide less than 30% access to basic services for households
 - 17,3% (49 of 283) of municipalities provide between 30% and 59% access to basic services for households
 - 29,6% (84 of 283) of municipalities provide between 60% and 89% access to basic services for households
 - only 3% (9 of 283) of municipalities provide more than 90% access to basic services for households”
- (COGTA, 2009:13).

The following areas of concern in municipalities have been identified (COGTA, 2009: 19):-

- “There are serious leadership and governance challenges in municipalities including weak responsiveness and accountability to communities;
- The financial management of many municipalities is very poor;
- Many municipalities are unable to deliver basic services or grow their economies;
- The legacy of apartheid spatial development patterns and inequity continues; and
- There is inadequate human resource capital to ensure professional administrations, and positive relations between labour, management and Councils”.

These findings created the public perception and concern within government that the entire local government system was in distress. It has subsequently led to many negative responses to those municipalities that are struggling with complex social and legacy-based issues, or that are failing in respect of performance or governance issues, whether these relate to changes that occurred in the external environment or problems of municipalities’ own making (COGTA, 2009: 19).

The reason why local government in South Africa is experiencing low performance levels and is failing to promote the socio-economic development of communities is a critical question in South Africa, according to Ramoshaba (2005:14), and it is therefore essential to find new creative, practical and impact-orientated modes of supporting local government. Spokespeople of COGTA (2009:8) accordingly highlight that knowledge-based engagements can assist in the establishment of possible support mechanisms for weaker municipalities.

1.3 Problem statement

Local government institutions (cities) in South Africa have to become more entrepreneurial to overcome the variety of challenges that they face. Cities are required to deliver more and better services to ever-expanding communities, which they can only do by improving management practices and the utilisation of resources. As referred to by Fox and Maas (1997:91), as well as officials of the World Bank (2009:52), metropolitan cities have to seek greater fiscal authority and autonomy from national government, build fiscal and financial capacity to manage budgets effectively and improve their financial accounting and reporting systems. In order to do this, cities require appropriate capacity and skills and need to change bureaucracies, operating methods, and existing relationships with national and central government. Currently, however, cities do not demonstrate sufficient entrepreneurial skills and behaviour to overcome the challenges that they face.

On the one hand, local government has the responsibility of promoting the socio-economic conditions of the community and therefore needs to establish an enabling environment for entrepreneurs. On the other hand, local government itself needs entrepreneurial competence to recognise and exploit innovations and opportunities to reach its strategic intentions, while the current situation indicates a serious lack of skill, competence and capacity.

Traditionally, local government mainly applies bureaucratic management approaches based on generally accepted strategic management practices that rely on rational, analytical planning and programming systems which are commonly applied in both the public and private sectors. Alternative views such as those of Mintzberg (1994: 110, 242-243),

however, call for a revision of traditional strategic planning and management practices and argue that “... *strategies are ‘crafted’ through a process of ‘logical incrementalism’ ...*”. According to the author the problem with strategic planning is related to the basic design model of strategy making, whereby thinking and acting are separated in practice. Similarly, Hjorth (2003:179) argues that bureaucratic management is constituting the problems for which entrepreneurship is represented as a solution (paragraphs 1.4 and 4.4).

In the view of Hjorth (2003:177) “*entrepreneurship concerns itself with distinctive ways of thinking, behaving and management that promotes creativity and innovation*”, which are regarded to be in conflict with bureaucratic management approaches (paragraphs 1.4, 1.6.1, and 4.2 refer). Recent theories that emphasise “*entrepreneurial action*”, such as the “*discovery theory of entrepreneurship*” and the “*creation theory of entrepreneurship*”, are all regarded by Alvarez and Barney (2007:16) as theories that explain human behaviour in terms of the impact of that behaviour on the ability of individuals to accomplish their purposes.

Entrepreneurship theory thus suggests alternative practices to those of traditional bureaucratic and strategic management methodologies, which separate planning and execution, by proposing “*the integration of thinking and acting*” that is regarded as the source of opportunity creation and exploitation. In accordance with this reasoning, human action is portrayed as the essential source of opportunities through continuous engagement in several action/revision processes that constitute inductive learning, until an opportunity is created. Management dispensations and practices that promote such behaviour therefore provide a possible solution for the improvement of local government services, but also poses a threat to the possibility of control, securing stability and reducing risk, which are central to the practices of bureaucratic management.

When evaluating the above-mentioned arguments in the context of local government, it is essential to note and consider applicable interventions as introduced by local government organisations. The city where the research was conducted implemented alternative operating models and structures during 2002 and established separate utilities for trading

services such as electricity, water and sanitation, as well as waste management. In addition, independent agencies were created to render services relating to roads and storm water, as well as parks, recreation and cemeteries as further described in Appendix C.

These interventions relate to the concept of corporate entrepreneurship (CE) and the key research problem is thus to determine whether the different operating models and structures implemented in the departments / units of the organisation had any impact on the actual entrepreneurial performance of the relevant entities and departments of the city. In addition, it is essential to identify specific managerial behavioural characteristics that relate positively with entrepreneurial performance. In summary the research problem is thus two fold namely; to determine whether there is a positive correlation between different operating models and structures and entrepreneurial performance of an organisation and secondly, to determine specific managerial behavioural characteristics that relate positively to entrepreneurial knowledge creation and performance.

1.4 Entrepreneurship and public management

Although entrepreneurship was initially regarded as mainly applicable to the business and private sector environments, there is currently general agreement that it is not only applicable but in fact critically essential for the public sector, which principally includes local government. Chicken (2000: 26-27, 128), Fox and Maas (1997:2-3), Hjorth (2003: 182), Kearney, Hisrich and Roche (2007:281), Morris, Kuratko and Covin (2008: 102-103), Morris and Jones (1999:74, 75) and Morris and Kuratko (2002:307) all agree that the public sector needs to become more entrepreneurial in order to face the challenges that confront government institutions.

In the view of Fox and Maas (1997:8), something additional is needed to create an efficient and responsive public bureaucracy that strives to social equity. The authors indicate that, *“To create a spirit of public entrepreneurship, entrepreneurial governments should thus be innovative by being able to devise new, creative, and innovative ways of satisfying citizens.”* (Fox & Maas, 1997:88, 89). Morris and Kuratko (2002:307) argue that different perspectives from public administration suggest an acknowledgement of the potential application of

entrepreneurship to public sector management and the authors are of the view that entrepreneurship is a universal construct that can be applied in public sector organisations.

According to Morris and Jones (1999:78,79), there is a growing need for entrepreneurial approaches in public administration, since the environment confronting public sector managers is more complex, threatening and dynamic than in the past. The authors define public sector entrepreneurship as “the process of creating value for citizens by bringing together unique combinations of public and/or private resources to exploit social opportunities” (Morris & Jones, 1999:74). The authors further agree with Morris and Kuratko (2002) and argue that “... *the basic steps in the entrepreneurial process of identifying opportunities, developing the concept, assessing resources, acquiring resources, and managing / harvesting the venture, should be no different in the public sector context ...*” (Morris & Jones, 1999:74,75).

According to Morris *et al.* (2008:112), entrepreneurship in the public sector has much in common with entrepreneurship in large corporations [Corporate entrepreneurship] [CE]. The authors state that “*Both types of organisations typically have formalised hierarchies, established stakeholder groups with competing demands, deeply entrenched cultures, detailed rules, and procedures to guide operations, a desire on the part of managers for power and security, and fairly rigid systems governing financial controls, cost allocations, budgeting, and employee rewards.*” The authors (Morris *et al.*, 2008:102-103) also indicate that government organisations face unprecedented demands from society that grow more complex and interdependent every day. As a result entrepreneurship is regarded as not only relevant, but often critical for these organisations to accomplish their missions.

Apart from agreeing on the applicability of entrepreneurship in the public sector, authors further highlight the importance of entrepreneurial people and innovative behaviour. In this regard Fox and Maas (1997:2-3) are of the opinion that government needs innovative public servants who not only support its efforts, but who give direction and find new ways of doing what is needed to deliver public goods and services effectively and efficiently. For Kearney *et al.* (2007:279) public sector entrepreneurship refers to state enterprise and the civil

service, which are defined as an individual or group of individuals who undertake desired activity to initiate change within the organisation, adapt, innovate and facilitate risk. The specific form of entrepreneurship within the public sector “... *depends on the patterns of interaction among individuals within the environment whose efforts jointly determine entrepreneurial performance ...*”, according to the authors. Kearney *et al.* (2007:281) highlight in addition that the process of public sector CE requires enterprising people, who are agents of change.

When evaluating entrepreneurship in public organisations/institutions it is, however, important to acknowledge specific challenges and accommodate differences that exist between the private and public sectors. Chicken (2000:26,27,128) mentions in this regard that entrepreneurial activity is very different between the public and private sectors but very important to the public sector, since enormous sums of money are spent on supplies that expose the scope for ‘entrepreneurism’ in the public sector. In the view of the author it is therefore of particular importance to understand the philosophy of risk assessment and management as part of the foundation of entrepreneurship. The author regards important aspects of “entrepreneurism” employed in the public sector as including activities that are associated with procurement (i.e. purchasing, contracts and tenders), privatisation or contracting out, as well as the formation of partnerships (i.e. public/private partnerships).

As referred to in paragraph 4.2, the key dimensions that influence public sector CE in the view of Kearney *et al.* (2007:280) are politics, complexity, munificence and dynamism, while organisational dimensions are also regarded as essential. According to the authors the dimensions that have the most significant influence on public sector CE are structure/formalisation, decision-making, control and rewards/motivation. Morris and Jones (1999:78, 79) are also of the view that the ability of public organisations to recognise and respond adequately to their changing environment is severely limited not only by resources, but also by the management philosophies and structures that characterise public enterprises. In the authors’ view the bureaucratic framework fails to provide flexibility, adaptability, speed, or incentives for innovation that are critical for effectively carrying out

the mission of the public enterprise and the higher the degree of bureaucratisation, the greater the potential for conflict with entrepreneurship (paragraph 4.2).

Hjorth (2003:64,65) agrees with Morris and Jones (1999:78,79) and argues that bureaucracy and normal management practices are generally in conflict with entrepreneurship. The author pinpoints differences between bureaucratic management and entrepreneurship by referring to the concept of entrepreneurial governance that promotes competition between service providers, empowers citizens, is driven by missions and visions instead of rules and regulations, decentralises authority, encourages participative management, and uses market-type mechanisms rather than administrative techniques and practices (Hjorth, 2003:182) (paragraphs 1.3, 1.4, 1.6.1 and 4.2).

Although there is strong agreement and support for the application of entrepreneurial knowledge and skills in the public sector environment, authors also agree that there are fundamental differences in organisational realities, suggesting that the goals, constraints, approaches, and outcomes related to successful entrepreneurial efforts are unique in both private and public sector organisations.

Entrepreneurial theory and practices could thus make a valuable contribution and are therefore regarded as essential to determine applicable knowledge creation interventions that would enhance the entrepreneurial performance of public institutions and local government specifically.

1.5 Defining concepts, constructs and variables

In terms of the applicable literature review, several propositions and hypotheses could be identified that contain a variety of concepts, constructs and variables that are regarded as influencing entrepreneurial performance on either the individual or organisational level, which are in some instances contradictory in nature and based on completely different baseline premises.

Although the wide spectrum of entrepreneurship perspectives is acknowledged, there is strong agreement that entrepreneurship is not only restricted to business, but is also

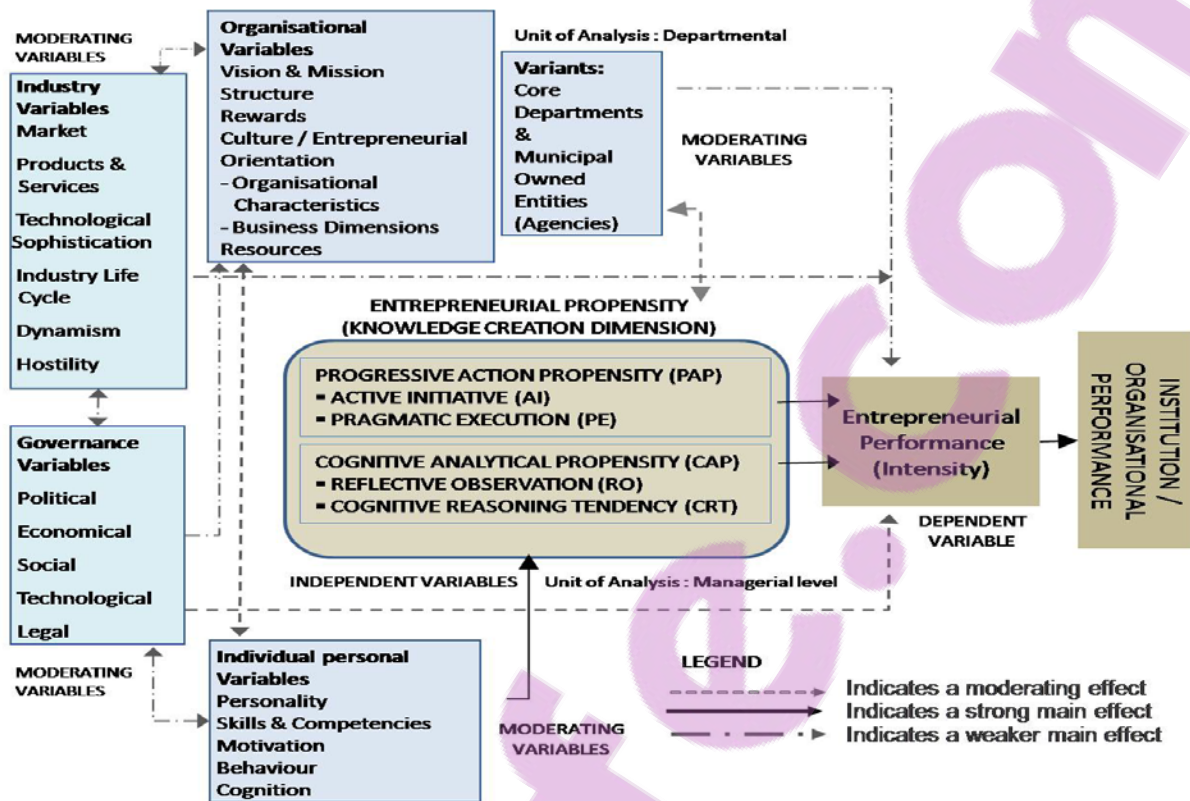
evident in a range of circumstances and environments that include public sector organisations and local government. The critical distinction of entrepreneurship from other disciplines is, however, regarded as the prominent focus on creativity, innovation, risk-taking, venturing and value creation (Hjorth, 2003; Wickham, 2004; Fox & Maas, 1997; Chicken, 2000). In accordance with the views of Morris and Kuratko (2002:307), as well as Chell (2000:63), entrepreneurship is regarded as a universal construct but the applicable environment, whether at the individual, new/small business or large organisational/corporate level, has different circumstances and objectives that create a moderating effect, which needs to be taken into account.

In terms of the reasoning of Chell (2000:63), entrepreneurship is regarded as a *process* in which the owner-manager's actions are contextually embedded. The central notion of the entrepreneur as depicted by Chell and the related inherent entrepreneurial behaviour/activities in different contexts or environments as primary antecedent of entrepreneurial performance, are accordingly acknowledged by a variety of authors (Aldrich & Martinez, 2001; Alvarez & Barney, 2007; Gartner, 1989; Hitt, Ireland, Camp & Sexton, 2002; Mitchell, Friga, & Mitchell, 2005; Stevenson & Jarillo, 1990; Ucbasaran, Westhead & Wright, 2001; Pretorius, Nieman & Van Vuuren, 2005). Recently extensive acknowledgement has also been evident for the critical role and impact of individual-level entrepreneurial behaviour within the CE context (Covin & Slevin, 1991; Davidson & Wiklund, 2001; Frese, 2009; Hjorth, 2003; Holt, Rutherford, & Clohessy, 2007; Huczynski & Buchanan, 2001; Kuratko, Ireland, Covin & Hornsby, 2005; Shepherd, Patzelt & Haynie, 2010; Stevenson & Jarillo, 1990; Zahra, 1993). The explicit views expressed by Hjorth (2003:160-61), Huczynski and Buchanan (2001:8), Kearny, Feldman and Scava (2000:279), Kim and Mauborgne (2003:6) and Van Wijk, Stam, Elfrin and Den Hond (2007:5), namely that companies, industries or organisations are the wrong unit of analysis for success or failure and that instead, the real difference depends on individual leaders and managers, are specifically noted and acknowledged. In this regard the definition of CE, as stated by Kuratko *et al.* (2005:701), namely that "*corporate entrepreneurship (CE) is the process whereby an individual or group of individuals, in association with an existing organisation, create a new*

organisation or instigate renewal or innovation within that organization”, can be regarded as an appropriate basis for further refinement.

In the context of the above-mentioned definition and in accordance with the arguments of Wiklund (1998), Jugdev (2007:427), Baum, Bird and Chardavoyne (2003), as well as Nonaka and Takeuchi (1995), it can be deduced that behaviour that promotes entrepreneurial knowledge creation consists of dimensions related to “a way of thinking” such as “cognitive analytical propensity” (CAP) and an “action orientation”, defined as “progressive action propensity” (PAP). These dimensions, which are together labelled *entrepreneurial propensity* (EP), are thus regarded as possible enablers of entrepreneurial knowledge creation and subsequent performance in accordance with the reasoning of Wiklund (1998), as well as Nonaka and Takeuchi (1995), and as a further extension of the work of Chell (2000), Holt *et al.* (2007), Alvarez and Barney (2007), Morris *et al.* (2008) Frese (2009), Ireland, Covin and Kuratko (2009) and Shepherd *et al.* (2010). The identified constructs relate to ‘*knowledge creation*’ dimensions (learning styles), as referred to by Nonaka and Takeuchi (1995) and Jugdev (2007:427), as well as Baum *et al.* (2003), and further extend and specifically integrate the “*creation theory of entrepreneurship*” highlighted by Alvarez and Barney (2007:26-28) and the “*action theory perspective*” of entrepreneurship highlighted by Frese (2009:433), as depicted in figure 1 below:

Figure 1: Entrepreneurial propensity (knowledge creation variables) and entrepreneurial performance



Based on: Alvarez and Barney (2007), Chell (2000), Frese (2009), Holt *et al.* (2007), Nonaka and Takeuchi (1995), Shepherd *et al.* (2010) and Wiklund (1998)

As depicted in figure 1, knowledge creation specifically relates to the behavioural dimension of entrepreneurship with individual behaviour as unit of analysis, which is influenced by and in turn influences organisational variables that include corporate culture (entrepreneurial orientation) at the organisational level of analysis. Knowledge creation is regarded as being dependent on the interaction between cognitive and active behaviour (experience) that facilitates the conversion of tacit knowledge to explicit knowledge, which promotes entrepreneurial performance.

While acknowledging the views that entrepreneurship represents a dynamic process defined by multiple actors, which is situated in a specific context, the concept of a “spiral” as originally defined by Nonaka and Takeuchi (1995:57-61) as the basis of knowledge

creation, and subsequently introduced in the entrepreneurship field by both Ropo and Hunt (1995:106) as well as Shepherd *et al.* (2010:60), is further specifically noted. The “*spiral*” concept and “knowledge creation” dynamics (behavioural dimension) of entrepreneurship are based on similar antecedents defined in the “*creation theory of entrepreneurship*” mentioned by Alvarez and Barney (2007) and share baseline premises, which argue that entrepreneurial behaviour actually “*shapes*” change and creates opportunities for exploitation and innovation by means of continuously recursive and progressive actions that facilitate knowledge creation and subsequently promote entrepreneurial performance. In the light of these arguments the “spiral” concept as an alternative view related to the entrepreneurial process, dynamics, methodology and propensity has been accepted and a proposed model, labelled Spiral of Human Action for Progressive Entrepreneurship (SHAPE), as depicted in figure 36 (Chapter 7, paragraph 7.8.1), is thus proposed.

In summary, the following key constructs as depicted in figure 1, which are related to the defined hypotheses, could be identified:

- Entrepreneurial performance, with specific reference to the level of entrepreneurial intensity
- Organisational characteristics and business dimensions as variables related to firm-level entrepreneurial orientation (organisational culture)
- Knowledge creation dimensions (learning styles) that facilitate EP and competencies which include the concepts of CAP and PAP with the following related variables:-

Cognitive Analytical Propensity (Cognitive Dimension)

- Reflective observation (RO)
- Cognitive reasoning tendency (CRT).

Progressive Action Propensity (Active Dimension)

- Active initiative (AI)
- Pragmatic execution (PE).

1.6 Research objectives and questions

1.6.1 Research objectives

In summary, the objectives of the research are:-

- a) To determine knowledge creation dimensions that relate to entrepreneurial performance;
- b) To determine factors that relate to entrepreneurial performance of an organisation/institution in a local government context;
- c) To determine the nature of relationships that exist between individual behavioural factors (knowledge creation dimension), organisation/institutional factors and entrepreneurial performance in different organisational units of the metropolitan local government organisation; and
- d) To make inferences about the identified relationships that can be applied in a local government context to improve entrepreneurial performance.

Confirmed relationships between the identified variables and entrepreneurial performance in different organisational units of a local government institution would highlight the necessity for substantial changes in recruitment criteria, human capital development initiatives, leadership and management practices, as well as operating methodologies of local government that are currently primarily bureaucratic in nature and directed at monitoring and control with limited room for creativity and innovation. According to Hjorth (2003:64,65) the concepts of management and entrepreneurship are regarded as being in conflict and the author views bureaucratic behaviour as the prime enemy of entrepreneurship, since entrepreneurship, like innovation, actually thrives on conditions of chaos while the task of management is to control that chaos (paragraphs 1.3, 1.4, 1.6.1, 4.2 and 4.4). As highlighted by Hjorth (2003:160-161) (paragraphs 1.4 and 4.4,) the managerial *'thinking-acting'* division is threatened by CE or intrapreneurship and entrepreneurship actually requires a breakdown of this distinction to allow individuals freedom to act more in accordance with their 'own' intuitive, spontaneous, and passionate initiatives.

In general, local government systems and practices are currently not aligned to accommodate such a distinction. A comparison between the entrepreneurial performance and knowledge creation dimensions (learning styles) of managerial staff in independent agencies and core departments of a metropolitan local government organisation is therefore regarded as essential to determine possible factors that relate to entrepreneurial performance. Confirmed relationships between the identified behavioural tendencies and entrepreneurial performance would thus provide substantiated arguments for the re-alignment of managerial and leadership practices, systems and human development initiatives to accommodate a balance between the need for monitoring, control and the freedom to act entrepreneurially.

1.6.2 Research questions

In order to achieve the objectives of the research, the following key questions are addressed:

- a) What are the key knowledge creation dimensions (individual behaviour) related to entrepreneurial performance?
- b) What are the organisational/institutional factors that relate to entrepreneurial performance in a local government context?
- c) Is the perceived entrepreneurial performance of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- d) Are the perceived organisational characteristics and key business dimensions of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- e) Are factors related to key knowledge creation dimensions (learning styles) of managerial staff in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation and at different managerial levels significantly different?

- f) Are there significant relationships between the perceived entrepreneurial performance, organisational characteristics and key business dimensions, as well as knowledge creation dimensions (learning styles), of managerial staff at different managerial levels and in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation?

The relationship between the “action” and “cognitive” propensities of staff refers to knowledge creation dimensions and EP that highlight the extent to which tacit knowledge is converted to explicit knowledge, which might have distinct relationships with entrepreneurial performance that need to be determined. In addition, the local government environment and context, as well as organisational characteristics of different organisational units in which the research is conducted, affect, and are being affected, by the behaviour of managerial staff (learning styles) that should be taken into account.

The determination of specific factors and development of behaviours and practices that enhance the potential of entrepreneurial success are of critical importance for individual, commercial, corporate and public entrepreneurship, as well to promote socio-economic development at local, national and international level.

1.7 Hypotheses

In accordance with the identified research problem and questions as well as the stipulated constructs and variables as indicated and discussed in paragraph 1.5 (figure 1) and paragraph 5.5, the following hypotheses have been formulated:

1.7.1 Perceived entrepreneurial performance of core departments and agencies

H1o: The number of new ventures, products/services, and systems/processes *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.

- H1a: The number of new ventures, products/services, and systems/processes *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H2o: The number of new ventures, products/services, and systems/processes *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H2a: The number of new ventures, products/services, and systems/processes *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H3o: The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H3a: The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H4o: The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H4a: The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H5o: The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H5a: The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H6o: The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.

- H6a: The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H7o: The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H7a: The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H8o: The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H8a: The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H9o: The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H9a: The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.
- H10o: The number of new methods, operational processes or systems successfully *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.
- H10a: The number of new methods, operational processes or systems successfully *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.

H11o The overall performance of municipal entities (agencies) and core departments of the metropolitan local government organisation is similar.

H11a: The overall performance of municipal entities (agencies) and core departments of the metropolitan local government organisation is significantly different.

1.7.2 Perceived organisational characteristics and key business dimensions of departments and agencies

H12o: Organisational characteristics in municipal entities (agencies) and core departments of the metropolitan local government organisation are similar.

H12a: Organisational characteristics in municipal entities (agencies) and core departments of the metropolitan local government organisation are significantly different.

H13o: Key business dimensions in municipal entities (agencies) and core departments of the metropolitan local government organisation are similar.

H13a: Key business dimensions in municipal entities (agencies) and core departments of the metropolitan local government organisation are significantly different.

1.7.3 Knowledge creation dimensions (learning styles) of staff

H14o: “Progressive action propensity” levels as reflected by active initiative of senior and operational management staff in the metropolitan local government organisation are similar.

H14a: “Progressive action propensity” levels as reflected by active initiative of Senior and operational management staff in the metropolitan local government organisation are significantly different.

H15o: “Progressive action propensity” levels as reflected by active initiative of staff in different units (i.e. municipal entities (agencies) and core departments) of the metropolitan local government organisation are similar.

H15a: “Progressive action propensity” levels as reflected by active initiative of staff in different units (i.e. municipal entities {agencies} and core departments) of the metropolitan local government organisation are significantly different.

- H16o: “Progressive action propensity” levels as reflected by active initiative of staff in different units (i.e. municipal entities {agencies} and core departments) and on senior and operational management levels in the metropolitan local government organisation are similar.
- H16a: “Progressive action propensity” levels as reflected by active initiative of staff in different units, i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are significantly different.
- H17o: “Progressive action propensity” levels as reflected by pragmatic execution of senior and operational management staff in the metropolitan local government organisation are similar.
- H17a: “Progressive action propensity” levels as reflected by pragmatic execution of Senior and Operational management staff in the metropolitan local government organisation are significantly different.
- H18o: “Progressive action propensity” levels as reflected by pragmatic execution of staff in different units (i.e. agencies and core departments) of the metropolitan local government organisation are similar.
- H18a: “Progressive action propensity” levels as reflected by pragmatic execution of staff in different units i.e. municipal entities (agencies) and core departments, of the metropolitan local government organisation are significantly different.
- H19o: “Progressive action propensity” levels as reflected by pragmatic execution of staff in different units i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are similar.
- H19a: “Progressive action propensity” levels as reflected by pragmatic execution of staff in different units i.e. municipal entities (agencies) and core departments, and on

senior and operational management levels in the metropolitan local government organisation are significantly different.

H20o: “Cognitive analytical propensity” levels as reflected by reflective observation of senior and operational management staff in the metropolitan local government organisation are similar.

H20a: “Cognitive analytical propensity” levels as reflected by reflective observation of senior and operational management staff in the metropolitan local government organisation are significantly different.

H21o: “Cognitive analytical propensity” levels as reflected by reflective observation of staff in different units i.e. municipal entities (agencies) and core departments, of the metropolitan local government organisation are similar.

H21a: “Cognitive analytical propensity” levels as reflected by reflective observation of staff in different units i.e. municipal entities (agencies) and core departments, of the metropolitan local government organisation are significantly different.

H22o: “Cognitive analytical propensity” levels as reflected by reflective observation of staff in different units, i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are similar.

H22a: “Cognitive analytical propensity” levels as reflected by reflective observation of staff in different units i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are significantly different.

H23o: “Cognitive analytical propensity” levels as reflected by the cognitive reasoning tendency of senior and operational management staff in the metropolitan local government organisation are similar.

- H23a: “Cognitive analytical propensity” levels as reflected by the cognitive reasoning tendency of senior and operational management staff in the metropolitan local government organisation are significantly different.
- H24o: “Cognitive analytical propensity” levels as reflected by the cognitive reasoning tendency of staff in different units i.e. municipal entities (agencies) and core departments, of the metropolitan local government organisation are similar.
- H24a: “Cognitive analytical Propensity” levels as reflected by the cognitive reasoning tendency of staff in different units, i.e. municipal entities (agencies) and core departments, of the metropolitan local government organisation are significantly different.
- H25o: “Cognitive analytical propensity” levels as reflected by the cognitive reasoning tendency of staff in different units i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are similar.
- H25a: “Cognitive analytical propensity” levels as reflected by the cognitive reasoning tendency of staff in different units i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are significantly different.

1.7.4 Correlation between progressive action propensity and entrepreneurial performance

- H26o: There are no correlations between progressive action propensity levels as reflected by the *active initiative* of all managerial staff with:-
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H26a: There are significant correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H27o: There are no correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H27a: There are significant correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H28o: There are no correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H28a: There are significant correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and

- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H29o: There is no correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H29a: There is a significant correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H30o: There are no correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H30a: There are significant correlations between progressive action propensity levels as reflected by the *active initiative* of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H31o: There is no correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H31a: There is a significant correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H32o: There is no correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.

- H32a: There is a significant correlation between progressive action propensity levels as reflected by the *active initiative* of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.
- H33o: There are no correlations between progressive action propensity levels as reflected by the *pragmatic execution* of managerial staff with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

- H33a: There are significant correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H34o: There are no correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff on senior or operational management levels with:

- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H34a: There are significant correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H35o: There are no correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H35a: There are significant correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H36o: There is no correlation between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H36a: There is a significant correlation between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H37o: There are no correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H37a: There are significant correlations between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff on senior or operational

management levels with the overall performance of organisational units in the metropolitan local government organisation.

- H38o: There is no correlation between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H38a: There is a significant correlation between progressive action propensity levels as reflected by *the pragmatic execution* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H39o: There is no correlation between progressive action propensity levels as reflected by the *pragmatic execution* of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.
- H39a: There is a significant correlation between progressive action propensity levels as reflected by the *pragmatic execution (PE)* of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.

1.7.5 Correlation between cognitive analytical propensity and entrepreneurial performance

- H40o: There are no correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H40a: There are significant correlations between cognitive analytical propensity levels as reflected by *the reflective observation* of managerial staff with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H41o: There are no correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation,

- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H41a: There are significant correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products / service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H42o: There are no correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and

- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H42a: There are significant correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

- H43o: There is no correlation between cognitive analytical propensity levels as reflected by *reflective observation* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H43a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H44o: There are no correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H44a: There are significant correlations between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H45o: There is no correlation between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H45a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *reflective observation (RO)* of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H46o: There is no correlation between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.
- H46a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *reflective observation* of managerial staff with the business

dimensions of organisational units in the metropolitan local government organisation.

H47o: There are no correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with:

- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

H47a: There are significant correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with:

- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H48o: There are no correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H48a: There are significant correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff on senior or operational management levels with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H49o: There are no correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H49a: There are significant correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff in core departments or municipal entities (agencies) with:
- a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H50o: There is no correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H50a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the overall performance of organisational units in the metropolitan local government organisation.
- H51o: There are no correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.
- H51a: There are significant correlations between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff on senior or operational management levels with the overall performance of organisational units in the metropolitan local government organisation.

- H52o: There is no correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H52a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the organisational characteristics of organisational units in the metropolitan local government organisation.
- H53o: There is no correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.
- H53a: There is a significant correlation between cognitive analytical propensity levels as reflected by the *cognitive reasoning* tendency of managerial staff with the business dimensions of organisational units in the metropolitan local government organisation.

1.7.6 Correlation between the perceived organisational characteristics and key business dimensions with entrepreneurial performance

- H54o: There are no correlations between the perceived *organisational characteristics* of *organisational units* in the metropolitan local government organisation with:
- a) The number of new ventures *identified* by organisational units of the metropolitan local government organisation;
 - b) The number of new ventures *implemented* by organisational units of the metropolitan local government organisation;
 - c) The number of new products/services *identified* by organisational units of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by organisational units of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by organisational units of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by organisational units of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by organisational units of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by organisational units of the metropolitan local government organisation; and
- i) The overall perceived performance of organisation units of the metropolitan local government organisation.

H54a: There are significant correlations between the perceived *organisational characteristics* of *organisational units* in the metropolitan local government organisation with:

- a) The number of new ventures *identified* by organisational units of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by organisational units of the metropolitan local government organisation;
- c) The number of new products/services *identified* by organisational units of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by organisational units of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by organisational units of the metropolitan local government organisation;

- f) The number of existing products/service revisions *introduced* by organisational units of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by organisational units of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by organisational units of the metropolitan local government organisation; and
- i) The overall perceived performance of organisation units of the metropolitan local government organisation.

H55o: There are no correlations between the perceived *key business dimensions* of *organisational units* in the metropolitan local government organisation with:

- a) The number of new ventures *identified* by organisational units of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by organisational units of the metropolitan local government organisation;
- c) The number of new products/services *identified* by organisational units of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by organisational units of the metropolitan local government organisation;
- e) The number of existing product/service revisions *identified* by organisational units of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by organisational units of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by organisational units of the metropolitan local government organisation;

- h) The number of new methods, operational processes or systems *successfully implemented* by organisational units of the metropolitan local government organisation; and
- i) The overall perceived performance of organisation units of the metropolitan local government organisation'

H55a: There are significant correlations between the perceived *key business dimensions* of *organisational units* in the metropolitan local government organisation with:

- a) The number of new ventures *identified* by organisational units of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by organisational units of the metropolitan local government organisation;
- c) The number of new products/services *identified* by organisational units of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by organisational units of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by organisational units of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by organisational units of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by organisational units of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by organisational units of the metropolitan local government organisation; and
- i) The overall perceived performance of organisation units of the metropolitan local government organisation.

H56o: There are no correlations between the perceived *organisational characteristics* of *core departments* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by core departments of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by core departments of the metropolitan local government organisation;
- c) The number of new products/services *identified* by core departments of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by core departments of the metropolitan local government organisation;;
- e) The number of existing products/service revisions *identified* by core departments of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by core departments of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by core departments of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by core departments of the metropolitan local government organisation; and
- i) The overall perceived performance of core departments of the metropolitan local government organisation.

H56a: There are significant correlations between the perceived *organisational characteristics* of *core departments* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by core departments of the metropolitan local government organisation;

- b) The number of new ventures *implemented* by core departments of the metropolitan local government organisation;
- c) The number of new products/services *identified* by core departments of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by core departments of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by core departments of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by core departments of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by core departments of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by core departments of the metropolitan local government organisation; and
- i) The overall perceived performance of core departments of the metropolitan local government organisation.

H57o: There are no correlations between the perceived *key business dimensions* of *core departments* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by core departments of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by core departments of the metropolitan local government organisation;
- c) The number of new products/services *identified* by core departments of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by core departments of the metropolitan local government organisation;

- e) The number of existing products/service revisions *identified* by core departments of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by core departments of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by core departments of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by core departments of the metropolitan local government organisation; and
- i) The overall perceived performance of core departments of the metropolitan local government organisation.

H57a: There are significant correlations between the perceived *key business dimensions* of *core departments* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by core departments of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by core departments of the metropolitan local government organisation;
- c) The number of new products/services *identified* by core departments of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by core departments of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by core departments of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by core departments of the metropolitan local government organisation,
- g) The number of new methods, operational processes or systems *identified* by core departments of the metropolitan local government organisation;

- h) The number of new methods, operational processes or systems *successfully implemented* by core departments of the metropolitan local government organisation; and
- i) The overall perceived performance of core departments of the metropolitan local government organisation.

H58o: There are no correlations between the perceived *organisational characteristics of municipal entities (agencies)* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by municipal entities (agencies) of the metropolitan local government organisation;
- c) The number of new products/services *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) of the metropolitan local government organisation; and
- i) The overall perceived performance of by municipal entities (agencies) of the metropolitan local government organisation.

H58a: There are significant correlations between the perceived *organisational characteristics* of *municipal entities (agencies)* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by municipal entities (agencies) of the metropolitan local government organisation;
- c) The number of new products/services *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) of the metropolitan local government organisation; and
- i) The overall perceived performance of by municipal entities (agencies) of the metropolitan local government organisation.

H59o: There are no correlations between the perceived *key business dimensions* of *municipal entities (agencies)* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by municipal entities (agencies) of the metropolitan local government organisation;

- b) The number of new ventures *implemented* by municipal entities (agencies) of the metropolitan local government organisation;
- c) The number of new products/services *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- d) The number of new products/services *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) of the metropolitan local government organisation,
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) of the metropolitan local government organisation; and
- i) The overall perceived performance of by municipal entities (agencies) of the metropolitan local government organisation.

H59a: There are significant correlations between the perceived *key business dimensions* of *municipal entities (agencies)* of the metropolitan local government organisation with:

- a) The number of new ventures *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- b) The number of new ventures *implemented* by municipal entities (agencies) of the metropolitan local government organisation;
- c) The number of new products/services *identified* by municipal entities (agencies) of the metropolitan local government organisation;

- d) The number of new products/services *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- e) The number of existing products/service revisions *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- f) The number of existing products/service revisions *introduced* by municipal entities (agencies) of the metropolitan local government organisation;
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) of the metropolitan local government organisation;
- h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) of the metropolitan local government organisation; and
- i) The overall perceived performance of municipal entities (agencies) of the metropolitan local government organisation.

1.8 Key constructs

In summary, as described and depicted in paragraph 1.5 (figure 1), the following key constructs related to the defined hypotheses had to be measured:

- Entrepreneurial performance, with specific reference to the level of entrepreneurial intensity;
- Organisational characteristics and business dimensions as variables related to firm-level entrepreneurial orientation (organisational culture); and
- Knowledge creation dimensions (learning styles) that facilitate EP and competencies which include the concepts of CAP and PAP with the following related variables:

Cognitive analytical propensity

- RO
- CRT.

Progressive action propensity

- AI
- PE.

1.9 Measurement of constructs

In order to assess entrepreneurial performance as well as organisational characteristics and key business dimensions of departments and agencies, the entrepreneurial performance index as adopted from Morris and Kuratko (2002:291 – 294) has been used as the primary basis to assess the performance of each selected agency and core department. The questionnaire captures both the degree and frequency of entrepreneurship, as well as underlining dimensions of innovativeness, risk-taking and proactiveness. In addition, product, service and process innovation are covered. The questionnaire is based on an ordinal Likert scale. Various studies in which these measures have been employed have reported more than satisfactory statistics for their reliability and validity (Morris & Kuratko, 2002:291; Morris & Sexton, 1996:9; Dhliwayo, 2007:183,185; Groenewaldt, 2010:164).

The CAP as well as PAP levels of managerial staff were measured by the Honey and Mumford (1992) learning style questionnaire (LSQ) (Honey & Mumford, 1992, 89-91). The selected questionnaire provides for the identification of four distinct learning/behavioural styles, namely activist, reflector, theorist and pragmatist, that have respectively been defined as AI, RO, CRT and PE. Honey and Mumford (1992:79, 80) mention that the instrument's validity has been found to be largely accurate and its reliability is high for an instrument of this kind. Grimbeek (2006:16) cites Duff (2001), who relates several studies by various authors who reported wide-ranging consistency and reliability of test results. The questionnaire is based on an ordinal staple scale.

The questionnaires have been adjusted in accordance with the findings of the exploratory study.

1.10 Hypotheses testing

The t-test for independent samples was conducted to evaluate the differences in the means of the core departments and agencies and to determine the probability that the two corresponding means are different. An analysis of variance (ANOVA) was further done on the dependent variables, namely sub-scales one (1) to four (4), with the independent variables i.e. managerial level and organisational unit and the interaction between these variables, to test whether the population means are equal. A normal Blom transformation was used to comply with the assumptions of equal variances and the normal distribution of the residuals.

In order to determine a measure of association, the Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) has been used to reveal the magnitude and direction of relationships.

The hypotheses testing are presented in chapter 6: Research Findings.

1.11 Research methodology

1.11.1 Research design

The study was designed as an empirical research study. The study was directed at clarifying constructs and determining variables related to the evaluation of entrepreneurial performance that had been used to adjust the selected questionnaires to organisation-specific circumstances. The study was conducted by means of an analysis of secondary, mainly organisation-specific data and academic literature. The formal study was directed at assessing associations among the identified variables that relate to entrepreneurial performance in a local government context.

1.11.2 Sampling

The population of the study consists of the managerial staff of a metropolitan local government organisation up to reporting level six (6), totalling 2 954 staff members. The study made use of a non-probability, judgemental sample.

In determining the sample size the following factors, as indicated by Cooper and Schindler (2003:190), were considered, namely dispersion of variance, desired precision, interval range, confidence level and number of sub-groups. Purposeful samples have been drawn to include departments as well as municipal agencies that realised high as well as low performance in terms of internal performance measurement evaluations. Three core departments, as well as two independent municipal agencies of the metropolitan local government organisation that are registered as Section 21 companies were selected as independent samples. Senior, middle and operational managerial staff up to reporting level six (6) in the selected departments and entities of the city represents the sample elements that amount to 1 020 staff members. The selected samples constitute 34,53% of the defined population.

1.11.3 Data collection

A self-administered structured questionnaire attached as Annexure A was used for the purposes of the empirical study.

The questionnaire comprised the following two sections as referred to in paragraph 1.9:-

- Section A : Learning style Questionnaire (individual behavioural dimension)

The section measured behavioural/learning style variables related to PAP, namely AI and PE, as well as variables related to CAP, namely RO and CRT. The section of the measuring instrument is based on the Honey and Mumford LSQ (Honey & Mumford, 1992:89-91) and comprises an ordinal staple scale.

- Section B : Entrepreneurial Performance Index

This section assessed the perceived entrepreneurial performance as well as organisational characteristics and key business dimensions of core departments and agencies as dimensions of firm-level entrepreneurial orientation. The entrepreneurial performance index (EPI) questionnaire was adopted from Morris and Kurakto (2002:291–294) and captures both the degree and frequency of entrepreneurship, as

well as underlining dimensions of innovativeness, risk-taking and proactiveness. In addition, product, service and process innovation are covered. The questionnaire is based on an ordinal Likert scale.

Because of the different access senior and operational managerial staff have to electronic systems, questionnaires were distributed to staff on operational management level while electronic versions were made available to senior managerial staff. A covering letter describing the study and ensuring confidentiality was provided.

For the purposes of the exploratory study, open-ended interviews with randomly selected managers and staff members were conducted to identify variables and determine adjustments required to the selected questionnaires. Since it is critically important to determine whether respondents understand the content of a questionnaire, a pilot test was conducted prior to final distribution.

1.11.4 Data analysis

The primary focus of the analysis was to test the hypotheses as stated in paragraph 1.7 concerning the variables of interest and to use the evidence provided to draw conclusions regarding these propositions for the population as a whole.

Questionnaires were distributed in hard copy as well as by electronic media to senior managers and responses were captured directly by data processors from the University of Pretoria onto Statistical Analysis Systems (SAS) software. For the analysis of the quantitative data of the questionnaires, the SAS of the University of Pretoria's Statistics Department was used. For comparative purposes, statistical tools were used, such as principal component analysis for Section A of the questionnaire, the t-test for independent samples, ANOVA and Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) to determine measures of association. The results are discussed in Chapter 6: Research Findings.

1.12 Importance/benefits of the study

The determination of specific factors, behaviour, knowledge creation dimensions (learning styles), practices, processes or systems that enhance the potential of entrepreneurial success in public institutions is of critical importance for individual, commercial and corporate entrepreneurship, as well as to promote socio-economic development at local, national and international level. Confirmed and substantiated evidence of variables, behaviour, learning styles, processes and/or systems that relate positively to entrepreneurial performance would furthermore enable governments, academic and training institutions, as well as other related supportive agencies, to determine key interventions to promote entrepreneurial competencies on various levels to the benefit of the communities that they serve.

1.13 Outline of study

Final results are presented in accordance with the following layout:

CHAPTER 1: RESEARCH OVERVIEW

Chapter 1 provides a background of local government in South Africa, as well as at the metropolitan local government organisation where the research was conducted. In addition, an overview of entrepreneurship and public management is provided, followed by the clarification of concepts and constructs. The research objectives and questions are described and the relevant hypotheses are stipulated. In addition, the key constructs are identified and an overview of the measurement of constructs, hypothesis testing, research methodology and the benefits of the study is finally provided.

CHAPTER 2: ENTREPRENEURSHIP THEORY

Chapter 2 provides an overview of the inherent baseline premises and definition of entrepreneurship, research trends, domains of entrepreneurship and the entrepreneurial process, as well as the concept of an entrepreneurial spiral. In conclusion, the contexts in which entrepreneurship applies are analysed.

CHAPTER 3: ENTREPRENEURIAL COGNITION, BEHAVIOUR AND KNOWLEDGE CREATION

In Chapter 3, success factors, skills and competencies related to entrepreneurship are reviewed, while different perspectives on applicable dimensions of cognition, behaviour, intuition, creativity, innovation, knowledge creation and entrepreneurial learning that relate to entrepreneurial performance are analysed.

CHAPTER 4: ENTREPRENEURSHIP IN AN INSTITUTIONAL CONTEXT

Chapter 4 is directed at the integration of generic variables in an institutional/organisational context. In this regard various approaches to corporate and public entrepreneurship are initially analysed, in order to determine applicable variables as contained in relevant literature, whereafter the interface between individual and collective factors as derived from Chapter 3 is considered within an institution/organisation (firm level). The relationship of strategic management concepts with entrepreneurship is accordingly analysed, followed by an overview of organisational learning and performance management.

CHAPTER 5: RESEARCH METHODOLOGY

Following on the theoretical literature review as addressed in Chapters 2 to 4, Chapter 5 describes the empirical study with reference to the background of the identified problem, articulates the research concepts, constructs and primary questions and explains the focus and hypotheses of the study. The research methodology that was followed is presented by providing a description of sampling, the research instruments used and the descriptive and inferential statistics applied.

CHAPTER 6: RESEARCH FINDINGS

Chapter 6 reports on the results of the empirical study. Initially the response rate and demographic data are reflected, whereafter the results obtained from the inferential statistics are depicted. Results obtained from the research questionnaire are portrayed, followed by the results of the t-test analyses, ANOVA and correlation (Pearson Correlation Coefficient).

CHAPTER 7: CONCLUSION

In conclusion, Chapter 7 summarises the findings of the literature review and reviews the research objectives, questions and stipulated hypotheses, as well as results obtained from the empirical study. The contribution and limitations of the study are further described, while specific conclusions and final recommendations are subsequently made.

CHAPTER 2: ENTREPRENEURSHIP THEORY

2.1 Introduction

The research field of entrepreneurship covers a wide spectrum of perspectives, dimensions, scopes, and contexts ranging from the personalities and traits of entrepreneurs to behavioural characteristics and entrepreneurial activities at an individual level, businesses of different sizes as well as corporate, social, and public institutions. This chapter provides an overview of the domain, definition and scope of entrepreneurship, as well as research trends, perspectives, dimensions, the entrepreneurial process and the concept of an entrepreneurial spiral that are related to entrepreneurial knowledge creation and performance at both the individual and firm/institutional level.

2.2 Definitions of entrepreneurship

Several definitions of entrepreneurship exist in literature that cover perspectives ranging from a specific type of person, certain behaviours or a particular strategy to a way of management, aimed at the introduction of new goods, markets, products or services, reorganisation and creation of growth or wealth.

According to Wickham (2004:115) the following sub-fields that are more focussed can be identified:-

- **Process**
Process refers to the series of actions taken by, and elucidated by, the entrepreneur in the identification of and pursuit of new opportunities.
- **Context**
Context refers to the situation within which entrepreneurs work.

- Outcomes
Outcomes refer to the performance of the entrepreneur in financial, organisational and human terms.

Wickam (2004:15,19) mentions that an entrepreneur can be defined as a specific type of person with certain personality traits, but entrepreneurship is also regarded as a style of management aimed at pursuing opportunity and driving change. Venkataraman, cited by Low (2001:6), points to the fact that “Entrepreneurship as a field seeks to understand how opportunities to bring into existence ‘future’ goods and services are discovered, created, and exploited, and with what consequences.” Low (2001:5) posits entrepreneurship as the process of identifying, valuing, and capturing opportunity. Carland, cited by Gartner (1989:60), ties the state of being an entrepreneur to innovative behaviour and strategic management practices and identifies five innovative ‘strategic postures’ for entrepreneurship, namely:

- Introduction of new goods;
- Introduction of new methods of production;
- Opening up new markets;
- Opening up new sources of supply; and
- Industrial reorganisation.

Biemans, cited by Frese, Chell and Klandt (2000:8-9), views entrepreneurship as an innovation strategy of which the active nature is regarded as of specific importance, while Morris and Kuratko (2002:23) identify the following key perspectives on the nature of entrepreneurship:-

- Creation of wealth
- Creation of enterprise
- Creation of innovation
- Creation of change
- Creation of employment
- Creation of value
- Creation of growth.

According to Drucker, cited by Frese *et al.* (2000:8-9), innovation is the major tool of entrepreneurship, which is defined as a systematic search for the changes that are occurring in society with a view to exploit those changes as opportunities for new markets, products,

or ideas. Entrepreneurship is therefore concerned with economic growth through recognition and exploitation of opportunities in economic and social arenas, according to the authors.

In essence the primary perspectives adopted to define and describe the domain and key purpose of entrepreneurship relate to the identification and exploitation of opportunities to innovate; create wealth, value, growth, new ventures; pursue enterprise, change and re-organisation; and to introduce new markets, goods, products, services, sources of supply, new methods and processes.

With reference to the behavioural dimension of entrepreneurship, Gartner (1989:47) asserts that the difference between entrepreneurs and non-entrepreneurs lies in the fact that entrepreneurs create organisations while non-entrepreneurs do not. An entrepreneur is thus regarded as *a set of activities* involved in organisation creation, while in terms of trait approaches an entrepreneur is a set of personality traits and characteristics. For Chell (2000:63), entrepreneurship is a process in which the owner-manager's actions are contextually embedded.

Wickam (2004:22) asserts that “... *the idea of an ‘entrepreneurial personality’ which predisposes people to business success is far from clear and controversial*”. The author mentions that there is no agreed definition of entrepreneurship and summarises key behavioural aspects of entrepreneurship by highlighting the following:-

- The entrepreneur as a manager undertaking particular tasks;
- The entrepreneur as an economic agent generating particular economic effect, and
- The entrepreneur as an individual of a particular personality.

Biemans, cited by Frese *et al.* (2000:8-9), is of the opinion that organisations and individuals can react to changes around them or *proactively* allocate resources to identify and seize opportunities. This is regarded as an entrepreneurial innovation strategy that emphasises the *active nature* of entrepreneurship.

Different views on the contexts in which entrepreneurship applies are also expressed with related objectives and variables. Gartner (1989:63) postulates that organisation creation

separates entrepreneurship from other disciplines and in order to encourage growth, the focus needs to be placed on the process by which new organisations are created. Chell (2000:72), however, disagrees and indicates that business founding is not a necessary condition of entrepreneurship. The author reasons that “... *the key skill of entrepreneurship may be widely distributed in the population and may manifest itself during the life of a business (not only start-up).*” It is further argued that it might be evident in ‘not-for-profit’ organisations. According to Chell, “... ‘Ownership of the means of production’ is neither a necessary nor sufficient condition for entrepreneurship.”

Fox and Maas (1997:2-3) regard entrepreneurship as one of the instruments able to generate prosperity in a rapidly changing environment and assert that as an instrument, it does not exist in a vacuum but incorporates several values and subsystems, including the characteristics of the organisation, the environment, the processes used and entrepreneurial dynamics. Morris and Paul, cited by Frese *et al.* (2000:9), regard entrepreneurial firms as tending to “... *actively scan their environments, constantly seek innovative solutions to problems, and tend to be aggressive in searching for growth opportunities for the business*”. It is further suggested by Donaldson and Morgan, cited by Frese *et al.* (2000:10), that “*In a world where the pace and complexity of change is increasing, entrepreneurship must be practised in many sections of organizations, not just at the top.*” The authors are of the opinion that corporate entrepreneurs must be willing to “... *move beyond received wisdom to combine ideas from different sources and to welcome change as an opportunity to look for new directions*”.

With respect to the organisational context of entrepreneurship, Wickam (2004:22) indicates that entrepreneurial management may be distinguished from conventional management by:

- a focus on change rather than continuity;
- a focus on new opportunities rather than resource conservation; and
- an organisation-wide approach rather than specific function management.

As referred to in Chapter 4, Kuratko *et al.* (2005:701) adopted the Sharma and Chrisman (1999) definition of CE as being “... *the process whereby an individual or a group of*

individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.”

This definition of the entrepreneurship domain relates to that of Chell (2000:63), who regards entrepreneurship as a process in which the owner-manager's actions are contextually embedded, and allows further aligned divisions in terms of different *dimensions*, such as behaviour, personality, cognition, attitudes, skills or management and business competencies; *perspectives* such as value/venture creation, organisation creation/renewal as well as process/system dynamics; and *contexts* such small business, private corporate institutions, public and social institutions.

In terms of the literature, authors hold several different viewpoints about the objective, field of study and dimensions of entrepreneurship. Agreement does not exist on a generic universal definition that can consistently be applied in different contexts while acknowledging the existence of different dimensions within a broader perspective and definition. Key perspectives of entrepreneurship that are, however, consistently highlighted by a variety of authors are the focus on the exploitation of opportunities to innovate; to create wealth, value, growth, new ventures and to introduce new markets, goods, products, services, sources of supply, new methods and processes. The 'ownership' of the means of production is not regarded as a necessary condition for entrepreneurship and in essence the critical distinction with other disciplines may lie in the prominent focus on creativity, innovation and venturing, as well as opportunity, wealth and value creation (Chell, 2000; Fox & Maas, 1997; Gartner, 1989; Kuratko, 2005; Low, 2001; Morris & Kuratko, 2002; Wickham, 2004).

In addition, it is agreed that a behavioural dimension of entrepreneurship exists that relates to specific actions that are undertaken by role-players as well as a 'management' dimension in the context of formal organisations. Authors also accept in essence that entrepreneurship applies to a variety of contexts that include 'not-for-profit' organisations.

The variety of views and perspectives about the domain and definition of entrepreneurship necessitates the development of a proper baseline framework whereby critical components

and concepts can be categorised in accordance with an agreed hierarchy that defines a primary domain, central perspectives, key dimensions and applicable contexts and methodologies. Such a framework would allow researchers to address different predefined dimensions or contexts while maintaining an overall generic definition related to the primary domain and perspective of entrepreneurship. The current primary perspectives of entrepreneurship in literature share similar key themes that are all related to the creation and promotion of prosperity in a variety of contexts.

2.3 Entrepreneurship research perspectives and trends

Researchers have struggled for a long time to determine critical factors that promote entrepreneurial performance for individuals, businesses, institutions, or large corporate organisations, with limited success. Research trends spanned a variety of fields covering economics, psychology, sociology and managerial sciences and are directed by the relevant definition that is accepted. The core perspective of a definition of entrepreneurship that is adopted constitutes the framework for the delineation of specific dimensions to guide the achievement of research objectives. It is therefore essential to evaluate research trends that relate to the applicable definitions, as addressed in paragraph 2.2.

Luke (2009:11), Nieman, Hough and Niewenhuizen (2004:8), Stevenson and Jarillo (1990:18) and Ucbasaran *et al.* (2001:57), all indicate that entrepreneurs and entrepreneurship have been examined from a number of perspectives such as economics, psychology studies which focussed on personality traits and patterns of behaviour, as well as the fields of sociology and managerial sciences. Authors are, however, in agreement that studies which focussed on entrepreneurs' personalities, backgrounds, early experiences and traits have been widely criticised and have produced disappointing findings, with the result that behavioural approaches are currently finding strong support (Aldrich & Martinez, 2001:41; Stevenson & Jarillo, 1990:21; Ucbasaran *et al.*, 2001:57).

Nieman *et al.* (2004:8) summarise research trends in entrepreneurship as follows:

Table 1: Research trends in entrepreneurship research

Period	Topic	Authors and researchers
What entrepreneurs do 1700 – 1950	From an economic perspective	Cantillion, Say, Schumpeter
Who entrepreneurs are 1960 – 1980	From a behavioural perspective	Weber McClelland, Rotter, De Vries,
What entrepreneurs do 1980 +	From a management science perspective (finance, marketing, operations, human resources)	Drucker, Mintzberg
What support is needed by entrepreneurs 1985 +	From a social perspective, including economists, geographers and socialists	Gartner, Weish, Bygrave, Reynold
What entrepreneurial activities are and what competencies are required 1990 +	From an entrepreneurship perspective	Timmons, Vesper, Brockhaus

Source: Nieman *et al.* (2004:8)

Stevenson and Jarillo (1990:18) postulate that studies on entrepreneurship can be divided into three main categories, namely *what* happens when entrepreneurs act, *why* they act and *how* they act. In the first instance researchers are concerned with the results of the actions of entrepreneurs, not the entrepreneur or even his or her actions. The second instance, termed the psychological/sociological approach, emphasises individual entrepreneurs as the real objects of the analysis and considers the causes (*why*) of entrepreneurial actions as the primary interest, as well as the environment, as it relates to the motives of individual entrepreneurial behaviour. Finally, *how* entrepreneurs act refers to the characteristics of entrepreneurial management in order to determine how entrepreneurs are able to achieve their aims, irrespective of the personal reasons to pursue those aims, while taking cognisance of the environmental inducements and effects of such actions. The authors subsequently argue that it is time to study the ‘*how*’ of entrepreneurship, since it focusses on understanding actual managerial practice (Stevenson & Jarillo, 1990:21).

Aldrich and Martinez (2001:41) support the notion of Stevenson and Jarillo (1990) and indicate that strong emphasis is currently placed on the fact that success primarily depends on what persons do: the execution and implementation of decisions and sustained commitment and motivation. According to the authors, a shift from the characteristics of entrepreneurs as individuals to the consequences of their actions has taken place, which emphasises the need to understand how entrepreneurs use knowledge, networks and resources to construct firms, as well as the environmental forces at different levels of analysis that affect entrepreneurship. The authors, however, argue that there is much to learn about “... *how process and context (strategy and environment) interact in a recursive continuous process that drives the fate of entrepreneurial efforts*”.

Ucbasaran *et al.* (2001:57) assert that recent promising research studies have focused more on the behavioural aspects of entrepreneurs with specific reference to *entrepreneurial cognition* that explores the way entrepreneurs think and the individual decision-making processes or heuristics adopted by entrepreneurs. In this regard it is argued that the level of uncertainty that entrepreneurs face is substantially greater than that of managers of established organisations who have better access to information. Entrepreneurs can, however, interpret new combinations of information via ‘unique heuristic-based logic’, which enables them to make decisions that exploit brief windows of opportunity.

Thomas, Clark and Giola (1993:239) concur with Aldrich and Martinez (2001), as well as Ucbasaran *et al.* (2001), but emphasise that the relationships between cognition and action have gained increasing prominence in recent years. It is accordingly mentioned that performance linkages between cognition and action have received considerably less attention and the cyclical link between performance outcomes and scanning activities has been ignored. Since in the view of the authors cognition often begins with action, it is argued that “... *the boundaries, and sequence of the sensemaking and performance constructs become blurred, especially when cyclical or historic influences are considered*”. Thomas *et al.* (1993) are of the opinion that studies which incorporate scanning, interpretation, action and performance outcomes from previous, or overlapping time periods would enhance researchers’ understanding of sense-making, especially to provide

insights into causal directions over time, and that such research would enable specific feedback and learning loops that can be incorporated into current models.

Meyer, Venkataraman and Gartner, as cited by Hitt *et al.* (2002:25), also emphasise the importance of action and indicate that the research domain of the entrepreneurship field involves *inter alia*, “... *cognitive processes, behaviours and modes of action to exploit new and existing opportunities.*” This view correlates with that of Frese (2009:442), who proposes that entrepreneurs’ actions need to be the starting point for theorising in entrepreneurship, as well as with that of Pretorius *et al.* (2005:415) who postulate that entrepreneurial education has as at its core the concept of stimulating entrepreneurial activity in some or other way.

Similar to the views of Thomas *et al.* (1993), Alvarez and Barney (2007:14) cite Shane and Venkataran (2000) and indicate that there has been growing interest in developing theories of *entrepreneurial action* (paragraph 3.4). The authors refer to Shane (2003), who postulates a general theory of entrepreneurial action in his book, *A General Theory of Entrepreneurship*, which is labelled the ‘individual-opportunity nexus’ approach. According to the authors, this approach is also known as the ‘discovery theory of entrepreneurship’. An alternative general theory of entrepreneurship, labelled the ‘*creation theory of entrepreneurship*’, is also emerging. The authors indicate that both theories seek to explain the same dependent variable, namely *entrepreneurial action*. In this context, entrepreneurial action is defined as any activity entrepreneurs might undertake - from initially identifying opportunities to assembling resources to exploit opportunities, generating and appropriating the economic profits created by exploiting opportunities and producing new products or services. Both the ‘discovery’ and ‘creation’ theories seek to explain these entrepreneurial actions in terms of their impact on the ability of entrepreneurs to produce new products or services (Alvarez & Barney, 2007:16).

Nieman *et al.* (2004:8) are, however, of the view that the emergence of a research perspective in the field of entrepreneurship is limited by, and has not generally led to an evolution in the original discipline. In the authors’ opinion “... *the science of*

entrepreneurship is to some extent, fettered by the limitations of source paradigms that have evolved as a result of their application to entrepreneurship and by its own inability to generate new paradigms with existing tools”.

The views of Nieman *et al.* (2004) highlight the dilemma of entrepreneurship research in that a myriad of perspectives, dimensions and contexts of entrepreneurship are addressed simultaneously without a generic framework that consistently guides areas of focus while acknowledging the fact that these might differ substantially, depending on the environments or perspectives of entrepreneurship that are addressed. It therefore strengthens the argument for a clear delineation of perspectives, dimensions and contexts, as mentioned in paragraph 2.2.

The recent growing interest and support for developing generic theories of *entrepreneurial action*, as mentioned by Alvarez and Barney (2007:14), Hitt *et al.* (2002:25) and Thomas *et al.* (1993:239), however, pinpoint critical aspects of entrepreneurial behaviour as a key dimension related to the primary perspective of entrepreneurship in any context, which provides a solid basis for research. These propositions are therefore specifically noted as they relate prominently to the theme of the research.

2.4 The entrepreneurial process

The notion of an entrepreneurial process that underpins venture creation and the identification and exploitation of opportunities as a key factor within the field of entrepreneurship is widely accepted by various authors (Morris & Kuratko, 2002:28; Timmons & Spinelli, 2003:47; Wickham, 2004:133), who all agree that a crucial element of future research is a thorough and on-going analysis of the entrepreneurial process.

According to Wickham (2004:134-136), the entrepreneurial process is based on four interacting contingencies, namely the entrepreneur, a market opportunity, a business organisation and resources to be invested. The entrepreneurial process is regarded as resulting from the *actions* of the entrepreneur. It can thus only occur if the entrepreneur acts to develop an innovation and promote it to customers. In this regard Wickham views

the entrepreneurial process as dynamic. Success is regarded as deriving from the contingencies of the entrepreneur, the opportunity, the organisation and resources coming together and supporting one another over time. The *interactions* between the different contingencies are the fundamental elements of the entrepreneurial process and together they constitute the foundations of the strategy adopted by the venture, according to the author.

Forbes (1999:416) distinguishes between different concepts related to new venture creation by defining the process of new venture creation as a process of conceiving or executing the start of a new organisation. In addition, it is stated that new ventures are generally created under conditions of high uncertainty and ambiguity, which is precisely the reason why primary functions such as *perception, information acquisition and decision-making* of entrepreneurs are of central concern. According to Forbes, new venture creation includes the initial identification and interpretation of opportunities, the processes of representing those opportunities to others and the processes by which representations of opportunities become templates for structuring and engaging in business activity.

Entrepreneurial actions are, however, directly influenced by the different stages in the life cycle of an entrepreneurial venture, according to Hisrich and Peters (2002:39), and the entrepreneurial process consists of phases of innovation, a triggering event, implementation and growth, as depicted in figure 2 below:

Figure 2: A model of the entrepreneurial process



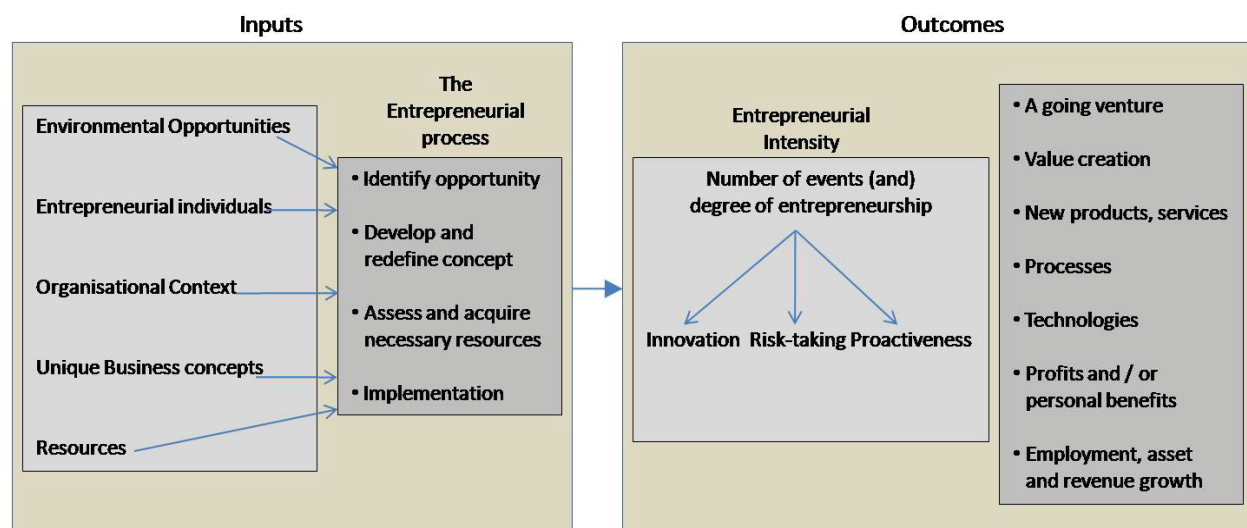
Source: Hisrich and Peters (2002:39)

As indicated in figure 3, different factors from the personal, sociological, organisational and environmental domains have a distinct impact on the process at the different stages of development, which needs to be taken into account, according to the authors. The primary weakness of the model is, however, the predominantly linear process, which asserts that innovation is a ‘once-off’ event followed by sequential phases of implementation towards growth. Such a proposition is not supported by recent arguments that emphasise recursive cycles and several feedback loops that enable the development of innovation and that support entrepreneurship over time (paragraph 2.5).

Frese *et al.* (2000:8) mention that there are different types of entrepreneurial events that trigger an entrepreneurial process. Catalytic events produce the ‘genuinely new’, whereas allocating events exploit the opportunities that new products or ideas present. In contrast, a refining event entails the optimum allocation of resources, is more concerned with efficiency than innovation and is not considered by the authors to be truly entrepreneurial.

Morris and Kuratko (2002:30) define the entrepreneurial process further by specifically identifying the relevant input, process and outcome variables, as depicted in figure 3 below:

Figure 3: An integrative model of entrepreneurial inputs and outcomes



Source: Morris and Kuratko (2002:30)

The model of entrepreneurial inputs and outcomes, as portrayed by Morris and Kuratko (2002:30), makes a valuable contribution by depicting applicable variables in relation to specific input and output dimensions of the entrepreneurial process. It also defines a variety of essential inputs, which accommodate the prominence of entrepreneurial individuals and entrepreneurial behaviour that ultimately drive the process. In addition, it should be noted that innovation, risk-taking and proactiveness are clustered in the outcome dimension, while these are often portrayed by authors as critical skills/competencies related to the 'input' dimension of the process. This situation emphasises the need to distinguish properly between 'input' and 'output' dimensions of entrepreneurship.

As indicated in paragraphs 1.5 and 5.5, Chell (2000:64) agrees with the central notion of entrepreneurial behaviour in the process and emphasises similar key dimensions as Morris and Kuratko (2002) when indicating that the entrepreneur, the environment in which he/she operates and the relevant outcomes are the primary variables in the entrepreneurial process. The author asserts that the idea of an entrepreneur and of the entrepreneurial process is regarded as aspects of the same phenomenon embodied in certain persons at certain times and observable in a series of events. The author posits entrepreneurship as a *process* in which the owner-manager's actions are contextually embedded (paragraphs 1.5, 2.2, and 5.5). The process is regarded as one of interaction from which outcomes emerge. As indicated in paragraph 4.5, Hornsby, Nafzinger, Kuratko and Montagno (1993:35) also emphasise the interactive nature of the process, which is critically important. This view is consistently emphasised by a variety of authors who emphasise the key role of entrepreneurial behaviour as addressed in paragraph 2.3 and chapter 3, which should be noted.

2.5 The entrepreneurial cycle/spiral

Lately various authors have indicated that the generally accepted linear process of entrepreneurship does not adequately account for nonlinear relationships and recursive feedback loops that are applicable to entrepreneurship and the notion of a 'cyclic' motion is currently attracting prominent attention.

Nonaka and Takeuchi (1995:69) first introduced the spiral concept when defining knowledge creation as the internalisation process of embodying explicit knowledge into tacit knowledge, which is closely related to ‘learning by doing’, as addressed in paragraph 3.7.

Ropo and Hunt (1995:107-108) apply the ‘spiral’ theory to entrepreneurship and mention that it involves a general way of thinking about entrepreneurship that moves beyond a series of discrete, static variables, treated linearly. The authors propose that entrepreneurship should be considered “... *in paradoxical, opportunity structure configurations, and virtuous and vicious process terms* ...” rather than approaching it with “... *a static kind of thinking* ...”. Such an approach treats entrepreneurship in terms of “... *an opportunity structure context across time, studying both organizational and individual aspects, accompanied by the paradoxical and process considerations that go with entrepreneurship and that can appear virtually any time, any place and in any kind of organization* ...”. In the view of Ropo and Hunt (1995) the model helps to move readers beyond simple linear views of change when considering the development of entrepreneurship. In essence, development is viewed as a cycle of goal formulation, implementation, evaluation, and goal action modification based on what was originally intended, which describes the virtuous spiral.

The ‘entrepreneurial spiral’ as proposed by Ropo and Hunt (1995), consists of three opportunity elements: detection of opportunities, opportunity facilitation and motivation to pursue opportunities. According to the authors, “*The virtuous process is reinforced by the consistently positive organizational and individual capabilities across time and feeds on itself, generating a continuous stream of entrepreneurial actions consistent with those encouraged by the environment.*” Entrepreneurship is thus promoted by the change which occurs in organisational capabilities that is created by the subculture of subordinate managers. It is accordingly suggested that the related ‘virtuous and vicious processes’ are created within configurations of entrepreneurial opportunity elements, in the form of organisational and individual capabilities that form the basis of the theory. In the view of Ropo and Hunt (1995) it is expected that the specific dimensions comprising each of the three entrepreneurial opportunity elements will differ, as well as the specific nature of ‘the

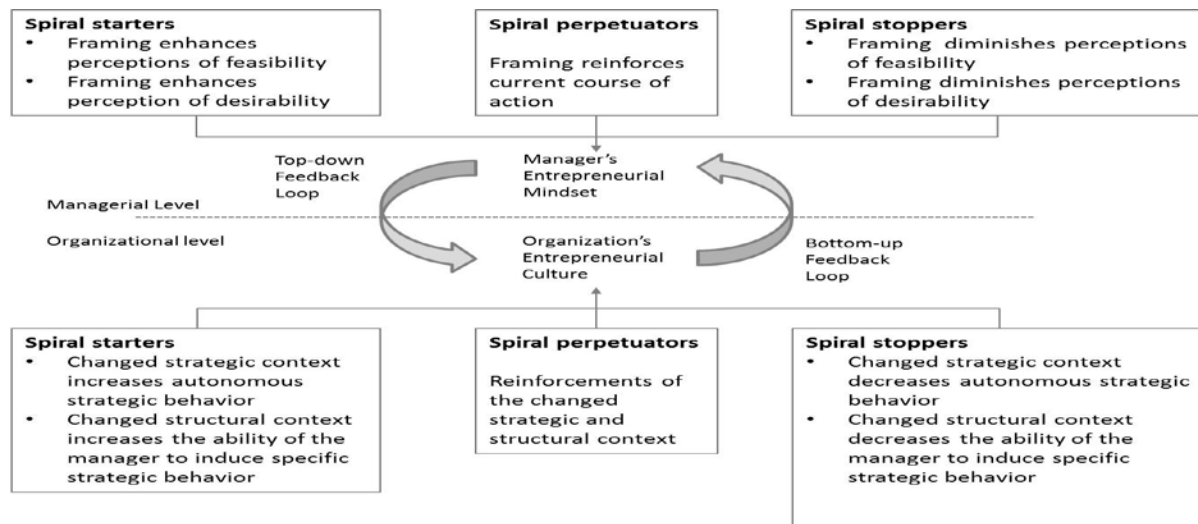
paradoxes encountered’ and the nature of the virtuous/vicious spirals in different environments (Ropo & Hunt, 1995:106).

Aldrich and Martinez (2001:41) identify a variety of functions and activities of entrepreneurs, but indicate that the primary function relates to the function of managerial action whereby organisations are defined and developed through strategic choices. The authors, however, regard all activities and functions as subject to the pressures and constraints of the environment and related to the entrepreneurial cycle that includes phases of conception, gestation, infancy and adolescence.

Shepherd *et al.* (2010) acknowledge that entrepreneurship represents a dynamic process, defined by multiple actors and situated in a social context, but it is also emphasised that nonlinear relationships and recursive feedback loops have recently characterised process research and frameworks. When investigating the individual level of entrepreneurship from a cognitive perspective, it is suggested that those who act more entrepreneurially have a more entrepreneurial mindset. When entrepreneurship at the organisational level is addressed (CE) it is suggested that organisations that act more entrepreneurially have a more entrepreneurial culture. However, according to the authors these approaches do not explain how and why ‘entrepreneurialness’ changes over time as a function of “... *reciprocal relationships between the two levels ...*”. The authors therefore argue that if it is acknowledged that environments change, and such change requires individuals and organisations to become more entrepreneurial to survive, then it is important to understand the mechanisms that effect changes in ‘entrepreneurialness’ (Shepherd *et al.*, 2010:60).

Shepherd *et al.* (2010; 74) consequently introduce the concept of an ‘entrepreneurial spiral’, which is related to the work of Ropo and Hunt (1995), and suggest that it results in enduring change. The concept and related interactions between managers and an organisation are depicted in figure 4 below.

Figure 4: Triggering, perpetuating and ceasing entrepreneurial spirals



Source: Shepherd *et al.* (2010:64)

As portrayed in figure 4, Shepherd *et al.* (2010) posit the 'spiral model' to bridge the individual and organisational level interface in the entrepreneurial context. The authors assert that "... an 'entrepreneurial spiral' suggests a means by which individual level heuristics might become embedded in the organisational culture in the form of routines, and reciprocally indicate how organisational routines that promote 'entrepreneurial action' may become adopted at the individual level as heuristics". It is thus argued that an entrepreneurial spiral provides an explanation for how both individual heuristics and organisational routines may be informed by each other and evolves over time. An important and interesting extension of this work relates to the suggestion that once started, entrepreneurial spirals may endure even in the absence of the factor or attribute that initially triggered the spiral (Shepherd *et al.*, 2010:73,74). This view is in contrast to the linear process model described by Hisrich and Peters (2002) (paragraph 2.4).

The work of Ropo and Hunt (1995), as well as that of Shepherd *et al.* (2010), relates strongly to perspectives of Chell (2000), Nonaka and Takeuchi (1995) and Schon (1983), who all emphasise that the structure of situations shapes the *action environment* of the individual who interprets this information as a basis for decision and action.

In this regard Schon (1983:68-79) indicates that “... *successful practitioners do not separate thinking from acting, but engage with the situation and shapes it through a cycle of processes that generate new phenomena, discoveries and a newly shaped situation ...*”. In essence the process refers to “... *a cycle of action and re-action; thereby actively constructing the reality ...*” (Schon, 1983:259). This view of Schon on the nature of creative and innovative behaviour is also entrenched in the ‘creation theory’ as mentioned by Alvarez and Barney (2007:28) (paragraph 3.4) who indicate that “... *the process is strictly emergent - the direction, duration, and outcomes of actions designed to produce new products or services are not knowable when this process begins and are only revealed, step by step, as an opportunity is created over time ...*”. The authors further assert that after several iterative actions, evaluations and reactions, entrepreneurs may even decide that they misinterpreted the results of previous actions, go back several sequences and start again or even abandon the entire process altogether.

The *spiral concept* as highlighted by Shepherd *et al.* (2010:60), Ropo and Hunt (1995:106) and Nonaka and Takeuchi (1995:70), relate to the entrepreneurial process as portrayed by Aldrich and Martinez (2001:41), Chell (2000:63) and Wickham (2004:134-136) who all emphasise the key importance of interaction between various factors and the relevant environment. It further relates to EP and the ‘creation theory’ mentioned by Alvarez and Barney (2007) and introduces a valuable new perspective on the behavioural dynamics related to entrepreneurship. It provides an alternative option for the integration of these concepts within the entrepreneurship domain at individual as well as organisational level, while acknowledging the critical need to maintain continuous interaction with the environment, as emphasised by Chell (2000), to enable success. The relevant concept can thus be accepted as a primary basis to evaluate entrepreneurial knowledge creation and performance.

2.6 Context of entrepreneurship

Since it is generally accepted that the environment in which entrepreneurship is practised has a prominent impact on the applicable variables and entrepreneurial performance, it is

essential to consider the applicability of entrepreneurship in various contexts, and specifically the public sector, which in principle includes local government. According to Wickham (2004:115) context refers to the situation within which entrepreneurs work. A variety of applicable contexts of entrepreneurship have been considered in the past and according to Low (2001:17) the entrepreneurial phenomena can be productively investigated from disciplines as varied as economics, sociology, finance, history, psychology and anthropology, each of which uses its own concepts and operates within its own terms of reference. In the author's opinion it is easier to go from established fields or disciplines to entrepreneurship than the other way around.

Apart from finding a *niche or perspective* as the principal foundation for the study of entrepreneurship, viewpoints on the applicability thereof also differ. Originally entrepreneurship was regarded as being primarily applicable to capitalists in the business environment, economic or financial sectors where enterprising, venturing, profit and organisation/value creation were regarded as the primary objective (Gartner, 1989:58; Hjorth, 2003:50; Timmons & Spinelli, 2003:4-6). The evolution of the field, however, expanded beyond the initial economic and financial perspective to include all functions, activities and actions associated with the perception of opportunities, and creation or renewal of organisations to pursue those (Wickham, 2004:115). Similarly, Luke (2009:11) mentions that more recent perspectives on entrepreneurship encompass a wide range of applications and contexts such as CE, which refers to entrepreneurship in a corporate environment; social entrepreneurship, which *inter alia* focuses on social rather than commercial outcomes; civic or public sector entrepreneurship which examines the need for government organisations to be entrepreneurial, and the concept of intrapreneurship, where individuals within an organisation instigate acts of entrepreneurship.

Luke (2009:28) provides a comprehensive summary of the different contexts of entrepreneurship highlighted by several authors, as indicated in table 2 below:-

Table 2: Entrepreneurship perspectives within literature

THE DIFFERENT PERSPECTIVES WITHIN ENTREPRENEURSHIP LITERATURE			
Period	Context	Description	Literature Source
	A	Process which may be best undertaken by firms when financial risk is high	Alvarez & Barney, 2007
	A	Process with event-driven or outcome-driven focus	Van de Ven & Engleman, 2007
	A	Process of opportunity identification and exploitation	McMullen & Shepherd, 2006
	A	Competitive behaviour that drives the market process	Davidson, 2006
	O	Entrepreneurial orientation influencing corporate entrepreneurship	Dess & Lumpkin, 2005
	O	Corporate entrepreneurship: entrepreneurial intensity	Morris & Kuratko, 2002
	O	Intersection of entrepreneurship and strategic management in organisations	Hitt, 2001
	O	Intersection of entrepreneurship and strategic management in organisations	Ireland, 2001
	A	Entrepreneurship as a process	Gartner, 2001
	A	Entrepreneurship as a process	Venkataraman & Sarasvathy, 2001
2000	O	Entrepreneurial edge: strategic management within an entrepreneurial firm	Eisenhardt, 2000
	A	Process of opportunity discovery, evaluation, and exploitation	Shane & Venkataraman, 2000
	N	Entrepreneurship in small businesses	Sonfield & Lussier, 1997
	I	Entrepreneur as an individual: creativity and strong execution skills	Bhide, 1994
	O	Corporate entrepreneurship as a process in three forms	Stopford & Baden-Fuller, 1994
	A	Pursuit of opportunity	Stevenson & Jarillo, 1990
	N	Entrepreneurship as new business creation	Gartner, 1990
	N	Entrepreneurship in small businesses: entrepreneurial strategic posture	Covin & Slevin, 1989
	A	Businesses of all forms and sizes	Drucker, 1985
1980	O	Entrepreneurial process in different firms	Miller, 1983
	O	Model of the strategic process of entrepreneurial activity in firms	Burgelman, 1983

THE DIFFERENT PERSPECTIVES WITHIN ENTREPRENEURSHIP LITERATURE			
Period	Context	Description	Literature Source
	O	Conservative versus entrepreneurial firm	Miller & Friesen, 1982
	O	Tracking strategy in an entrepreneurial firm	Mintzberg & Waters, 1982
	O	Innovative and entrepreneurial firm within 10 firm archetypes	Miller & Friesen, 1977, 1978
	I	Individuals acting quickly to identify and exploit opportunity	Kirzner, 1979
	I	Individuals: high internal locus of control	Shapero, 1975
	I	Bold risk-taking individuals	Mintzberg, 1973
1960	I	Individuals: high need for achievement	McClelland, 1961, 1962
1940	I	Individuals: innovative, disturbing the status quo	Schumpeter, 1934
	I	Individuals willing to bear risk and uncertainty	Knight, 1921
	I	Individuals seeking profit as a reward for investing and risking capital	Hawley, 1901

Legend:	
I	Entrepreneurship associated with individuals
N	Entrepreneurship associated with new and small businesses
O	Entrepreneurship associated with large organisations
A	Entrepreneurship associated with activity in businesses of all forms and sizes

Source: Luke (2009:28)

As indicated in table 2, four primary entrepreneurial perspectives related to the individual, new and small businesses, large organisations and activities related to businesses of all forms and sizes can be identified. The latest trend, to focus primarily on the activities of businesses and organisations of all forms and sizes, can further be noted.

Hjorth (2003:148) refers to the term 'genre' and identifies the following three primary 'genres' or perspectives of the field:-

- Management through the strategy/structure present in CE or intrapreneurship;

- Individual motivation, psychological characteristics or the use of personal networks in which forming a venture is the focus, and
- Organisational theory, where topics such as organisational structure, entrepreneurial forms of organising, leadership, 'life cycles', industrial organisation, population ecology, organisational evolution and creativity and innovation are explored.

According to Hjorth (2003:149), the first genre is more of an enterprise output arena, while the second perspective is the traditional dominant one in entrepreneurship research, which is an input to 'enterprise'. The third perspective addresses reflexivity and the enterprising individual is assumed to manage his/her organisational life so that the body corporate becomes enterprising.

With specific reference to entrepreneurship in the public sector and local government, as also referred to in Chapters 1 and 4, Morris *et al.* (2008:102,103) indicate that government organisations face unprecedented demands from society that grows more complex and interdependent every day. As a result entrepreneurship has become not only relevant, but often critical for these organisations to accomplish their missions. According to the authors these realities are forcing non-profit organisations to seek out new models of management and in this regard entrepreneurship might hold the key. Similarly, Kearney *et al.* (2007:281) indicate that the process of public sector CE requires enterprising people, who are agents of change. Chicken (2000:26, 27, 128) mentions in addition that entrepreneurial activity is very different between the public and private sectors and although it is considered by some that entrepreneurship is a unique feature of the private sector, 'entrepreneurism' is very important to the public sector, since enormous sums of money are spent on supplies that expose the scope for 'entrepreneurism'.

It is highlighted in publications of the Council of European Municipalities and Regions (CEMR) (2004) that the possibilities at the local and regional level to boost entrepreneurship depend to a great extent on the legal and political frameworks of individual countries. An awareness among local and regional authorities of the importance of entrepreneurship in local economic development is thus regarded as crucial for any progress to be made and local

and regional authorities have an important role to play in mobilising resources, building networks and creating a supportive environment for entrepreneurs and business start-ups, as well as to facilitate local partnerships as initiators and moderators. It is accordingly stated that entrepreneurship should be regarded as a horizontal issue, touching various fields of local policies, such as economic development, labour-market policy, educational policy and social assistance. As a consequence, capacity building on the side of local and regional authorities is regarded as important, although challenging. CEMR spokespeople regard local and regional authorities as being well placed to make an essential contribution to the creation of entrepreneurial cities, towns and regions and consider them as having an important role to play in developing and promoting entrepreneurship policy and activity, each with different needs, strategies, instruments and delivery systems. In this regard, the spokespeople of the CEMR are of the view that there is a clear need for municipalities and regions to learn from one another and for benchmarking of initiatives, trans-national comparison, mutual learning and the exchange of best practice, which are all necessary to improve entrepreneurial policy and initiatives across Europe (Council of European Municipalities and Regions, 2004).

While acknowledging the wide spectrum of entrepreneurship perspectives, there is currently wide acceptance that entrepreneurship is not restricted to only business but is also evident in a range of circumstances and environments that include the public sector and local government. Each of these environments has different objectives and unique situations that need to be taken into consideration.

The views as expressed by officials of the the CEMR (2004), Chicken (2000:26,27,128), Kearney *et al.* (2007:281) and Morris *et al.* (2008:102,103), highlight the applicability of entrepreneurship in general and CE in particular to the local government context and support the primary objective of the research study. These views further emphasise the necessity to evaluate and explore generic entrepreneurial competencies, skills, and knowledge creation dimensions, as well as organisational, business and management characteristics in a local government context, as further addressed in Chapter 3 and 4.

The research study accordingly covered various dimensions and institutional units within the metropolitan local government organisation, where the research was conducted as described in Appendix C and paragraph 4.3 respectively.

2.7 Conclusion

In summary, constructs and related concepts as addressed in a range of academic publications are intertwined, overlapping in various instances and there is clearly no agreement about the scope, perspectives and dimensions. Although definitions vary and the research fields cover a broad range of disciplines, the primary role of the entrepreneur within the entrepreneurial process and applicable environment in which he/she functions is acknowledged consistently. Since research on entrepreneurial personality types and personal characteristics has not rendered much success, recent trends focus more on the behavioural dimension and entrepreneurial activities.

It is further acknowledged that the relevant environment in which entrepreneurial activities takes place has a primary impact and it should be accommodated as a moderating variable. In this regard cognisance was taken of several viewpoints indicating that entrepreneurship is evident in a range of circumstances and environments that include 'not-for-profit' organisations and the public sector that includes local government in principle.

No generic definition of entrepreneurship could be identified that can consistently be applied universally while accommodating different dimensions, perspectives, dynamics and applicable contexts within an agreed framework of reference and scope. The simplified definition of Chell (2000:64), whereby entrepreneurship is regarded as a process in which the owner-manager's actions are contextually embedded and the Sharma and Chrisman (1999) definition of CE as cited by Kuratko *et al.* (2005:701) that defines CE as the process whereby an individual or a group of individuals in association with an existing organisation, create a new organisation or instigate renewal or innovation within that organisation, however, provide the most appropriate options that can serve as a solid basis for further refinement to create a generic applicable definition of the entrepreneurship domain.

The *spiral concept* as introduced in the entrepreneurship field by Ropo and Hunt (1995) relates to the generally accepted entrepreneurial process, EP as well as the *creation theory* mentioned by Alvarez and Barney (2007) and provides a valuable alternative option for the integration of these concepts within the entrepreneurship domain at individual as well as organisational level. The relevant concept is therefore accepted as a primary basis for the study of behavioural and knowledge creation dimensions of entrepreneurship and is further analysed in subsequent chapters in order to develop an approach and framework of constructs as a basis to analyse the applicable research question.

The following chapter (Chapter 3) explores generic entrepreneurial competencies, success factors, cognition, behaviour, intuition, creativity and innovation, as well as knowledge creation and learning, in more detail to define constructs and the related variables in order to develop the argument for a relationship with entrepreneurial performance in general and in corporate and local government institutions.

CHAPTER 3: ENTREPRENEURIAL COMPETENCIES, COGNITION, BEHAVIOUR AND KNOWLEDGE CREATION

3.1 Introduction

The entrepreneur is widely accepted as a key factor related to the practice of entrepreneurship, whether at an individual or organisational level. Knowledge creation dimensions that facilitate the development of competencies and skills such as cognitive and active propensities of behaviour (learning styles) are thus of critical importance. This chapter provides an overview of identified success factors, skills and competencies and furthermore analyses views and research results on cognition, behaviour, intuition, creativity, innovation, knowledge creation and learning that relate to entrepreneurial performance of individuals in general as well as managers and staff in an organisational or local government context.

3.2 Entrepreneurial success factors, skills and competencies

Viewpoints on potential factors that influence entrepreneurial success, skills and competence ranges from personality characteristics of entrepreneurs to behavioural attributes as well as organisational, economic and environmental variables. The various stages in the entrepreneurial process, as well as the life cycle of an entrepreneurial venture, are furthermore considered to have a distinct impact on success. Various authors regard a variety of factors including different skills, knowledge and experience as of importance to entrepreneurial success (Chell, 2000; Hisrich & Peters, 2002; Mitchelmore & Rowley, 2010).

Mitchelmore and Rowley (2010:95) distinguish between various related constructs and indicate that competency and competence are linked but distinct. Competence is regarded

as the evaluation of performance in a specific domain of activity, whereas competency is regarded as a class of things that can be used to characterise individuals and their behaviour. It is further mentioned that there is a level of confusion that arises from the indiscriminate use of terms such as skills, knowledge and abilities, alongside competencies. According to the authors the unique characteristic of competencies is that they consist of interactional constructs. In other words, they have three parts: individuals' differences, situationally defined behaviour and socially designed criteria for performance. Competences are regarded as distinct from knowledge, skills and abilities in the sense that these are not only attributes of individuals, but also depend on situation and social definition. The authors are, however, of the view that entrepreneurial competencies are carried by individuals, the entrepreneurs who begin or transform organisations and who add value through organising resources and opportunities. A key aspect of competency research literature is regarded to be the search for long-lasting individual characteristics leading to success or performance in a job and these characteristics can vary from a motive, trait, an aspect of the person's self-image or social role, skill, or a body of knowledge on which the entrepreneur draws. The authors cite Bartlett and Ghoshal (1997) and indicate that three categories of competencies, attitudes/traits, knowledge/experience and skills/abilities, were identified (Mitchelmore & Rowley, 2010:93, 96).

Mitchelmore and Rowley (2010) believe that competencies are interactional constructs that are of particular importance, since they emphasise the fact that apart from generic competencies the situational context in which entrepreneurship is practised has a specific and important impact that should be accommodated and taken into consideration. As indicated in paragraph 4.2, entrepreneurship in the local government context, for instance, confronts unique obstacles such as multiplicity and ambiguity of goals, limited managerial autonomy and high political interference, high visibility, skewed reward systems, a short-term orientation (reinforced by budget and election cycles), restrictive personnel policies, lack of competitive incentives for improved performance, difficulty in segmenting or discriminating among users and lack of accountability among managers for innovation and change (Morris & Jones, 1999:79). These challenges and obstacles are regarded by the authors to require different skills and competencies, such as strong political and external

networking skills, calculated risk-taking, self-confidence and an ability to tolerate and use ambiguity as a source of discretion.

According to Mitchelmore and Rowley (2010:100 - 101), Chandler and Hanks found that entrepreneurs needed to be competent in two key roles, i.e. entrepreneurial (recognising and envisioning; taking advantage of opportunity) and managerial roles (acquiring and utilising resources to co-ordinate the business interest and activities). This view is also supported by Pretorius *et al.* (2005:416). Shane and Venkataraman, cited by Mitchelmore and Rowley (2010), however, suggest that opportunity recognition and exploitation are focal concepts in entrepreneurship, which differentiate entrepreneurship from management. It is accordingly asserted that effective performance in the entrepreneurial role requires the founder to have the ability to recognise business opportunities and the drive to see firms through to fruition. In the view of the authors effective execution of the managerial role requires conceptual, interpersonal and political competence, while competence in the technical role requires the ability to use the tools or procedures required in the applicable specialised field.

In addition, Mitchelmore & Rowley (2010:100) mention that Baum (1994) created a list of nine entrepreneurship competencies based on the work of others, namely knowledge, cognitive ability, self-management, administration, human resource, decision-making skills, leadership, opportunity recognition and opportunity development. The authors finally summarise applicable skills and competencies identified by various researchers in the following competency framework:-

Table 3: Entrepreneurial competency framework

Entrepreneurial competencies		
Identification and definition of a viable market niche	Development of products or services appropriate to the firms chosen	Market niche/product innovation
Idea generation	Environmental scanning	Recognising and envisioning taking advantage of opportunities

Formulating strategies for taking advantage of opportunities		
Business and management competencies		
Development of the management system necessary for the long term	Functioning of the organisation	Acquisition and development of resources required to operate the firm
Business operational skills	Previous involvement with start-ups	Managerial experience
Familiarity with industry	Financial and budgeting skills	Previous experience
Management style	Marketing skills	Technical skills
Industry skills	The ability to implement strategy (develop programmes, budgets, procedures, evaluate performance)	Familiarity with the market
Business plan preparation	Goal setting skills	Management skills
Human relations competencies		
Development of the organisational culture management feels is necessary to guide the firm	Delegation skills	The ability to motivate others individually and in groups
Hiring skills	Human relations skills	Leadership skills
Conceptual and relationship competencies		
Conceptual competencies	Organisational skills	Interpersonal skills
The ability to manage customers	Mental ability to coordinate activities	Written communication skills
Oral communication skills	Decision-making skills	Analytical skills
Logical thinking skills	Deal-making skills	Commitment competencies

Source: Mitchelmore & Rowley (2010:100-101)

Nieman *et al.* (2004:15-20) similarly highlight that entrepreneurial success contains two dimensions, namely entrepreneurial success factors and managerial success factors, which can be summarised as follows:

- Entrepreneurial success factors
 - Creativity and innovation;
 - Risk orientation;
 - Leadership;
 - Good human relations;

- Positive attitude;
 - Perseverance; and
 - Commitment
- Managerial success factors
 - Planning;
 - Knowledge of competitors;
 - Mainly market orientated;
 - Client service;
 - High quality work enjoying priority;
 - Financial insight and management;
 - Knowledge and skills with regard to the business, and
 - The use of experts.

The viewpoint of Nieman *et al.* (2004) correlates with the findings of Luke (2009) (paragraph 2.6) who indicates that the context of entrepreneurship relates in essence to the individual, new and small businesses, large organisations and businesses of all forms and sizes, as well as those of Mitchelmore and Rowley (2010:100-101), who indicate that entrepreneurs need to be competent in two key roles, i.e. entrepreneurial and managerial roles.

Chell (2000:63) emphasises, however, that the entrepreneur cannot be isolated from the context. This viewpoint highlights the fact that the personality, skills, behaviour, knowledge and competence of the 'entrepreneur', whether as an individual or collectively as a team within an organisation or business, form a critical element with respect to entrepreneurial success. Huczynski and Buchanan (2001:8) similarly emphasise the importance of people within the corporate management context by indicating that organisations cannot have goals; instead people have goals. Collectively, the members of an organisation may be involved in various activities in pursuit of common goals; however, individual members pursue a variety of activities and goals of their own. In the view of the authors, senior managers may decide on objectives and attempt to get others to agree with them by calling these an 'organisation mission' or 'corporate strategy', but in reality it is still the activities and goals of the people who determined the objectives in the first place. This argument leads to the conclusion that organisations do not exist as separate entities but are instead a collection of individual people in pursuit of a common goal.

The importance of the 'entrepreneur' as a critical success factor is also acknowledged by Pretorius *et al.* (2005:416-417) when describing the entrepreneurial performance education model. The model contains the following constructs as the principal basis: $E/P = a + b(M) [(cE/S \times dB/S)]$; where entrepreneurial performance (E/P) is regarded as a linear function of motivation (M) x entrepreneurial (E/S) and business skills (B/S). Entrepreneurial skills (E/S) are furthermore described as consisting of creativity, innovation, risk taking and opportunity identification.

Pretorius *et al.* (2005:416) mention that factors such as attitude, role models, a negative mindset towards confidence, initiative and creativity, as well as a negative attitude towards failure, contribute to the development of an entrepreneurial culture. It is important to note the authors' emphasis on '*initiative and creativity*' since similar sentiments are expressed by various authors who highlight the importance of '*action learning*', the value of '*tacit knowledge*', '*intuitive intelligence*' and the necessity to '*learn from experience*'. In this regard Baronet (2003) mentions that in their perception of opportunities, entrepreneurs use a blend of two types of knowledge: *tacit knowledge* built up from their *experience* in a field and from their *relations* with their personal network as well as *formal knowledge*, which they are able to gather from their *active search* for information.

This view is supported by a survey conducted by the Kaufman Foundation of Entrepreneurship. The four most important factors for entrepreneurial success, according to the responses received in the survey, were prior work experience, learning from successes and failures, management teams and luck. Networks and financing were also identified as important factors (Wadhwa, Aggarwal, Holly & Salkever, 2009:20).

When examining dimensions and success factors related to CE Morris *et al.* (2008:54-69) identify innovativeness, risk-taking and proactiveness, together with the concepts of entrepreneurial orientation (EO) and intensity, as key variables. Innovativeness is regarded as being concerned with more novel methods or processes, new services and new organisational forms. Risk-taking involves pursuing initiatives that have a calculated likelihood of loss or failure, while proactiveness refers to an *action orientation* and tenacity

in moving an idea towards implementation. Entrepreneurial intensity is consequently described as a two-dimensional matrix with the number or frequency of entrepreneurial events on the vertical axis and the extent or degree to which these events are innovative, risky and proactive on the horizontal axis. The authors further acknowledge the necessity to create an entrepreneurial environment and climate to foster CE.

With reference to entrepreneurial variables within non-profit and public sectors, Morris *et al.* (2008:103) indicate that the basic steps in the entrepreneurial process should be no different, since entrepreneurship has the same underlying dimensions when applied to non-profit and public sector contexts.

Authors further agree that the environment in which entrepreneurship is practised influences outcomes and success directly and highlight the importance of the *interactions* between the different contingencies, which are regarded as fundamental elements of the entrepreneurial process (Wickham, 2004:134-136). Although the success of every venture differs in accordance with the aspirations and expectations of its stakeholders, the following set of common factors lies behind every successful business, according to Wickam (2004:244-246):-

- The venture exploits a significant opportunity.
- The opportunity the venture aims to exploit is well defined.
- The innovation on which the venture is based is valuable.
- The entrepreneur has the right skills for the venture.
- The business has the right people.
- The organisation has a learning culture and its people have a positive attitude.
- Effective use is made of networks,
- Financial resources are available.
- The venture has clear goals and its expectations are understood.

In summary, strong support is evident for the view that entrepreneurial skills and competencies can primarily be categorised into three main categories, namely, behavioural, entrepreneurial and business/management skills (Chell, 2000:63; Huczynski & Buchanan, 2001:8; Mitchelmore & Rowley, 2010:100-101; Nieman *et al.*, 2004:15-20; Pretorius *et al.*, 2005:416).

3.3 Entrepreneurial cognition

De Carolis and Saporito (2006:45) mention that prior research on personal attributes that distinguish entrepreneurs from others has hypothesised a positive relationship between venture creation and variables such as internal locus of control, need for achievement, personal optimism, preference for shaping one's own destiny and tolerance of ambiguity. The assumption behind this literature stream is that certain personal attributes facilitate new venture creation. This research has, however, produced inconsistent results, according to the authors, and the field has since moved to an investigation of the impact of variations in cognition and decision processes, to explain entrepreneurial behaviour.

Research in entrepreneurial cognition is seeking to re-assert the importance of the individual as an empirical unit of analysis in entrepreneurship, according to Hindle (2004:587). This research accepts “... *the core psychological trinity of person, process, and choice that recognizes social cognition as the key to understanding entrepreneurial thinking and action at the individual level ...*”. When assessing entrepreneurial thinking, the complex interaction of mind and environment needs to be considered and in this regard the authors postulate the definition that entrepreneurial cognition (singular) is the over-arching process that encompasses a range of particular mental processes, called entrepreneurial cognitions (plural). Entrepreneurial cognitions are regarded as the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation and growth. According to Hindle (2004:587), research in entrepreneurial cognition is about, “... *understanding how entrepreneurs use simplifying mental models to piece together previously unconnected information that helps them to identify and invent new products or services, and to assemble the necessary resources to start and grow the business.*”

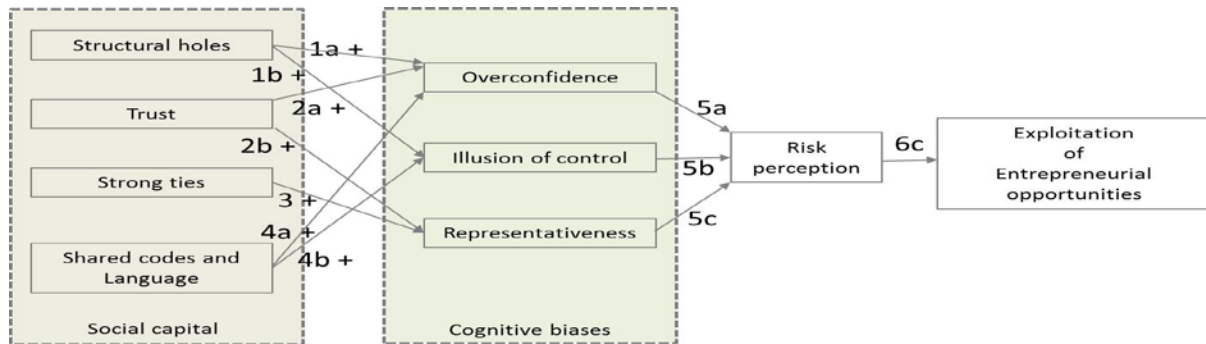
According to Le Roux (2005:48-49), the following viewpoints related to cognitive research are specifically relevant to entrepreneurship:-

- “*Our capacity to process new information about the world around us is severely limited and can be readily exceeded;*

- *Human beings seek to minimize cognitive effort in coping with the information overload and frequently use various heuristics (shortcuts) in thinking techniques that reduce mental effort;*
- *People are often less rational in thinking due to limited information-processing capacity; various aspects of human cognition are subject to a wide range of biases and errors;*
- *The concepts of cognitive psychology are increasingly being found to be useful tools for probing entrepreneurial related phenomena;*
- *The role of intuition (sensing) rather than rational thinking on decision making is underestimated;*
- *The field of social cognition literature gives us several new insights into how to develop an entrepreneurial-friendly 'cognitive infrastructure' at both self and collective efficacy level, and*
- *When receiving equivocal information, individuals are likely to perceive that which they are predisposed to see. These predispositions and preferences for information have been categorised by Herman (1996) into four categories: factual, procedural, effective and imaginative information."*

In the view of De Carolis and Saporito (2006:46), recent research suggests that some entrepreneurs perceive situations differently from others because of several specific cognitive biases that influence risk perception as they relate to entrepreneurs, such as *overconfidence, illusion of control* and *representativeness*. The authors cite the 'social cognitive theory' of Bandura that suggests social environments play a pivotal role in shaping individuals' cognition and ultimately behaviour, since individual cognition originates in social life, human interaction and communication. It is finally suggested that "... *social capital derived from being embedded in a network shapes entrepreneurs' cognitive processes and ultimately their behaviour ...*" as depicted in figure 5 below.

Figure 5: Social capital, cognitive biases, and exploitation of entrepreneurial opportunities



Source: De Carolis & Saporito (2006:43)

As portrayed in figure 5, the authors suggest that dense connections between parties within a group facilitate the development of self-enforcing norms and trust within a collective, allowing the group to attain communal goals more easily. It is thus important to focus on individuals and their network relationships. The authors posit that social capital assists in the explanation of individuals' success, as they can utilise their contacts and connections and the resources that they bring for personal gain (De Carolis & Saporito, 2006:43).

The central nature of the entrepreneur as a person and the critical interaction with the applicable environment are also highlighted by Mathews (2008:18), who indicates that entrepreneurship is a function of the person and the environment. It explains the importance of initiating and developing entrepreneurial activity that starts with the 'individual entrepreneur' who later becomes the centre of economic activity derived from the socio-economic environment. An explanation of the entrepreneurship construct therefore requires consideration of 'environmental opportunity realisation', which is made possible by the specific '*cognitive processes*' and the unique configuration of the personality structure that becomes functionally autonomous, according to the author. These components are derived from the integration among the personality processes, motivational dynamics, cognitive processes, decision-making modes and the attributes of the environment of value creation (Mathews, 2008:19).

Individuals model their behaviour based on cognitive and personal factors, along with what is demonstrated in the environment. This view correlates in principle with that of De Carolis and Saporito (2006) mentioned earlier. In the view of Mathews, the platform of interaction and integration of personality and motivational processes, decision-making activity and cognitive processes gives rise to the emergence of entrepreneurship. The author cites Mitchell, who demonstrates that an overlap exists between the domains of cognitive psychology and entrepreneurial cognition. Cognitive research is concerned with the spheres of cognitive processing of entrepreneurs and investigates the mental transactions that relate to the ability to identify and exploit entrepreneurial opportunities. According to Mathews, the cognitive approach of an entrepreneur refers to the preferred way of gathering, processing and evaluating information to produce useful cognitions in the economic activity (Mathews, 2008:19-20).

Decisions of entrepreneurs are informed by the scanned environmental inputs and are effected through the mental models that facilitate the entrepreneur's behaviour in relation to the other individual-specific processes and the environmental attributes. Mathews (2008) therefore posits that entrepreneurship can be predicted from 'ideation and divergent thinking'. A high need for cognition implies the tendencies to engage in more extensive causal processing and explanatory thinking (Mathews, 2008:28).

Le Roux (2005) argues that information overload, high uncertainty, strong emotions, time pressure and fatigue occur in entrepreneurial environments. This situation results in counterfactual thinking, affect infusion, self-serving bias, planning fallacy, self-justification, overconfidence, illusion of control and misguided belief in numbers. Systematic biases occur in human decision-making processes such as framing, representativeness and availability that vary according to the nature of the venture and are unlikely to be universally evident. According to Le Roux, the focus of entrepreneurship studies has, however, now turned to a new variable, namely entrepreneurial heuristics, which can be defined as 'thumb-rules' or decision rules underlying entrepreneurial decision-making actions. In this regard heuristics (short-cuts) and biases are described as 'systematic deviations from rationality' in people's judgement and decision-making (Le Roux, 2005:50,51,56).

The views expressed by Mathews (2008:19-20) and Le Roux (2005:50) emphasise the overlap that exists between the domains of cognitive psychology and entrepreneurial cognition and raises the questions, to what extent entrepreneurship research should actually engage in the field of psychology to explain the reason for behaviour or, whether entrepreneurship research should rather focus primarily on the identification of applicable behaviour that relates to entrepreneurial success. The latest trends to look into relationships between intuition and entrepreneurial performance that highlight the relevance of experience, 'active engagement' and networking, which facilitate interaction with the environment, are therefore noteworthy.

In this regard Mitchell, Busenitz, Bird, Gaglio, McMullen, Morse, and Smith (2007:3-4) indicate in addition that entrepreneurship concerns itself with distinctive ways of '*thinking and behaving*' and that advances in social psychology now permit entrepreneurship investigators to address the '*thinking-doing*' connection of entrepreneurship more directly. The author regards this approach as being in contrast with using 'proxy variables' that produced equivocal results in previous research, such as demographic differences, internal locus of control, need for achievement, or risktaking propensity. According to Mitchell *et al.* (2007:6) some of the more recent approaches to the study of entrepreneurial cognitions (e.g., entrepreneurial heuristics theory, entrepreneurial alertness theory, entrepreneurial expertise/script theory and the effectuation theory), consider the rational model to be compromised as entrepreneurs address the essential task, namely 'value creation-driven opportunity identification'. Mitchell *et al.* (2007:2) accordingly invite entrepreneurship researchers to develop the '*thinking-doing*' link in entrepreneurship research further.

This appeal of Mitchell *et al.* (2007:2), namely to focus on the '*thinking-doing*' link, is important, since the actual outcomes of entrepreneurship show a strong link with the 'doing' or 'action propensity' of behaviour. In this regard Alvarez and Barney (2007:19) indicate that in terms of the *creation theory of entrepreneurship*, it is suggested that entrepreneurs and non-entrepreneurs may be virtually indistinguishable in terms of their cognitive characteristics. The authors assert, however, that entrepreneurial behaviour reinforces certain cognitive attributes such as systematic overconfidence and willingness to

generalise from small samples more positively than other cognitive attributes. The process can, in the view of the authors, create significant differences between entrepreneurs and non-entrepreneurs. The authors therefore posit that cognitive differences between individuals may be the result of entrepreneurship and not just a cause of entrepreneurship.

In accordance with the the reasoning that entrepreneurs and non-entrepreneurs are virtually indistinguishable in terms of cognitive characteristics, as mentioned by Alvarez and Barney (2007:19), as well as Gartner (1989:57, 58), it can be deduced that an outcome-based behavioural approach to entrepreneurship research (action) should be prioritised instead of exploring psychological undertones and reasons for certain behaviour, as these might prove to be extremely diverse and more applicable to the field of psychology. The respective propositions of De Carolis and Saporito (2006:46) and of Alvarez and Barney, (2007:19), namely that social interaction actually shapes cognition and that differences in cognition are the result of entrepreneurship and not just the cause, are therefore of critical importance, since it is acknowledged that 'active behaviour' also influences cognition, which is in contrast to the dominant normal linear perspective whereby cognition is regarded to drive behaviour in a 'one-way' direction. Such a proposition is also highlighted by Schon (1983:68-79), who mentions that "*... our bias towards thinking blinds us to the non-logical processes which are omnipresent in active practise ...*" (paragraph 3.4).

3.4 Entrepreneurial behaviour

The necessity to look at the behaviour of entrepreneurs and to define what they do and how they go about doing that, is emphasised by a variety of authors, such as Alvarez and Barney (2007:28), Frese (2009:448), Gartner (1989:57,58), Hitt *et al.* (2002:25) and Mathews (2008:21). According to Gartner, the personality characteristics of the entrepreneur are ancillary to the entrepreneur's behaviour and research should thus rather focus on what the entrepreneur does instead of who the entrepreneur is. This view is also shared by Frese *et al.* (2000:48) when emphasising the importance of innovativeness as a strategy in the entrepreneurial process. In this regard the authors indicate that studies of the direct

relationship between personality and entrepreneurial success ignore the role of *entrepreneurial behaviour*.

As indicated in paragraph 3.2, Mitchelmore and Rowley (2010:93) refer to action, behaviour or outcomes, in order to describe the term 'competency', which is defined as behaviour that an individual demonstrates. Competences are, however, regarded as minimum standards of performance. Competency is thus seen as an underlying characteristic of a person, which results in effective action and/or superior performance in a job. It is portrayed as a description of something which a person who works in a given occupational area should be able to achieve.

According to Gartner (1989:62) entrepreneurs are identified by a set of behaviours which link them to organisation creation, in a similar manner that managers and small business owners are also identified by their applicable behaviour in their respective fields. In this regard Gartner refers to Mintzberg and indicates that the same behavioural questions that he asked with respect to management should also be asked for entrepreneurs, such as:

- What activities do they perform?
- What kind of information do they process?
- Who do they work with, how frequently?
- What are the activities they prefer to engage in?
- What is the flow of activities?
- How do they use time?
- How do they make decisions?
- How do they deal with people?
- To what extent is the work programmed, i.e. repetitive, systematic, predictable?
- What knowledge and skills do they use and gain?
- What information do they use?

Gartner (1989:57, 58) also mentions that empirical research has found that when certain psychological traits are carefully evaluated, it is not possible to differentiate entrepreneurs from managers or from the general population based on the possession of supposed traits. It is further highlighted that researchers have found it difficult to distinguish between trait and behavioural aspects and easily stray from the one to the other while defining concepts and variables. Gartner is thus of the opinion that as long as one adheres to the behavioural

approach and views entrepreneurship as something one does instead of a state of being, definitional dilemmas can be avoided.

Allison, Chell and Hayes (2000:31) mention that entrepreneurs can be differentiated from non-entrepreneurs on the basis of intention, but intention is not always translated into performance that produces entrepreneurial outcomes. The authors explored the expectation that there will be no difference between the cognitive styles of successful entrepreneurs and senior managers – both will operate intuitively. The hypothesis was confirmed and also correlates with the viewpoint of Gartner (1989:57, 58), as well as Alvarez and Barney (2007:19), who indicated that entrepreneurs and non-entrepreneurs may be virtually indistinguishable in terms of their cognitive characteristics. Such findings have important implications for management and entrepreneurship, since they confirm that there is no distinction in the cognitive styles of senior managers and entrepreneurs. Hitt *et al.* (2002:25) accordingly singled out *action* as a critical aspect as indicated in paragraph 2.3. According to the authors the research domain of the entrepreneurship field involves “... *cognitive processes, behaviours and modes of action to exploit new and existing opportunities*”. Thomas *et al.* (1993:239) similarly indicate that studies that incorporate scanning, interpretation, action and performance outcomes from previous or overlapping time periods would enhance researchers’ understanding of sense-making.

Ucbasaran *et al.* (2001:57) also postulate that entrepreneurs can gain new insights from interpreting new combinations of information via ‘unique heuristic-based logic’, while Aldrich and Martinez (2001:41) argue that a deeper understanding of how entrepreneurs use knowledge, networks and resources to construct firms is required and the impact of the environmental forces at different levels of analysis, should be taken into account (paragraph 2.3). In the view of the authors it is necessary to learn how process and context (strategy and environment) interact in a recursive continuous process that drives the fate of entrepreneurial efforts.

According to Chell (2000:63-73), new lines of investigation are currently followed that include new behavioural characteristics arising from entrepreneurship theory, such as

alertness to opportunities, analytic versus *intuitive* thinking and *cognitive style*; as well as the development of interdisciplinary knowledge of *entrepreneurial behaviour*. Two sub-prototypes of *entrepreneurial behaviour* are suggested, namely behaviour that involves the development of new ideas and behaviour that indicates the ability to process data from the environment, to recognise and exploit existing opportunities. The author therefore deduces that “... *understanding is not gained by abstracting the individual from their social environment; rather the individual can only be known through what they become while dealing with particular situations ...*”. According to Chell it is thus essential to evaluate behaviour in the context of the environment in which it occurs and not only from the perspective of a particular personality type.

Various authors, as indicated above, highlight the need to focus on outcome-based behaviour (action), while Chell (2000) emphasises the trend to distinguish between analytical and intuitive behaviour, which is directly related to the primary theme of the research. The reasoning of Chell (2000:63), that individuals can only be known through what they become while dealing with particular situations, highlights the importance of ‘active behaviour’ that promotes intuition and relates to the arguments of Burgelman, cited by Kuratko *et al.* (2005:703) (paragraph 4.4), when distinguishing between autonomous behaviour and induced behaviour. In this regard induced behaviour is regarded as behaviour that is shaped by the firm or environment in which entrepreneurship is practised. The reasoning of both authors highlights an important dimension of entrepreneurial behaviour, which emphasises the necessity to maintain interaction with the relevant environment, which is facilitated by ‘action’ propensities, networking and experience.

Schon (1983:viii) emphasises similar sentiments and poses another angle to the debate on cognition and behaviour by indicating that “... *the current attitudes have contributed to widening the rift between universities and the professions, research and practise, thought and action ...*”. Schon (1983:16) argues that the future of operations research is past, since “... *managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other ...*”. It is therefore asserted that instead of analytical techniques, “... *active,*

synthetic skill of designing a desirable future and inventing ways of bringing it about ...” is required.

According to Schon (1983:68-79), there is nothing strange about the idea that knowing is inherent in *intelligent action*. As also referred to in paragraph 3.3, the author therefore postulates that “... *our bias towards thinking blinds us to the non-logical processes, which are omnipresent in effective practise ...*”. Schon further states that, “*Successful practitioners do not separate thinking from acting, but engage with the situation and shape it through a cycle of processes that generate new phenomena, discoveries and a newly shaped situation*” (Schon, 1983:94-97). In essence the process refers to “... *a cycle of action and re-action; thereby actively constructing the reality*” (Schon, 1983:259). Schon (1983:319) subsequently proposes the concept of ‘*action science*’ that is concerned with situations of uniqueness, uncertainty, and instability, which do not lend themselves, in his view, to the application of theories and techniques derived from science in the mode of *technical rationality*.

The arguments of Schon (1983) relate strongly to those of Chell (2000:63, 73) as well as those of De Carolis and Saparito (2006:46) and Alvarez and Barney (2007:19), mentioned in paragraph 3.3, who all share the opinion that more prominence should be given to non-logical processes of ‘*action*’ in contrast to cognition, since ‘*active propensities*’ shape situations and are regarded as influencing cognition, enabling interaction with the environment and promoting intuition. These views are particularly important to the primary theme of the research study, namely to determine relationships between cognitive and action propensities of behaviour and entrepreneurial performance in an institutional and local government context.

Mathews (2008) similarly refers to ‘*theories-in action*’ and indicates that these are represented by cognitive maps and assumptions about what constitutes effective action, which has two dimensions: ‘*espoused theories*’ and ‘*theories-in-use*’. ‘*Espoused theories*’ refers to public explanations of what people say they use in choosing their behaviours while ‘*theories-in-use*’ refers to the actual actions that are carried out. According to the author, the ‘*theory of mental model*’ explains the manner of representation of knowledge, and the

way the domain of knowledge is mapped; *'theories-in-action'*, however, do not represent the knowledge structure. In the view of Matthews, *'theories-in action'* point out the divergence between *'professed behaviour'* and *'actual behaviour'*. These distinctions further elaborate the significance of the underlying mental models of entrepreneurs, which enable them to produce outcomes, in the view of the author (Mathews, 2008:30).

In a further explanation of *'entrepreneurial action'*, Mitchell *et al.* (2007) indicate that, like the entrepreneurial heuristics approach and the entrepreneurial expertise approach, the *'entrepreneurial action approach'* views decision-makers as *'boundedly rational'* rather than *'substantively rational'*, in the sense that they do not act on full information. According to the authors the defining characteristic of the entrepreneurial action approach is the *socio-economic* component of new value creation. The entrepreneurial action approach tends toward privileging the situation versus the person and suggests that individuals may become entrepreneurs simply by being the right person, in the right place, at the right time (Mitchell *et al.*, 2007:21).

As referred to in paragraph 2.3, Alvarez and Barney (2007) highlight the recent trend in defining theories of *'entrepreneurial action'* such as the *'discovery theory of entrepreneurship'* and the *'creation theory of entrepreneurship'* that both seek to explain the same dependent variable, namely entrepreneurial action. In general, these theories assert that behaviour that facilitates the accomplishment of one's purposes is more likely to occur than behaviour that does not facilitate the accomplishment of one's purposes. Both the *'discovery'* and *'creation'* theories seek to explain entrepreneurial actions in terms of their impact on the ability of entrepreneurs to produce new products or services. Examples of these types of theories in the social sciences include the motivation theory in psychology, functional theory in anthropology and institutional theory in sociology (Alvarez & Barney, 2007:16).

According to Alvarez and Barney (2007), the *'discovery theory'* argues that:

- *“Technological, political, regulatory, social and demographic changes disrupt the competitive equilibrium that exists in a market or industry and create opportunities to produce new products or services.*
 - *Opportunities to produce new products or services evolve out of pre-existing industries or markets.*
 - *Entrepreneurs play a passive and responsive role and do not create opportunities themselves,*
 - *Opportunities are assumed to have an existence independent of the entrepreneurs seeking to exploit them.*
 - *The task of the entrepreneur is to become aware of existing opportunities and to exploit them.*
 - *Entrepreneurship is predominantly about search - systematically scanning the environment to discover opportunities to produce new products or services”.*
- (Alvarez and Barney, 2007:17,18),

In explaining the basis of the ‘*creation theory*’, Alvarez and Barney (2007) indicate that opportunities are not assumed to be objective phenomena created by exogenous shocks to an industry or market, but are created by the actions of individuals exploring ways to produce new products or services in terms of the following principles of the theory:-

- *“Opportunities do not necessarily evolve out of pre-existing industries or markets.*
- *Entrepreneurs’ actions are the essential source of opportunities and they do not wait for exogenous shocks to create opportunities and then provide agency to those opportunities.*
- *By acting, entrepreneurs create opportunities that could not have been known without the actions and may decide to engage in subsequent actions that modify and change their initial actions.*
- *The inductive learning process whereby entrepreneurs learn after they have acted is different from the learning that the discovery theory assumes occurs, namely learning that takes place before an entrepreneur acts.*

- *Entrepreneurship creates opportunities that are recognised only after they have been exploited.*
- *The term 'search' has little or no meaning, since 'search' implies that entrepreneurs attempt to discover opportunities that already exist. In the 'creation theory', entrepreneurs do not search, they act and observe how consumers and markets respond to their actions. Entrepreneurs and consumers may be able to recognise an opportunity to produce new products or services once it has been created, but be unable to anticipate such an opportunity before it is created".*

(Alvarez and Barney, 2007:26-28)

In summary, Alvarez and Barney (2007:28) indicate that in terms of the '*creation theory*' the process is strictly emergent and the direction, duration and outcomes of actions designed to produce new products or services are not knowable when this process begins, but are only revealed, step by step, as an opportunity is created over time. It is accordingly postulated by the authors that as entrepreneurs act upon their initial beliefs they observe the market responses, and review original beliefs through *acquisition and creation of information*. After several iterative actions, evaluations and reactions, entrepreneurs may decide to review the process or abandon it completely (paragraph 2.5).

Although the reasoning of Alvarez and Barney (2007) with respect to the principles of the '*creation theory*' provides a valuable new perspective on entrepreneurial behaviour, the principles of the '*creation*' and '*discovery*' theories might not necessarily be mutually exclusive. As highlighted by a variety of authors, '*action*' is a key aspect of entrepreneurship since it facilitates continuous interaction with the industry or environment in which entrepreneurship is practised and therefore creates the potential of '*shaping*' situations to create opportunities. However, it should also be acknowledged that '*pre-existing*' opportunities do occur owing to a variety of factors. The '*action propensity*' of entrepreneurs might therefore enable the identification of existing opportunities as well as the creation of new opportunities through networking and by '*shaping*' situations to the benefit of the entrepreneur. It can therefore be deduced that '*action propensities*' of

entrepreneurs include ‘networking’ that relates positively to entrepreneurial behaviour and success.

Similar to the principle of the ‘*creation theory*’, Frese *et al.* (2000:48) mention two entrepreneurial behaviours that have emerged in studies and that are central to the situation of the entrepreneur, namely *innovativeness and initiative*. Frese (2009:443) postulates an ‘*action theory perspective*’ of entrepreneurship that consists of four facets, namely action sequence, self-starting, proactiveness and the overcoming of barriers, as depicted in figure 6 below.

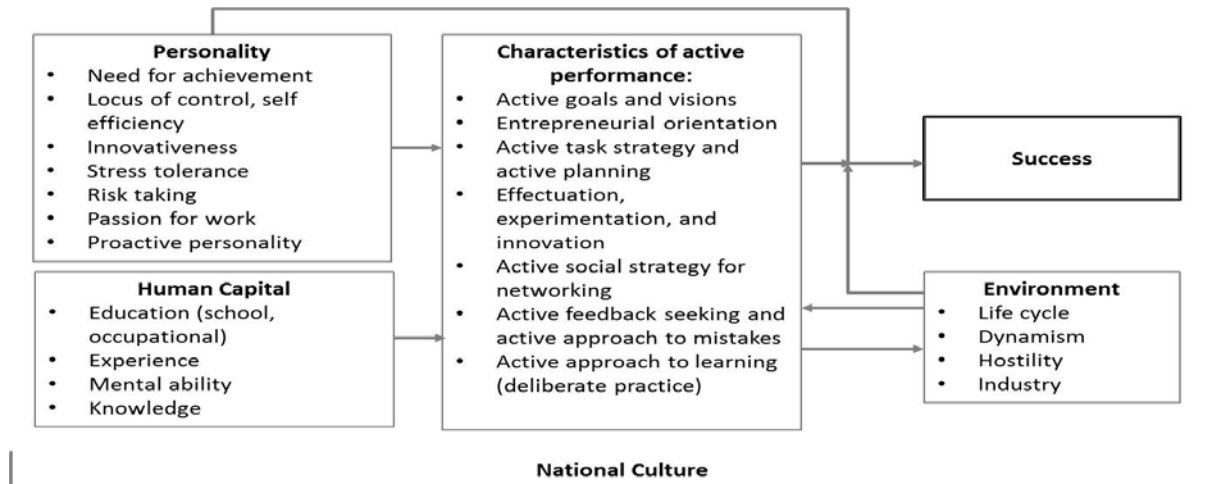
Figure 6: Facets of active performance of entrepreneurs

Action Sequence	Self-starting	Proactive	Overcome barriers
Goals / redefinition of tasks	<ul style="list-style-type: none"> – Active goal – Not just goals that are taken over from others – Setting higher goals (growth goals) 	<ul style="list-style-type: none"> – Anticipate future opportunities and problems and convert into goals 	<ul style="list-style-type: none"> – Protect goals when frustrated or taxed by difficult environment or complex goal structure
Information collection and prognosis	<ul style="list-style-type: none"> – Active search, i.e exploration, active scanning 	<ul style="list-style-type: none"> – Search for potential problem areas and opportunities before they occur – Develop knowledge on alternative routes of action 	<ul style="list-style-type: none"> – Maintain search in spite of lack of resources, problems, complexity, and negative emotions
Plan and execution	<ul style="list-style-type: none"> – Active plan – High degree of self-developing a plan – Don’t imitate, don’t just follow advisors 	<ul style="list-style-type: none"> – Back-up plans – Have action plans for opportunities ready – Proactivity of plan and detailedness 	<ul style="list-style-type: none"> – Overcome barriers – Return to plan quickly when disturbed
Monitoring and feedback	<ul style="list-style-type: none"> – Self-developed feedback and active search for feedback 	<ul style="list-style-type: none"> – Develop pre-signals for potential problems and opportunities 	<ul style="list-style-type: none"> – Protect feedback search

Source: Frese (2009:443)

Frese (2009:448) describes ‘action’ as goal-oriented behaviour in which there are three aspects that are important to understand about how humans regulate their actions, namely sequence, structure and focus. Sequence refers to how actions unfold, structure involves levels of regulation and the focus of an action can be the task, the social context in which the task is performed and the self. In summary, Frese (2009:461) defines the following model of relationships between active performance characteristics and entrepreneurial success:

Figure 7: Active performance characteristics and entrepreneurial success



Source: Frese (2009:461)

The relationships of variables and active performance characteristics of entrepreneurial behaviour, as described by Frese in figure 7, relate to the latest trends that emphasise the importance of ‘action’ and are particularly useful in directing key behavioural dimensions related to EP that facilitate knowledge creation. It acknowledges the need for action learning and experimentation that have been proven to relate positively to entrepreneurial success. In addition to sequence, structure and focus as dimensions related to active behaviour as proposed by Frese (2009:448), it can be argued that the intensity and frequency of actions should be included to capture critical additional criteria.

According to Frese (2009) active performance as depicted in the model (figure 7) is an ‘omnibus variable’, as it includes a number of different constructs, which Lumpkin and Dess (1996) labelled ‘entrepreneurial orientation’, that include autonomy, innovativeness, risk taking, competitive aggressiveness and pro-activeness. According to the author, EO is thus regarded as being related to the proposed concept of active performance in the following manner:-

- Autonomy implies being self-directed when pursuing opportunities.
- Innovativeness refers to developing new ideas (on products, services, and processes).

- Risk taking implies venturing into the unknown, committing one's assets to the business, and borrowing money. The author, however, indicates that risk taking is the only variable not being related to active performance, although one could argue that there is a certain risk when active performance takes place.
- Competitive aggressiveness implies making it difficult for competitors to enter the same market and attempting to outperform one's competitors.
- Proactivity means to have a long-term focus and not to wait until a demand is explicitly made to which one must respond. The author posits that a long-term focus can be related to future opportunities and to stressors; preparing for opportunities now implies that one assembles resources now so that one is able to make use of future opportunities quickly. Similarly, the author regards preparing for future problems and stressors now, to be consistent with being active. In the view of Frese the concept of proactiveness has been conceptualised as part of the concept of entrepreneurial EO and empirically, proactiveness has been of particular importance to explain the organisational success of business owners.

(Frese, 2009:445, 462, 463)

Frese (2009:463) emphasises further that in contrast to all other constructs in the model, 'entrepreneurial orientation' is a construct that uses the referent 'firm' and not the individual. Questions are related to whether the firm is entrepreneurially oriented or not. The author, however, argues that EO is regarded as a psychological concept, since most of the time only one high-ranking manager (e.g. the CEO) of the firm is asked about entrepreneurial orientation. In the view of Frese the most likely implicit referent of EO is not really the firm but the culture or climate of the firm, which is a typical variable of organisational psychology, and EO has been shown to be related to organisational success. The author indicates in addition that there have been attempts to make the concept more psychological in the sense of an individual action orientation (with the individual as the referent) and this too has been shown to be related to firm success in two cross-sectional studies.

The arguments of Frese (2009:463) give important direction with respect to the proper placement of ‘action propensities’ of behaviour as key determinants applicable to entrepreneurial success. These propositions highlight the importance of experience and experimentation that also relate to intuition, which has recently been identified as a promising additional area to explore in entrepreneurial research. In addition, it also indicates that the ‘entrepreneurial orientation’ concept of Lumpkin and Dess (1996) as applied to the firm level of an organisation (paragraph 4.4), is more appropriately applicable to individual entrepreneurial behaviour.

In summary, literature as presented on entrepreneurial behaviour confirms similar views as expressed about entrepreneurial cognition in paragraph 3.3, which emphasises the importance of ‘action propensity’ that facilitates interaction with the environment (social and industry) to create new knowledge, promote creativity and innovation and actually shape cognition. In accordance with this reasoning, differences in entrepreneurial cognition could be regarded as the result of entrepreneurial behaviour and not just the cause. In addition, the contrasting of analytical and intuitive thinking and the emphasis placed on the difference between professed and actual behaviour that is affected by the environment in which entrepreneurship is practised, should also be noted since it supports the argument of Chell (2000:63) that individuals can only be known through what they become when dealing with a specific situation.

3.5 Intuition

The recent recognition in entrepreneurship research that cognitive heuristics/biases give rise to deviations from rationality, and the subsequent call from researchers such as Schon (1983) and Mitchell *et al.* (2007) to develop the ‘*thinking–doing*’ link in entrepreneurship further, highlight the relevance of ‘*intuition*’ as an applicable concept in the entrepreneurship field of research.

When analysing *intuition*, Schon (1983:49) introduces the term ‘*reflection in action*’ and mentions that when people perform normal daily intuitive actions, it indicates that they are knowledgeable in a special way. Such knowledge can often not be described or is explained

inappropriately (irrationally). According to the author, “... *our knowing is ordinarily tacit, implicit in our patterns of action ...*”. Similarly, the author is of the opinion that the working life of the professional depends on ‘tacit knowing-in-action’.

Allison *et al.* (2000) argue that intuitive approaches to information processing accommodate critical aspects of *entrepreneurial activity* more effectively than rational approaches. According to the author, this viewpoint was confirmed in a study that offered support for the hypothesis that entrepreneurs (of high growth firms) are more *intuitive* than members of the general population, middle and senior managers, but that in terms of cognitive style, they are similar to senior managers. In the view of Allison, these findings provide empirical support for the idea that successful entrepreneurs adopt an *intuitive* approach to information processing and also confirm that senior executives process information in similar ways to successful entrepreneurs. The findings highlight interesting possibilities for investigating the nature of *entrepreneurship in large organisations*, according to the authors, and emphasise the need to consider the *learning styles* of potential and actual chief executives (Allison *et al.*, 2000:35).

According to Mathews (2008:26), intuitive decision-making entails experiences, know-how, the motivational processes, and ‘personal dispositions’ that affect decision-making processes. Unconscious information-processing in the form of implicit perception, implicit learning and implicit memory, which is structurally separated from consciousness, provides the input to intuitive decision-making that does not rely on rationality, according to the author. In the view of Mathews, an intuitive decision-maker is influenced unconsciously by past knowledge, training and background, which enable intuitions that occur with ease.

In a comprehensive analysis of the properties of intuition, Bastick (1982:51) asserts that analytical thought is, like all thought, interwoven with intuitive processes and cannot exist independently. The author further mentions that intuitive thought processes are contrasted with analytical thought on the following properties of intuition:-

- Intuition has emotional involvement while analytical thought is emotion-free.

- Intuitive thought is dependent on past experiences and the present situation, whereas analytical thought is considered independent of personal experiences and independent of the immediate environment.
- The intuitive process is preconscious but analytical thought is entirely a conscious discipline.
- Analytical thought is a linear, step-by-step, often slow process, whereas intuitive thought is sudden and depends on parallel processing of a global field of knowledge.
- Analytical thought only compares two elements at a time.

Bastick (1982:77) clearly identifies experience as a specific property of intuition and mentions that behaviourists recognise the fact that past experience affects insightful learning. In terms of the theory of 'intuitive thought', past experiences condition responses to and produce emotional sets. The perception of present stimuli is thus moderated by a present emotional set. According to Bastick, intuition and creativity have so many properties in common that they are considered to be identical. The first three stages of the creative cycle (i.e. preparation, incubation and illumination) have been incorporated by the theory of "intuitive thought" into one phase so that the creative process may be thought of as just two stages, i.e. intuition followed by verification (Bastick, 1982:301).

When Mitchell *et al.* (2005:671-672) apply the intuition concept to the entrepreneurship domain, the authors define intuition as; "... *the dynamic process by which entrepreneurial alertness cognitions interact with domain competence (eg. Culture, industry, specific circumstances, technology, etc) to bring to consciousness an opportunity to create new value*". In this regard it is suggested that entrepreneurially alert individuals who participate in more conscious activities may increase competence within a given area of specialisation, but not in other areas. The author therefore proposes that education in entrepreneurship should accommodate more conscious activities and emphasise activities that:

- enhance entrepreneurial alertness cognitions (activities that increase use of cognitive heuristics relevant to entrepreneurial alertness), and
- increase competence in a given domain.

Since the field of entrepreneurship is concerned with understanding how entrepreneurship enables future goods and services to come into existence, Mitchell *et al.* (2005) argue that the enabling process occurs owing to conscious *human action* (e.g. making observations, decision-making, etc.) rather than through human action that is based on on less-conscious mechanisms (e.g. breathing, digestion, etc.). It is further suggested that the opportunity identification process depends upon elaborate cognitive activity, and in particular upon those cognitive mechanisms associated with consciously undoing and redoing representations of information or knowledge (Mitchell *et al.*, 2005:658, 659).

Mitchell *et al.* (2005) accordingly highlight the following possible antecedents to the construct of intuition, namely:

- Brain organisation
 - The physical and social environment
 - The existence of implicit theories
 - Experience
 - Training
 - Practice
 - Expert knowledge structures/decision scripts
 - Formal knowledge or beliefs
 - Painstaking practice
 - Problem sensing
 - Gestation
 - Deliberation, and analysis
- (Mitchell *et al.*, 2005:656, 657).

As referred to in paragraph 3.4, Alvarez and Barney (2007:19) agree with Mitchell's view on human action and the conscious undoing and redoing of representations. However, they also indicate that in terms of the '*creation theory of entrepreneurship*', it is suggested that entrepreneurs and non-entrepreneurs may be virtually indistinguishable and that differences between entrepreneurs and non-entrepreneurs may be the result of entrepreneurship, not just a cause of entrepreneurship.

The view of Alvarez and Barney (2007:19) supports the notion that intuition might be developed by recurring 'actions and experience' that promote entrepreneurial knowledge creation and competence. Of importance to also note is the comment of Bastick (1982:301),

namely that intuition and creativity have so many properties in common that they are considered to be identical. It is further important to take cognisance of Bastick's view (1982:51) that analytic thought is considered to be independent of personal experience and independent of the immediate environment, while intuition develops from the integration of experience (action) and cognitive activity. This view is similar to that of Chell (2000:63,73) who also contrasts analytical and intuitive thinking, as addressed in paragraph 3.4, and relates directly to the theme of the research that explores relationships between cognitive analytical propensity and active behaviour.

3.6 Creativity and innovation

Creativity and innovation are inherent concepts of entrepreneurship and researchers have struggled to define the concepts separately from other behavioural variables without conflicting or overlapping definitions.

According to Rank, Pace and Frese (2004:519-20), creativity typically refers to the production of new and useful ideas by an individual or a small group of individuals working together, while innovation is defined as “... *the intentional introduction and application within a role, group or organization of ideas, processes or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society*”. Nonaka and Takeuchi (1995:56-57) are of the view that innovation refers to the creation of new knowledge, from the inside out, in order to redefine both problems and solutions and in the process, to re-create the environment.

When explaining the difference between creativity and innovation, Rank *et al.* (2004) mention that *creativity* refers to idea generation, whereas *innovation* refers to idea implementation. *Creativity and innovation* differ in the required degree of idea novelty and social interaction. In the view of the authors *creativity* is truly novel, whereas *innovation* can be based on ideas that are adopted from previous experience or different organisations. *Innovation* is accordingly regarded to be primarily an ‘*inter-individual social*’ process, whereas *creativity* is to some extent an ‘*intra-individual cognitive*’ process. The authors subsequently cite West and Farr (1990) who considered *creativity* as the ideation

component of *innovation* and *innovation* as encompassing both the proposal and applications of the new ideas. Rank *et al.* mention in addition that although several researchers recently used *innovation* as a more inclusive two-component concept encompassing both idea generation and application, they still emphasise the need to distinguish between *creativity* and *innovation* implementation (Rank *et al.*, 2004:519-20).

According to Nieman *et al.* (2004:48-49), creativity is a result of brain-driven actions but at the same time it is also indicated that there are more than 450 definitions of creativity, which have been developed over the last hundred years. The author, however, cites Cougar's (1995) definition and the '4 P' model of creativity that identified the following variables:-

- The person/entrepreneur (Creativity is regarded as a fundamental entrepreneurial skill that is learnable or can be acquired);
- Expertise (It includes all the knowledge, experience and talent a person applies in a certain situation);
- Motivation (Motivation determines what a person will do and also whether they will do it); and
- Creative thinking skills (It plays an enormous role and refers to the association of unrelated components and the combination thereof in a new or unique format).

In the view of Nieman *et al.* (2004:350), the creative process is part of the innovation process, as it forms the link between the first two steps of the innovation process, which is portrayed as consisting of:-

- Step 1: Searching for innovation (This step refers to the creative process which includes accumulation of knowledge, incubation process, the idea experience, evaluation, and implementation)
- Step 2: Evaluating the opportunity;
- Step 3: Involving the customer;
- Step 4: Making way for innovation;
- Step 5: Focussing on innovation; and
- Step 6: Organising for innovation.

Nieman *et al.* (2004:352) distinguish further between creativity, innovation and entrepreneurship and indicate that creativity refers to getting ideas and innovation refers to implementing ideas, while entrepreneurship refers to human and organisational processes.

West and Farr, cited by Frese *et al.* (2000:49), also define innovation as “... *the intentional introduction and application of ideas, process, products or procedures, new to the relevant unit of adoption*”. In the view of the authors, an innovation unfolds in two stages, namely the creative generation of new and useful ideas and the second stage of implementing these ideas. The *active part of innovation processes* is accordingly highlighted in the definition of innovation. The authors postulate that innovativeness describes more than an interest in innovation; it describes the *actual innovative behaviour*, such as the daily effort to improve one’s work procedures. In addition, it is mentioned that *innovativeness* has often been shown to have a significant effect on venture performance.

As referred to in paragraph 3.4, Frese *et al.* (2000:48) mention two entrepreneurial behaviours that have emerged in studies and that are central to the situation of the entrepreneur, namely *innovativeness and initiative*. Frese *et al.* (2000:49) subsequently measured *innovativeness*, where items were taken from Patchen’s innovation scale.

According to the authors, the most powerful factor in the mediation model was found to be innovativeness. There was a strong link from achievement orientation to innovativeness and a strong link from innovativeness to both venture performance variables. Initiative could not be positively related to venture performance and innovativeness was thus defined, as it is a mediator between *achievement orientation* and venture performance (Frese *et al.*, 2000:49).

In a study that examined how innovation strategies influence small firms’ ability to introduce product and process innovations that may provide a competitive advantage, Vertinsky (2003) *inter alia* found the following:-

- Innovation strategies were a strong predictor of a firms’ ability to introduce successful product and/or process innovations.

- Different levers, such as intensifying *innovation efforts* and/or increasing the emphasis placed on innovation, as well as in-house research and development, may increase their *innovative performance*.
- Firms' relative competitive position in terms of labour productivity, price-cost margin and domestic market share did not affect their innovation performance significantly.
- The scope and significance of small firms' *innovative efforts* and the adoption of multi-faceted *implementation strategies* distinguished between successful and unsuccessful innovators and had a significant impact on several aspects of firms' innovation performance,
- More comprehensive *implementation actions* were associated with greater innovation novelty, rhythm, and effectiveness,
- Innovation strategies explained a greater portion of the variance than industry and firm characteristics (size, technology, relative competitive position) combined;
- Internal learning increases firms' propensity to introduce radical innovations, while external learning appears to increase firms' efforts to appropriate the benefits of innovation through faster commercialisation and better protection.

Vertinsky (2003) highlights in summary that *implementation actions* are important ways to gain competitive advantages, as they assist firms in developing radical products at a faster pace than the competitors.

With reference to the organisational context, Antoncic and Hisrich (2003:14) indicate that the distinction between CE and innovation remains subtle. In their view the two concepts share the focus on *newness* but CE also includes activities that illustrate a departure from the customary in terms of changes in *strategy* and *organising*, as well as *risk-taking*, *proactiveness* and *aggressive posturing*. In this sense, the author postulates that organisational innovativeness can be considered a subset of CE.

When evaluating the distinctions provided for creativity and innovation in relation to entrepreneurship by Antoncic and Hisrich (2003), Frese *et al.* (2000), Nieman *et al.* (2004), West and Farr as cited by Frese *et al.* (2000), as well Vertinsky (2003), it can be argued that

these fall short in the sense that they do not capture the essence of entrepreneurial competency from which innovation results as an outcome. As indicated in paragraph 2.4, the model of 'entrepreneurial inputs and outcomes' as portrayed by Morris and Kuratko (2002:30) portrays innovation as a result or the outcome of entrepreneurship, which provides a different definition of the distinguishing characteristics. Drucker, cited by Frese *et al.* (2000:49), similarly refers to innovation as the result of purposeful actions and systematic work. In accordance with these arguments, innovation could be regarded primarily as a socially designed value criterion of an 'outcome' instead of a specific type of behaviour or process. However, these conflicting views highlight the dilemma of entrepreneurship research in that agreement does not exist on key dimensions and input/output definitions, which calls for a proper framework to guide the focus of research.

As indicated, authors have different opinions about the relevant definitions and distinctions of creativity, innovation and entrepreneurship. The model of 'entrepreneurial inputs and outcomes' as portrayed by Morris and Kuratko (2002:30), as discussed in paragraph 2.4, provides a sound and promising framework for further refinement that categorises innovation as an output that is created by entrepreneurship. This view in principle supports the argument of Antoncic and Hisrich (2003:14) that innovativeness can be considered a subset of CE. Innovation could, however, be regarded as a qualitative criterion of an outcome or competence, instead of a competency (input) in terms of the reasoning of Luke (2009), as addressed in paragraph 3.2. However, entrepreneurship has a specific additional requirement of 'creating wealth' or 'prosperity', which is not necessarily an implicit inherent condition of innovation, although that might be the case.

3.7 Knowledge creation

Knowledge creation and innovation are closely related concepts and as indicated in paragraph 3.6, Nonaka and Takeuchi (1995:56-57) are of the opinion that innovation refers to the creation of new knowledge in order to redefine both problems and solutions and in the process, to re-create the environment.

In the view of Von Krogh, Ichijo and Nonaka (2000:6), knowledge is defined as dynamic, relational and based on human action; it depends on the situation, and people are involved rather than absolute truth or hard facts. Pfeffer and Sutton (2000:15) view knowledge as information that changes something or somebody, either by becoming the basis of actions that lead to new wealth creation or by making an institution (or individual) capable of using what is learned to stimulate economic growth, innovation and productivity improvement. According to Nonaka and Takeuchi (1995:56), knowledge creation is the internalisation process of embodying explicit knowledge into tacit knowledge, which is closely related to 'learning by doing'.

Authors agree that the primary dimensions of knowledge creation relate to the conversion process between tacit knowledge and explicit knowledge (Baronet, 2003; Jugdev, 2007:427; Nonaka & Takeuchi, 1995:56-57; Von Krogh et al., 2000:6). Tacit knowledge refers to an internalised, shared mental knowledge base, or technical know-how, according to Nonaka and Takeuchi (1995), while Baronet (2003) describes it as being developed from experience in a field and from relations with personal networks. Von Krogh et al. (2000:6) mention that tacit knowledge is tied to senses, skill in bodily movement, individual perception, physical experiences, rules of thumb and intuition. Explicit knowledge is regarded as knowledge that can be put on paper, transferred or transmitted through communication by creating manuals, documents or databases, and can be used to create new concepts and new knowledge (Jugdev, 2007:428; Pfeffer & Sutton; 2000:12, 15; Von Krogh et al., 2000:6).

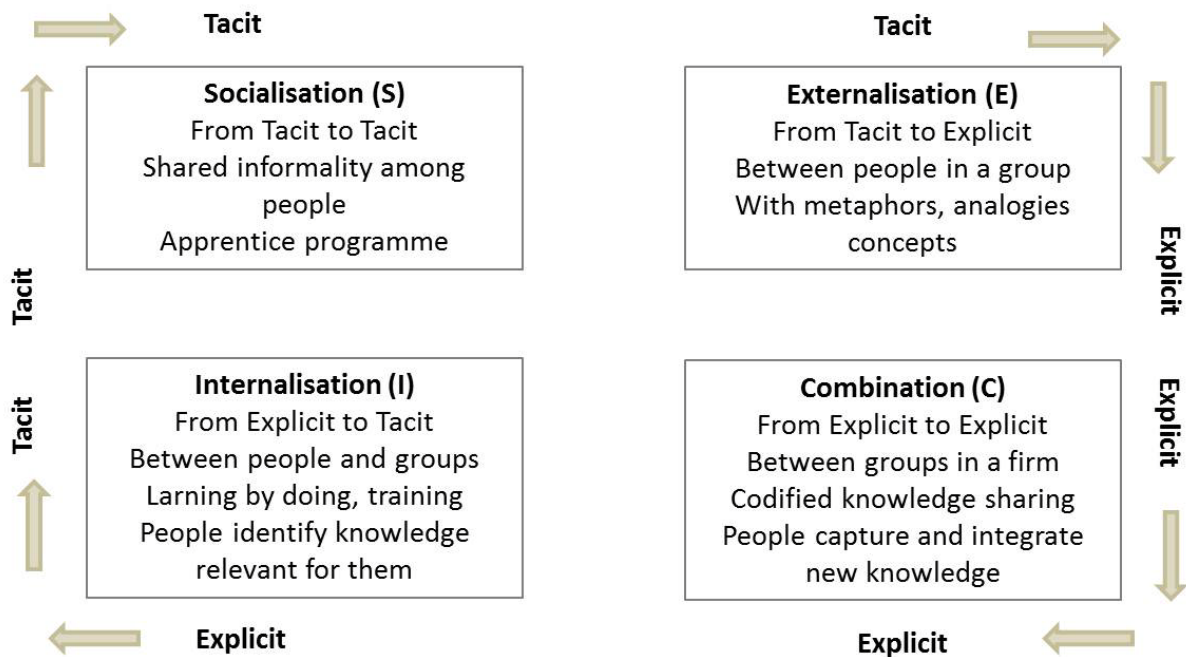
Von Krogh et al. (2000:6) further postulate that a person creates knowledge when he/she makes sense of a new situation by holding justified beliefs and committing to them. In the view of the authors effective knowledge creation depends on an enabling environment, referring to a shared space that creates emerging relationships which can be physical, virtual, mental, or all three. In the view of Von Krogh et al., (2000:8), knowledge enabling involves both deliberate activities, which can be planned and directed, and emergent ones, the 'unintended consequences of intended actions', or discovery after the fact that a particular activity promotes knowledge creation. The author states that "... knowledge

enabling is a circular motion that is always aimed at enhancing knowledge-creating potential of the company”.

The ‘*theory of knowledge creation*’, as described by Nonaka and Takeuchi (1995:56, 57), is primarily based on the distinction between tacit and explicit knowledge. When experiences are internalised into individuals’ tacit knowledge bases through phases of socialisation, externalisation and combination, they become valuable assets through the interaction that occurs with one another in a *spiral of knowledge creation* (Nonaka & Takeuchi, 1995:69). Knowledge is regarded as being about beliefs and commitment (a function of a particular stance, perspective, or intention), action, and about meaning that is context-specific and relational. Two dimensions of knowledge creation can be identified, according to the authors, namely an ‘ontological dimension’ and ‘epistemological dimension’. The ‘ontological dimension’ refers to knowledge as created by individuals that is organisationally amplified, while the ‘epistemological dimension’ refers to the distinction between and conversion of tacit and explicit knowledge. The authors assert further that human beings create knowledge by involving themselves with objects through self-involvement and commitment (Nonaka & Takeuchi, 1995:56, 57).

Jugdev (2007:427) describes the *knowledge spiral* concept as defined by Nonaka and Takeuchi (1995) and indicates that knowledge can be converted from tacit to tacit (through shared experiences), explicit to explicit (through information processing), explicit to tacit (often called internalising learning), and from tacit to explicit (through meaningful dialogue to draw out tacit knowledge). The framework is accordingly portrayed in figure 8 below.

Figure 8: The knowledge-sharing spiral



Source: Jugdev (2007:428)

As depicted in figure 8, four phases of socialisation, externalisation, internalisation, and combination exist that involve knowledge capturing, sharing, application, and discovery. A dynamic spiral emerges, since knowledge is created and shared at the individual, group and organisational level. *Socialisation* involves knowledge sharing through shared experiences in the same physical space and facilitates knowledge management effectiveness at the *group level*. *Externalisation* is regarded as a form of knowledge conversion that involves meaningful dialogue to draw out tacit knowledge into explicit knowledge. The knowledge conversion process of externalisation facilitates knowledge management effectiveness at the *individual level*. In addition, people turn explicit knowledge into complex sets of explicit knowledge through *combination* that involves information processing, creating manuals, documents, databases and codified communication sets to transmit newly created concepts and create new knowledge. The knowledge conversion process of combination facilitates knowledge management effectiveness at the *organisational level*. *Internalisation* is described as a form of knowledge conversion that involves the use of common guidelines

and goals so that explicit knowledge can be turned into tacit knowledge, which can be used. In internalisation, people learn by doing. According to the author, the knowledge conversion process of internalisation facilitates knowledge management effectiveness at the *individual level* (Jugdev, 2007:427, 428).

In the view of Nonaka and Takeuchi (1995:30, 56-61), the concept of action is directly related to knowledge creation and is regarded as critical. The focus shifts from a sequential pattern whereby thought drives action, towards an integrated spiral transmission between thought and action, whereby each influences the other continuously, without any clarity on which element actually comes first. This view is also supported by Pfeffer and Sutton (2000:15), who assert that merely knowing what to do is not enough, and it is critical to put knowledge to work.

Baronet (2003) confirms the viewpoints of Nonaka and Takeuchi (1995), as well as Jugdev (2007), and finds that in their perception of opportunities, entrepreneurs use a blend of two types of knowledge namely, tacit knowledge which they gather from experience and from their relations with personal networks and formal knowledge, which they gather from their active search for information.

With reference to the organisational context, Nonaka and Takeuchi (1995:72) argue that an organisation cannot create knowledge by itself; the tacit knowledge of individuals is the basis of organisational knowledge creation. The organisation has to mobilise tacit knowledge created and accumulated at the individual level, which is organisationally amplified through a knowledge spiral to a higher level. Holt *et al.* (2007:43) mention accordingly that CE, through the behaviours of innovation, proactiveness and risk taking, is instrumental in knowledge creation. The authors argue that organisations must continually learn and retain the knowledge (i.e., memory) that is created through CE.

In summary, the baseline premises of knowledge creation, as defined by Baronet (2003), Jugdev (2007:427), Nonaka and Takeuchi (1995), Pfeffer and Sutton (2000), as well as Von Krogh *et al.* (2000), all refer to the key aspect of 'action' that facilitates knowledge conversion from tacit to explicit, and from explicit to tacit knowledge, in a non-linear circular

motion, which should be noted. In addition, the proposition of Nonaka and Takeuchi (1995:72), namely that an organisation cannot create knowledge by itself but that the tacit knowledge of individuals is the basis of organisational knowledge creation, is of key importance, since it requires that assessments in an institutional context should accommodate the individual level as a unit of analysis.

3.8 Entrepreneurial learning

The concepts of knowledge creation and entrepreneurial learning can be regarded as synonymous, with minor differences in emphasis. As referred to in paragraph 3.7, Nonaka and Takeuchi (1995:56) assert that knowledge creation is closely related to 'learning by doing', while Rae and Carswell (2000:153) argue that both learning and knowledge creation refer to the ability to act differently and comprise three dimensions of knowing, doing and understanding.

Holcomb, Ireland, Holmes and Hitt,(2009:172-73) postulate entrepreneurial learning as the process by which people acquire new knowledge from direct experience and from observing the behaviour, actions and consequences of others; assimilate new knowledge via heuristics to confront discrepancies and organise assimilated knowledge by linking it with pre-existing structures.

In the view of Rae and Carswell (2000:150), there is a close relationship between learning and entrepreneurial achievement, in which learning is the dynamic process which enables entrepreneurial behaviour to be enacted. The authors assert that there is consensus on the fact that entrepreneurship is learned primarily by experience and discovery and experiential learning has proposed conceptual models, which have been influential in suggesting how people learn from experience. In this regard the authors mention that Kolb (1984) defined learning as a process whereby concepts are derived from and continuously modified by experience. It is further suggested that learning could be reactive or deliberate, and responsive or proactive, based on the level of conscious intent, and that learning is both the process by which knowledge, skills and insight are developed and the end result of the content which is learned.

According to Rae and Carswell (2000:153), people may 'know' cognitively, but if their actions do not change it cannot be concluded that they have 'learned'. Learning is thus regarded as a discursive, sense-making process in which people create a new reality, by talking and doing, as they learn. It is concerned with how people construct new meaning in the process of recognising and acting on opportunities, and of organising and managing ventures. In the view of the authors it is much more than acquiring the functional 'knowing', since it involves active 'doing' as well as understanding. Knowing, acting and 'making sense' are thus regarded as interconnected.

In summary, Rae and Carswell (2000:155) identify the primary themes of entrepreneurial learning as known capabilities, relationships, personal theory and active learning as well as confidence and self-belief, while it is argued that 'learning to achieve' and 'learning from achievement' are vital in the process of entrepreneurial formation.

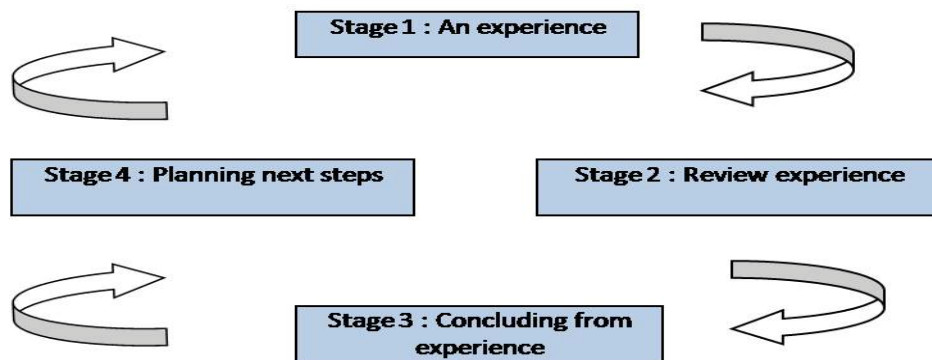
Grimbeek (2006:11,13) mentions that theorists view learning as a process that unfolds over time and link it with knowledge acquisition and improved performance. Some argue that behavioural change is required for learning, while others regard new ways of thinking, information processing, organisational routines and even memory as requirements for learning. In the view of Grimbeek (2006:80), people vary not only in their learning skills but also in their learning styles. Learning styles describe the attitudes and behaviours which determine an individual's preferred way of learning that is portrayed as a continuous process with four distinct phases, i.e. having an experience, reviewing the experience, concluding from the experience and planning the next steps. The author asserts that learning only happens when people can demonstrate that they know something they did not know before (insight, realisation and facts) or when they can do something they could not do before (skills). People normally associate learning with the accumulation of facts and an important component of learning is regarded as 'experience', which refers to learning from day-to-day activities (both success and failure (action learning) (Grimbeek, 2006:148) and the following essential characteristics of successful learning in the workplace are thus provided:-

- Learning must come through the work itself.
- Learning must be developmental.
- Learning means discovery.

(Grimbeek, 2006:80)

Grimbeek's arguments are primarily based on the learning style model of Honey and Mumford (1992) who describe learning from experience as a four-stage process, as indicated in figure 9 below.

Figure 9 : Learning from experience



Source: Honey and Mumford (1992:4)

According to Honey and Mumford (1992), there are four learning styles, which can be represented by a two-dimensional model, and each manager has varying preferences for each learning style. These learning styles can be summarised as follows:

- **Activist:** People enjoy new experiences; they are open-minded and enthusiastic about anything new. They learn best from activities where there are new experiences, problems and opportunities.
- **Reflectors:** People like to stand back and ponder experiences; they collect data and think through the experience. They learn best if given adequate time to consider, assimilate and prepare.

- Theorists: These persons enjoy adaptation and integration of data into complex but logical, sound theory and learn most by having time to explore methodically the association and interrelationships between ideas, events and situations.
- Pragmatists: People are keen to try out ideas, theories and techniques to see if they work in practice. They learn best when there is an obvious link between the subject matter and a problem or opportunity and they have the chance to try it in practice.

(Honey and Mumford, 1992:5,6)

Grimbeek (2006:87), however, indicates that some researchers have suggested that the model of Honey and Mumford (1992) has only two learning style orientations, namely doing and thinking. The doing orientation tends to overlap with a combination of activist and pragmatist styles, while the thinking orientation overlaps with reflector and theorist styles. According to the author, work on brain dominance also argues that there are two primary styles: right brain (intuitive, spontaneous, qualitative) and left brain (factual, analytical and qualitative). Right brain dominance tends to overlap with a combination of activist and pragmatist, while left brain dominance overlaps with reflector and theorist.

As highlighted in paragraph 3.2, Pretorius *et al.* (2005:416) also argue that entrepreneurial skills can be developed by addressing initiative and creativity, including techniques to facilitate creativity. The authors' reference to techniques that facilitate creativity highlights the importance of '*action learning*', the value of '*tacit knowledge*', '*intuitive intelligence*' and the necessity to '*learn from experience*'.

Although cognitive attributes are generally accepted as a key determinant of learning success, authors generally also agree strongly that 'experience' (action learning) and practical intelligence are of particular importance for the development of entrepreneurial competencies. In this regard Baum *et al.* (2003) found in a research study regarding the relationship of an entrepreneur's learning orientations and practical intelligence to new venture performance that entrepreneurs who prefer to learn through *concrete experience* and *active experimentation* and who have high *practical intelligence* achieve higher venture growth. The research team found that *practical intelligence* related with venture

performance and that a sample of entrepreneurs preferred the RO style of learning. Industry experience was a surprisingly strong independent variable in the study and related significantly with new venture performance. According to the authors this suggests that experience is a powerful predictor and that the cognitive model is not the only explanation of the intervening process between experience and new venture growth.

Baum *et al.* (2003) mention in addition that although a relationship between practical intelligence and venture performance was found, it is only one of three types of successful intelligence. The '*triadic theory*' also proposes that analytic intelligence and creative intelligence, both distinct from practical intelligence, are important intelligences for success. Creative intelligence in particular may be a predictor of success in new ventures that compete on the basis of technology. The research team used only two of the four scales employed by Kolb (1984) and suggested that a more complete study should be performed on *learning styles* (Baum *et al.*, 2003).

With reference to an analysis of intuition as a construct in entrepreneurship research, Mitchell *et al.* (2005:659-660) identified 'proximity to consciousness' and 'dynamism' as definitions related to opportunity identification in the context of learning. The authors refer to the 'system/mode model of learning and memory' of Gordon (1992) that identified four levels of consciousness. The organisation of cognitive processes is illustrated on the basis of the proximity to consciousness, from closest to consciousness (Level 4: the executive mental system), to farthest from consciousness (Level 1: the nonconscious procedural system). *Level 4 consciousness* refers to *deliberate or intentional initiation of information retrieval* and includes executive tasks that require self-initiated responses, such as active planning, sequential organisation, or task monitoring. The executive control system does, however, have the following limitations, according to the authors: it can only bring certain types of information into awareness (e.g. verbal or symbolic information, images, feelings, etc.) but it cannot bring procedural knowledge into conscious awareness. *Level 3 declarative systems* are based on explicit memory. Declarative memory can be declared and deals with facts and data which interface with both working memory and with executive and control systems. *Level 2 response systems* include cognitive subsystems that are based in certain human

senses or in a situational context. The output of these subsystems is brought into working memory by the executive system. *Level 1, the non-conscious procedural system*, refers to the memory system that “includes motor skills, cognitive skills, simple classical conditioning, habituation, sensitisation, perceptual after-effects, and other automatic association phenomena” (Mitchell *et al.*, 2005:659-660).

Mitchell *et al.* (2005) mention in addition that at higher levels of consciousness (i.e. Level 4) the individual has greater ongoing awareness of specific mental activity than at lower levels of consciousness. According to the author, entrepreneurial alertness cognitions appear to be part of Level 4 executive-cognitions-based control systems that enable the process whereby an individual becomes conscious of an opportunity. The process is, however, considered to be dynamic with *extensive linkage, feedback and/or bidirectionality* (Mitchell *et al.*, 2005:664). When people become competent in a given domain they move away from the use of symbolic or declarative knowledge, toward reliance on perceptual, “nonverbalisable procedural knowledge” (Mitchell *et al.*, 2005:665). Level 3 consciousness (declarative system information) operates to manage the procedural knowledge interface with other levels and is the critical output for the ‘action-orientated’ Level 4 executive control system (Mitchell *et al.*, 2005:666). The authors assert that “... *entrepreneurial alert individuals who participate in more-conscious activities to increase competence within a given area of specialisation (domain) will actually gain greater levels of entrepreneurial intuition in that area of specialization, while not in other areas of specialization.*” This leads to the conclusion of Mitchell *et al.* (2005:667) that more attention should be paid to conscious activities in the education and teaching of entrepreneurial intuition (Mitchell *et al.*, 2005:659-661).

The arguments of Mitchell (2005) confirm and support the propositions of Nonaka and Takeuchi (1995), Jugdev (2007), Rae and Carswell (2000), Baum *et al.* (2003) as well as Grimbeek (2006), who all emphasise experience and action-based learning as critical for the entrepreneurship domain. It is also essential to note the argument of Mitchell *et al.* (2005:667) that alert individuals who participate in more-conscious activities to increase competence will actually gain greater levels of entrepreneurial intuition. This view supports

the argument of Bastick (1982:77), as indicated in paragraph 3.5, who clearly identifies experience as a specific property of intuition and who mentions that behaviourists recognise the fact that past experience affects insightful learning.

As also referred to in paragraph 3.4, Alvarez and Barney (2007:28) similarly indicate that the '*creation theory*' suggests that action/revision processes occur several times and it is through this inductive learning process that entrepreneurs learn after they have acted. As entrepreneurs act upon their initial beliefs about opportunities and then observe the market responses, beliefs are transformed, reflecting the *acquisition and creation of information*. Entrepreneurs thus learn by several iterative actions, evaluations and reactions. This view also correlates with the views of Rae and Carswell (2000), Nonaka and Takeuchi (1995) and Frese (2009).

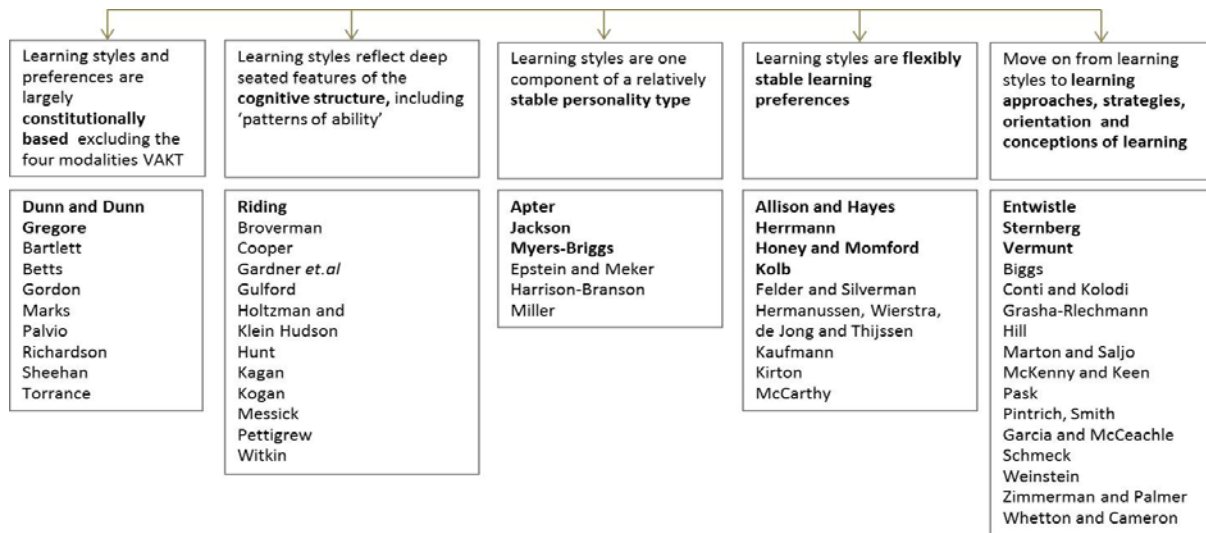
Apart from acknowledging the relevance and necessity for experimentation and an active approach to entrepreneurial learning, accumulated experiential knowledge also affects the subsequent cognition and behaviour of entrepreneurs. Holcomb *et al.* (2009:172-73) accordingly assert that the accumulation of experiential knowledge by entrepreneurs, the effect on entrepreneurial action and the mechanisms that entrepreneurs employ to acquire, assimilate, organise and use entrepreneurial knowledge are important for research. The authors indicate that learning processes adapt incrementally as people learn from the consequences of actions taken and from the behaviour and choices they observe in others. Variations therefore occur when conditions limit the ability of entrepreneurs to process information fully and these conditions cause people to rely on heuristics to construct judgments that may vary widely. According to Holcomb *et al.* (2009:173), Corbett (2007) relied on Kolb's (1984) concept of experiential learning, and demonstrated that the different manners in which people acquire and transform information account for important variations in the discovery of entrepreneurial opportunities. It is postulated that the effect of heuristics on learning depends significantly on the learning context: whether learning occurs through direct experience (experiential learning) or through modelling others' behaviours and actions (vicarious learning).

The interactions of variables and methodology of learning as described by Holcomb *et al.* (2009:176) relate strongly to the arguments of Nonaka and Takeuchi (1995) with respect to knowledge creation (paragraph 3.7) and the 'spiral' concept as addressed in paragraph 2.5. This further supports the view of Alvarez and Barney (2007:19), namely that social interaction actually shapes cognition and that differences in cognition are the result of entrepreneurship and not just the cause (paragraphs 3.3 and 3.5). These propositions are specifically noted, as they are directly applicable to the primary theme of the research and highlight the importance of an 'action' dimension with respect to entrepreneurial knowledge creation and performance.

Holt *et al.* (2007:43) provide additional support and confirmation for these propositions by indicating that learning orientation has a significant impact on innovative behaviour within organisations, as further addressed in paragraphs 4.4 and 4.5. The authors indicate in addition that learning orientation has been positively associated with new product development, the possession of state of the art technology, overall firm performance and decisively influenced organisational innovativeness in 187 US firms.

Different approaches to assessing learning styles have been considered by researchers, varying from cognitive structures and personality types to flexible learning preferences and learning strategies. Coffield, Moseley, Hall, and Ecclestone (2004:9) evaluated these and related instruments and summarised the basic underlying premises applicable to available models as follows:

Figure 10: Families of learning styles



Source: Coffield *et al.* (2004:9)

In evaluating 'on-the-job' learning style dimensions and the suitability of the dimensions for 'on-the-job' learning contexts, Berings, Poell and Simons (2008:427) summarised the suitability of applicable learning style models as reflected in table 4 below.

Table 4: Overview of learning style models in educational psychology: Literature and their sustainability in on-the-job learning contexts

Model	Suitability for on-the-job learning contexts
1. Deep and surface learning approaches (Entwistle, 1981, 1988)	Not suitable
2. Vermunt's learning styles (1992)	Not suitable
3. Kolb's (1984), Honey and Momford's (1986) and Jackson's learning cycles (2002)	A translation of the element of reflection can be suitable
4. Brain dominance (Hermann, 1989)	Not suitable
5. Intuition and analysis (Allison & Hayes, 1996)	Not suitable The intuition-analysis dimension can be suitable
6. Model of Learning preferences (Dunn, 2003: Dunn et.al., 1989)	A translation of the sociological and psychological stimuli can be suitable
7. Cognitive styles (Riding & Cheema, 1991)	Not suitable
8. Thinking styles (Sternberg, 1997)	The scope and learning of mental self-government can be suitable
9. Mind-styles model: ordering and perception (Gregore, 1982)	The two forms of ordering, sequential and random ordering, can be suitable

Source: Berings *et al.* (2008:427)

Berings *et al.* (2008:427) accordingly concluded that the following four learning styles can be suitable to on-the-job learning:

- Sequential and random ordering, derived from Gregorc (1982) and Sternberg (1997);
- Learning alone or with others, derived from Dunn *et al.* (1989) and Sternberg (1997);
- Intuitive and analytical learning, derived from Allinson and Hayes (1996); and
- Forms of reflection, derived from Kolb (1984), Honey and Mumford (1986), Jackson (2002) and Dunn (2003).

According to Berings *et al.* (2008:427) these dimensions indicate learning activities that can be actively directed by the learners themselves and are applicable to the preparation of work, the performance of work and the innovation of work. In the view of the authors, they are applicable to both explicit and implicit learning processes and a social learning dimension is included.

In general, agreement exists on the critical requirement for active behaviour and experience that facilitate learning, which is highly applicable to the entrepreneurship field of research. Of importance to note is the fact that innovation as addressed in paragraph 3.6, knowledge creation (paragraph 3.7) and learning (paragraph 3.8) are all not regarded as linear processes but rather as continuous cycles of recursive activities (spiral) that re-inform each other and that ultimately develop intuitive ability, which is especially applicable to entrepreneurship in any context. In addition, the views of Baum *et al.* (2003), namely that experience is a powerful predictor, that the cognitive model is not the only explanation of the intervening process between experience and new venture growth and that a more complete study should be performed on learning styles, are specifically noted and accepted.

3.9 Conclusion

Although a variety of viewpoints and research results have been identified that highlight an extensive range of factors that determine, influence and affect knowledge creation dimensions, entrepreneurial learning and entrepreneurial competencies, strong support could be identified for the prominent role of practical experience/AI that facilitates

knowledge creation/conversion at the individual level. The views of Baronet (2003) and Baum *et al.* (2003) suggest an emphasis and possible relationship with the concept of tacit knowledge and the theory of knowledge creation as proposed by Nonaka and Takeuchi (1995:57–61), as well as the *creation theory* mentioned by Alvarez and Barney (2007). Although not clearly defined, the intuitive aspect of entrepreneurial behaviour mentioned by Mitchell *et al.* (2005) is also highlighted and supports the argument for the prominent influence of AI.

Cognitive behaviour also features prominently in a variety of arguments for creative thinking as a key aspect of entrepreneurial competence, creativity and innovation. However, it has lately been argued that *human action* is the primary outcome-based factor related to the creation of opportunities and successful entrepreneurship (Alvarez & Barney, 2007:28). The findings of Allison *et al.* (2000:31), namely that there is no difference between the cognitive styles of successful entrepreneurs and senior managers and the related proposition of Alvarez and Barney (2007:19) that entrepreneurs and non-entrepreneurs may be virtually indistinguishable in terms of their cognitive characteristics, are of particular importance. The findings/viewpoints of the authors strengthen the argument for more prominent emphasis on outcome-based behaviour and AI as related to EP.

The view of Pretorius *et al.* (2005:416) whereby entrepreneurial performance is regarded as a function of motivation as well as entrepreneurial and business skills, acknowledge the prominence of entrepreneurial behaviour, as well as business and management skills, which provides a generally appropriate basis for further refinement.

Although the rational, linear perspective of the entrepreneurship process enjoys wide acceptance, an alternative viewpoint for a cyclic/spiral motion that facilitates interaction with the applicable environment, knowledge creation/conversion, learning and intuition as antecedents of entrepreneurial competence, is currently also finding strong support. In accordance with the observations by Wiklund (1998), cognitive or action-orientated behaviour that facilitates learning might prove to have distinct relationships with entrepreneurial competence and performance, while the “*creation theory*” of Alvarez and

Barney (2007) suggests that entrepreneurs learn by several iterative actions, evaluations and reactions. Of particular importance is the suggestion by Alvarez and Barney (2007:19) that differences between entrepreneurs and non-entrepreneurs may be the result of entrepreneurship, not just a cause of entrepreneurship, as well as the notion that entrepreneurs create opportunities by means of the continuous actions of individuals exploring ways to produce new products or services, instead of just identifying pre-existing opportunities.

The impact of the relevant organisational environment in which entrepreneurship is practised, such as the local government environment in which the research has been conducted, also features as a prominent factor and should be incorporated and aligned with variables that are regarded as applying to the individual entrepreneur.

The following chapter (Chapter 4) explores environmental variables related to the organisational context that have an impact on entrepreneurship in order to integrate the individual and organisational perspectives.

CHAPTER 4: ENTREPRENEURSHIP IN AN INSTITUTIONAL CONTEXT

4.1 Introduction

Flowing from Chapters 2 and 3, where the inherent basic generic factors related to entrepreneurial competencies, behaviour, cognition, skills and knowledge were explored, Chapter 4 is directed at the integration of variables as identified within an institutional/organisational context. Individual behaviour is recognised as a key dimension of entrepreneurship and it is thus essential to build onto this basic premise when evaluating tendencies and dimensions at firm/institutional level and in local government specifically. Various views with respect to public entrepreneurship, which includes local government as well as CE, are initially analysed, in order to determine applicable variables as contained in relevant literature, whereafter the interface between individual and collective factors as derived from Chapters 2 and 3 are considered within an institution/organisation (firm level). The relationship of strategic management concepts with entrepreneurship is accordingly analysed, followed by an overview of organisational learning and performance management. In conclusion, the primary findings are summarised and integrated with the findings from Chapters 2 and 3 in order to set the stage for the applicable research methodology, as addressed in Chapter 5.

As indicated in paragraph 1.3, a key problem with local government institutions in South Africa is that municipalities do not display sufficient entrepreneurial skills and behaviour to overcome the challenges that they face. Traditionally, local government applies bureaucratic management approaches related to generally accepted strategic management practices that rely on rational, analytical planning and programming systems that are commonly used in both the public and private sectors. However, alternative viewpoints call for a revision of

bureaucratic approaches in local government to enable entrepreneurial behaviour that is regarded as essential to overcome current challenges.

The metropolitan local government organisation where the research was conducted accordingly introduced alternative organisation and management mechanisms during 2002 and established separate independent utilities and agencies for trading and service delivery services, as described in paragraph 1.3 and Appendix C. The introduction of these alternative arrangements established two principal modes of operation for the delivery of municipal services, namely core departments that operate according to traditional local government practices and municipal entities (agencies) that function independently in principle, under the control of separate boards of directors in accordance with generally accepted corporate governance methodologies. The establishment of these different modes of operation within the city makes it particularly prudent to evaluate whether it had any impact on managerial staff behaviour (knowledge creation variables) or relationships with the actual entrepreneurial characteristics, business dimensions and performance of the relevant agencies and departments. In this regard entrepreneurial knowledge creation in the context of public and corporate entrepreneurship can make a valuable contribution.

4.2 Public entrepreneurship

The primary challenge for local government and public institutions is to balance the requirements for bureaucracy and general management control with those of entrepreneurship that require speed, autonomy and flexibility.

In this regard, Fox and Maas (1997:91) refer to the rise of public sector entrepreneurship that can be traced to the advent of tax limitations, declining grants to state and local governments and the growing fiscal crisis that require public managers to find new sources of revenue beyond traditional rates and taxes to enlarge tax bases, which reflects the importance attached to both private and public entrepreneurship. According to the authors (Fox & Maas, 1997:8), entrepreneurship is accepted as one of the instruments able to generate prosperity in a rapidly changing environment. The authors further mention that to

convert public policy into goods and services that ensure social equity, the innovative characteristics of the entrepreneur are needed to enable a transformed public bureaucracy.

In evaluating the obstacles and potential benefits for entrepreneurial government, Fox and Maas (1997), however, emphasise the following:-

- The greatest obstacles to public entrepreneurship are political and bureaucratic in nature
- Risks of corruption demand rigid control of especially public budgets, which makes it difficult for governments to act entrepreneurially.
- An entrepreneurial government that generates competition for the private sector could be regarded as a potential disadvantage.
- Privatisation of governmental functions might lead to monopolies, which could have a negative influence on a country's economy; a contrary argument, however, holds that the privatisation of government enterprises seems to generate wealth.
- Although a government cannot be run as a business, it does not imply that it cannot become entrepreneurial – any institution, public or private, can be entrepreneurial, just as any institution can be bureaucratic.

(Fox and Maas, 1997:91, 96, 98, 99, 101)

The aforementioned obstacles and the benefits of entrepreneurial government are of specific significance, since they highlight the following in particular:-

- Political and bureaucratic obstacles to public entrepreneurship,
- Privatisation of government enterprises, which seems to generate wealth, and
- The fact that any institution, public or private, can be entrepreneurial.

As indicated in paragraph 1.4, Morris and Jones (1999:78,79) similarly argue that the ability of public organisations to recognise and adequately respond to their changing environment is limited by management philosophies and structures that characterise public enterprises, since the bureaucratic framework fails to provide flexibility, adaptability, speed, or incentives for innovation and the higher the degree of bureaucratisation, the greater the potential conflict with entrepreneurship.

This view of Morris and Jones is of the utmost importance in the local government context and correlates with that of Hjorth (2003:64,65), who also argues that bureaucracy and normal management practices are generally in conflict with entrepreneurship (paragraphs 1.3, 1.4, 1.6.1 and 4.4).

As indicated in paragraph 1.4, Hjorth (2003:182) pinpoints differences between bureaucratic management and entrepreneurship by referring to the concept of entrepreneurial governance that promotes competition between service providers, empowers citizens, is driven by missions and visions instead of rules and regulations, decentralises authority, encourages participative management and uses market-type mechanisms rather than administrative techniques and practices.

In the view of Morris and Jones (1999:79) “... *public sector entrepreneurs confront unique obstacles such as multiplicity and ambiguity of goals, limited managerial autonomy and high political interference, high visibility, skewed reward systems, a short-term orientation (reinforced by budget and election cycles), restrictive personnel policies, lack of competitive incentives for improved performance, difficulty in segmenting or discriminating among users and a lack of accountability among managers for innovation and change ...*”. In the view of the authors, these obstacles can, however, be used to facilitate entrepreneurial behaviour.

Morris and Jones (1999:79) suggest that the conflict with bureaucracy can be bridged with what they refer to as ‘civic-regarding entrepreneurship’. According to the authors the concept emphasises accountability, which implies that the principles of democratic theory are incorporated into the design of any entrepreneurial activities. It is thus argued that such initiatives should be developed in ways that facilitate citizen education and participation, such as the utilisation of budget committees and advisory boards. The proposal of the authors relates to the ‘emergence perspective’ mentioned by Hjorth (2003:204) (paragraph 4.4), whereby a different kind of ‘managerial entrepreneur’ is proposed to enable entrepreneurship in government institutions.

Morris and Jones (1999:76) refer to the concept of EO or ‘intensity’ that indicates the extent to which entrepreneurial events are innovative, risky and pro-active. It is accordingly stated

that different levels of entrepreneurial intensity are appropriate for different public sector organisations and that organisations might pursue different strategies, depending on their relative emphasis on frequency versus degree.

In an effort to distinguish between individual, corporate and public sector entrepreneurs, Morris and Jones (1999:79) identified the key characteristics of public sector entrepreneurs to include a mix of power and achievement motivation, an ability to work strategically, beginning with small steps, strong political and external networking skills, calculated risk-taking, self-confidence and an ability to tolerate and use ambiguity as a source of discretion. It should be noted that these characteristics, as identified by the authors, relate mainly to the behavioural dimensions of entrepreneurship.

In accordance with the findings of a study conducted in South African public institutions, Morris and Jones (1999:80, 82) reported that at the individual level, entrepreneurship was most strongly associated with self-confidence, strong drive, strong leadership abilities, good organisational skills, vision and self-discipline. With respect to the entrepreneurial organisation, a strong leader, good planning systems, customer-driven orientation, efficient operations and hands-on management were identified as the key characteristics. Nearly half of the respondents in the particular study (48,6%) associated the term entrepreneurship primarily with the type of person. This finding supports the generic premises related to entrepreneurship as addressed in Chapters 2 and 3 that highlighted wide-ranging acknowledgement of the importance of individual behavioural dimensions, especially action orientation that relates positively with entrepreneurial performance.

Morris and Jones (1999:83) mention in addition that 58,6% of the respondents in the above-mentioned study disagreed with the statement that “...*entrepreneurship does not apply to organisations such as ‘mine’* [public sector organisations] ...”. Respondents generally perceived that most entrepreneurial individuals could be found in middle management (23,2%) and in functional areas (16,8%), which overlap with each other, as well as at the executive or senior management level (19,4%). It is further significant to note the conclusion of Morris and Jones (1999:87) when they state that there is no blueprint or model for how

entrepreneurship can be accomplished in the public sector, that conventional bureaucracy is an increasingly inadequate solution and that experimentation appears to be the key. The authors' reference to 'experimentation' also relates positively to similar sentiments expressed by a variety of authors as addressed in paragraph 3.4 that emphasise 'action orientation' as a key behavioural dimension of entrepreneurship that needs to be accommodated.

Kearney *et al.* (2007:277) also highlight the fact that there are significant differences in organisational realities, suggesting that the goals, objectives, constraints, approaches and outcomes associated with successful entrepreneurs are unique in public sector organisations. The authors subsequently summarise the relevant differences as portrayed in table 5 below.

Table 5: Specificities of public sector compared to private sector entrepreneurship

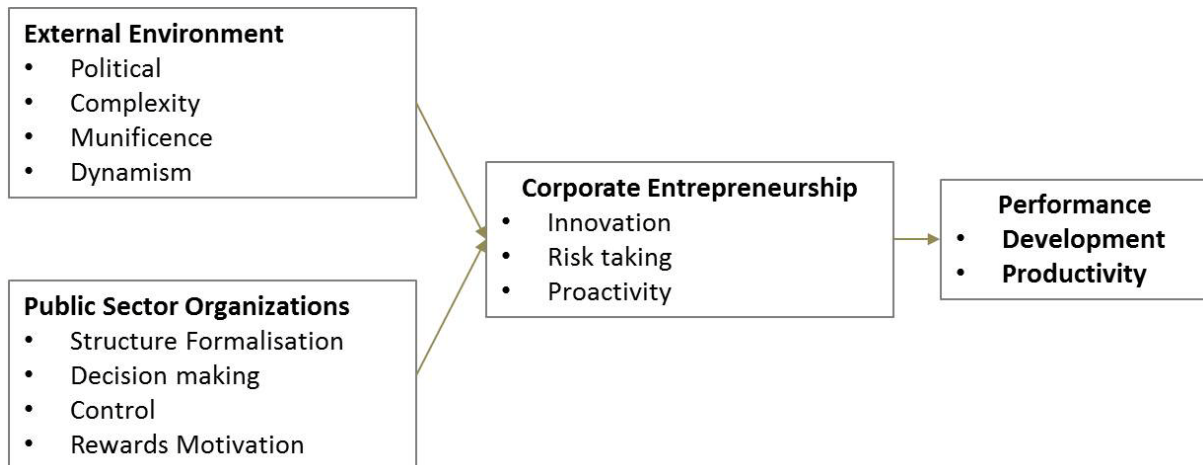
	Public Sector Entrepreneurship	Private (Independent) Entrepreneurship
Objectives	Greater diversity and multiplicity of objectives; greater conflict among objectives (Banfield, 1975; Cornwall & Perlman, 1990; Rainey, Backoff & Levine, 1976)	More clearly defined goals and objectives; greater consistency among objectives (Sadler, 2000)
Decision-making	Less decision-making autonomy and flexibility; more constraint on procedures and operations; subject to public scrutiny; major decisions have to be transparent (Rainey, Backoff & Levine, 1976; Rainey, 1997)	Greater degree of flexibility and autonomy in the decision making process; more participative and independent in their decision-making (Jennings & Lumpkin, 1989; Pearce & David, 1983)
Authority	More authoritarian; more centralised or centrally controlled (Downs, 1967; Pugh, Hickson & Hinings, 1969)	More democratic; more decentralised (Jennings, 1994; Miles & Arnold, 1991; Miller, 1983; Cornwall & Perlman, 1990; Slevin & Covin, 1990; Russell, 1999)

	Public Sector Entrepreneurship	Private (Independent) Entrepreneurship
Risk/ rewards	Risk and reward trade-offs favour avoiding mistakes; lower financial incentives; does not share enterprise profits (Morris & Jones, 1999; Ramamurti, 1986)	Identifies risk factors and aims to minimise them; calculated risk taker; invests personal capital in the business; higher financial incentives; profitability is fundamental to generate income (Hornsby <i>et al.</i> , 2002; Ramamurti, 1986)
Motivation	Lower commitment and job satisfaction (Buchanon, 1974a, 1974b; Rainey, 1983; Boyne, 2002; Rhinehart, Barrek, De-Wolfe, Griffin & Spaner, 1969)	Greater level of commitment and job satisfaction (Buchanon, 1974b; Rainey, 1983; Hornsby <i>et al.</i> , 2002; Rhinehart, Barrek, DeWolfe, Griffin & Spaner, 1969)
Funding and Profit	Not constrained by narrow profit; easier to obtain funding for risky projects; easier to raise capital; do not have a profit motive, instead they are guided by political and social objectives (Morris & Jones, 1999; Ramamurti, 1986)	Can be constrained by narrow profit; more difficult to access and obtain funding for risky projects; difficult to raise capital; profit-oriented (Ramamurti, 1986)
Restrictions	Restrictions on growth and power that face the private sector are not applicable to the public sector (Ramamurti, 1986)	Can be restrictions on the growth and power of the enterprise (Ramamurti, 1986)
Independence	Obtains independence by overcoming dependencies (Ramamurti, 1986).	Obtains independence by avoiding or minimising dependencies (Ramamurti, 1986).

Source: Kearney *et al.* (2007:278)

According to Kearney *et al.* (2007:279), personal goals and objectives are less important than the generation of a good result for the state enterprise/civil service and the specific form of entrepreneurship within the public sector “... *depends on the patterns of interaction among individuals within the environment whose efforts jointly determine entrepreneurial performance ...*” (paragraph 1.4). The following model of CE in the public sector is accordingly proposed by the authors:-

Figure 11: Model of orporate entrepreneurship in the public sector and its direct effects



Source: Kearney *et al.* (2007:281)

In the view of Kearney *et al.* (2007:280), the key dimensions that have the most significant influence on public sector CE are politics, complexity, munificence and dynamism, while organisational dimensions are also regarded as essential. In addition, the authors regard the dimensions that have the most significant influence on public sector CE as structure/formalisation, decision-making, control and rewards/motivation (paragraph 1.4). Kearney *et al.* further argue that enterprising people have the ability to obtain the required resources to exploit opportunity, but reinvention implementation is also regarded as a function of specific restraining and facilitating characteristics of individual cities and their governments. To encourage innovation and entrepreneurship, corporations must thus create a vision, remove unnecessary administrative requirements, generate mechanisms that integrate departments and functions, change budgeting and accounting procedures, provide internal venture capital and special project funds, allow discretionary time to employees and develop new business performance, according to the authors (Kearney *et al.* 2007:281).

Kearny *et al.* (2000:544,545) mention that a research study conducted in US local authorities found that managers' attitudes to reinvention vary positively and significantly with membership of the City Managers' Association and negatively with the time they have worked in their current position. It was also found that personal and professional

experiences influence managers' attitudes to reinvention and that the longer managers spend in their present job, the less favourably they view reinvention. In addition, city government characteristics such as financial resources and the size of the labour force have been identified as significantly important factors in managers' attitudes. The researchers concluded that a host of personal, experiential and situational factors influence managers' views on and support for the principles of reinvention.

The arguments of Kearney *et al.* (2007) highlight four specific areas that influence entrepreneurship in the public sector in particular, namely *political dynamics, organisational characteristics, the environment* and the *behaviour of staff*, which are important to note. The authors' argument that entrepreneurship within the public sector *depends on the patterns of interaction among individuals within the environment whose efforts jointly determine entrepreneurial performance*, supports that of Huczynski and Buchanan (2001:8) who also emphasise that organisations cannot have goals; instead people have goals. It therefore highlights the necessity to evaluate both individual behaviour and organisational characteristics as variables related to entrepreneurial performance in an organisational or local government context.

4.3 Reforms and corporatisation of public and local government services

In order to evaluate alternatives that can be applied to promote entrepreneurship in public and local government organisations, it is thus essential to consider current practices and initiatives that have been applied internationally and in a local context.

World Bank (2009) officials argue that the effective implementation of reforms in local government requires a strategy to give discretionary power to local governments and strengthen their accountability towards citizens. However, in local government case studies observed, none of the reform codes conform to the practices that are widely recognised in the literature. The reason for this is regarded as the inherent political nature of the devolution of power that redistributes power between different participants of the government system and that results in central bureaucracies being reluctant to support change and preferring to resist reforms, since these may jeopardise long-established

institutional and political allegiances. According to officials of the World Bank (2009), arbitrariness at the central level adversely affects the incentives of local governments and discourages them from exploiting their own resources. It also creates incentives for the local government to respond to the demands of the central government rather than their constituencies, since by responding to the preferences of the centre, the local government officials gain access to resources that would otherwise be denied. Empirical findings indicate that in countries where decentralisation involves reliance on own taxation at provincial and local levels, local governments tend to be small, but where decentralised government is financed primarily by transfers from above, the local governments have much more resources and 'soft budgets' can result in an increase in the size of the overall public budget. Therefore, a large proportion of own source revenues in the total budgets of the local government is regarded as critical to encourage the accountability and increase the efficiency of local government operations (World Bank, 2009:52, 69).

Zerbinati and Souitaris (2005:3) confirm the view of the World Bank and indicate that the existing service/tax situation in Europe is challenged by calls for policy reforms that will reduce local taxes and at the same time improve the efficiency of local government services. The authors are thus of the opinion that mainstream entrepreneurship literature should embrace the study of entrepreneurship in the public sector, where politicians and public managers act entrepreneurially and are driven by non-profit rewards (Zerbinati & Souitaris, 2005:61).

When considering applicable possible reforms in the public sector, Luke (2009:62-63) argues that the most effective approach to managing the public sector is a combined programme of privatisation and corporatisation (i.e. converting government departments with a commercial focus so that they become separate legal entities such as *state-owned enterprises* {SOEs}). According to the author, the SOE model has been adopted in numerous countries, with variations in both the SOE framework and the resulting outcomes. Essentially the model is regarded as an alternative to privatisation, in that state assets remain in public hands, but are required to operate as efficiently as private sector organisations. Luke mentions that those in support of the model outline a number of public

administration benefits, such as maintaining ownership of core infrastructure assets often considered national icons, security of supply (particularly for essential services), continuity of service provision in markets where the private sector may not have sufficient interest and increased accountability to the extent that SOEs are directly accountable to government.

The rationale for the SOE reforms was the inefficiency of government (or government departments) as a provider of commercial services, owing to protection from a free market economy, which allowed them to operate in a monopolistic environment, with on-going financial support from central government. Government departments were often required to include non-commercial and social objectives, which were inconsistent with otherwise commercial choices. According to Luke, “... *corporatisation provided a viable solution for these departments to become both efficient and profitable, enabling freedom of commercial choice and responsibility for commercial results*” (Luke, 2009:69-70).

In summary, Luke (2009:269-271) found clear support for corporatisation through SOEs and evidence of solid financial returns. According to the author, “... *the notion that SOEs will always fail due to a lack of self-interest, competition, and customer focus is not supported and the importance of competition rather than ownership is validated.*” Distinct examples of SOEs that have achieved operational and financial success from commercial and often innovative activity were also identified. Entrepreneurial activity, more specifically strategic entrepreneurship, is therefore not regarded as inconsistent with a public sector context. The author indicates in conclusion that strategic entrepreneurship may thus be particularly appropriate for risk-averse and highly accountable businesses, such as those in the public sector.

As indicated in Appendix C, the metropolitan local government organisation where the research was conducted adopted a similar approach and considered privatisation and corporatisation options during its Igoli transformation programme that resulted in the establishment of separate utilities and agencies. Allan *et al.* (2001:93-97) mention that the Johannesburg iGoli solution was to establish a number of wholly owned private utility companies, capable of becoming self-sufficient through the raising and retention of user

fees on specific services sold to individual consumers. Each utility company was financially ring-fenced and established as a semi-independent and single-purpose entity. According to Allan *et al.* (2001:90-91) the benefits far outweighed the risks, particularly where these could easily be mitigated by a sound regulatory framework and strategic management of the process. When the trading services such as electricity, water and sanitation and waste management were managed as part of the administration in Johannesburg, they were subjected to an inflexible environment in which all services were provided through the same generic bureaucratic approach that was in need of a radical overhaul, since it had a significant impact on the financial standing of a service sector. Because of the metro's poor credit rating, it was unable to raise the loans needed to extend services into new areas. In addition, the metro used the profits of viable and well-run services to cross-subsidise poorly performing services, resulting in cuts in the operational and maintenance budgets of these services. Allan *et al.* (2001; 90-91) argue that these problems severely restricted the metropolitan government's ability to redress service backlogs or halt the steady decline in service standards and it was clear that these trading services had the potential to become financially viable, more efficient, and able to generate enough surplus to reinvest in improved service coverage and provide a reliable, cost-effective and customer-friendly service.

The establishment of municipal entities as mentioned above by Allan *et al.* (2001) is provided for in South African legislation. In terms of the Municipal Systems Act (Act 32 of 2000) (Section 82 of the Act) a municipal authority may set up a utility as a separate company, which it wholly owns.

One of the significant advantages of setting up separate companies/utilities, according to Allan *et al.* (2001:95), is that utilities can approach the capital markets to raise infrastructure finance and launch and sustain ambitious capital programmes. This prevents a situation where a trading service that is financially viable is held hostage by the negative credit ratings of a municipality that is unable to manage its finances effectively. Although utility companies are separate legal entities, the Council retains a central interest as the sole shareholder, for which it receives an annual dividend. A utility has a board of directors,

which typically comprises politicians and specialists in the field, and a managing director. The managing director is responsible for ensuring financial and operational success, introducing effective operating practices, bringing in relevant external partners, introducing appropriate conditions of service and staffing practices and ensuring high-quality customer care. Each utility must keep its own set of company accounts. Allan *et al.* mention in addition that the core administration performs a regulatory role, such as developing the policy framework for the delivery of the service, setting service standards and tariffs and approving business plans. In terms of the iGoli model, each utility company is granted authority to perform the specified service in accordance with a service delivery agreement. This agreement gives the operator the necessary authority to operate the service and sets the terms, conditions, duties and area of jurisdiction for operations. In the view of Allan *et al.* (2001:95), the establishment of utilities offered a number of advantages over the old system, since it:-

- Allowed greater flexibility of management;
- Created commercial imperatives for improved performance and efficiency;
- Mobilised the necessary skills found in the private sector that were lacking in the metro departments in order to manage service delivery and performance; and
- Enabled the raising of capital and reinvestment of own profits, since utilities have their own corporate balance sheets and risks are assessed on the strength of the company.

Services such as roads, stormwater and parks can, however, not be measured and charged to individual consumers on a unit-cost basis and are traditionally funded from the collection of property taxes, via the municipality's rates account. These services could therefore not be reorganised into self-sufficient utilities. Johannesburg has thus established 'agencies' in these instances that provide non-divisible or 'public goods and services' that have to rely on the rates account for funding. The Council remains responsible for allocating a budget, since the agencies are unable to raise their own finance, which must be spent in line with policy, approved work schedules and benchmarks for performance management. In the case of agencies the supervisory function of the Council is thus greater than for utilities (Allan *et al.*, 2001:103-104).

The reforms that were introduced by Johannesburg released managers in utilities and agencies from the normal bureaucratic structures and procedures. However, several core departments that render basic community services and are essentially dependent on council funding, such as Health, Community Development, Development Planning and Urban Management, etc., were retained to operate under the normal control of the Council in general.

In summary, documentation of the city of Johannesburg (2008) describes the applicable business environments, governance and business models of the departments and entities that participated in the research as follows:

- Municipal-owned entities (agencies)

Municipal-owned entities (MoEs) and corporatised agencies operate as separate companies and were created to deliver specialised services and to relate closely to their customers. The MoEs are wholly owned by the city and have the primary objective of providing services that were originally provided by Council. The city maintains policy and implementation direction, while allowing company boards and company management to exercise relative autonomy in the execution of their fiduciary duties, in terms of the Companies Act.

The following MoEs /agencies participated in the study:

- City Power

City Power distributes electricity, bought from bulk generators, to Johannesburg residents. City Power Johannesburg (Pty) Limited is a separate company, with the metropolitan local government organisation as its sole shareholder. In South Africa, 90% of electricity is produced from coal. City Power does not generate power itself, but rather buys it from major generators. The cost of this energy varies throughout the day and the year. In line with most electricity utilities worldwide, City Power has introduced an energy management system that limits the amount of electricity bought during the expensive peak periods and the savings made can then be passed on to consumers in the form of reduced tariff increases. The public lighting division of City Power is responsible for installing, operating

and maintaining Johannesburg's public lighting network and streetlights. It also maintains streetlights in certain areas as supplied by Eskom, the main generator of electricity in South Africa.

– Johannesburg Roads Agency

The Johannesburg Roads Agency is also a self-contained company owned by the city that is responsible for the design, maintenance, repair and development of Johannesburg's road network and stormwater infrastructure, including bridges and culverts, traffic lights and signage. Previously roads and storm water services were fragmented across Greater Johannesburg's five councils. This led to confusion about who was responsible for what and resulted in different standards across the Johannesburg region. The agency is run on strictly business principles and endeavours to introduce new and innovative construction and maintenance practices in order to improve the condition of roads and reduce maintenance cost. In this regard the agency, for example, developed its own asphalt plant to produce construction material. The agency charges the city council for services rendered.

• Core departments

Core departments fall under the direct control of the council and the relevant executive and management structures. These departments have specific functions allocated to them and do not have any independent authority, as in the case of utilities and agencies, apart from normal delegations. Departmental expenditure and revenue generated are incorporated in the overall budget of the city and distributed to individual departments according to operational requirements.

The following core departments participated in the research study:

– Department of Community Development

The department is the largest core department in the city and is responsible for overseeing the well-being of all of Johannesburg's inhabitants, from providing social support to catering for their physical, emotional, mental, artistic and cultural needs. The department's vision is: *"A city where community development, personal growth and social mobility are enhanced so*

that the challenges of poverty and vulnerability, inequality and social exclusion are fundamentally addressed." The city's social development responsibilities include the following:

- Maintenance and upgrading of the city's sports, recreation, libraries and social service facilities;
- Home-based care and food, social services, technical and counselling support for the vulnerable (the elderly, women and children) and people living with HIV/Aids; and
- Implementation of a human development strategy for communities to promote social upliftment.

The department maintains and operates amenities such as migrants' help desks, the Johannesburg Art Gallery, Museums, the Civic Theatre, libraries, recreation centres, swimming pools and council halls and generates moderate income from renting, enrolment and visiting fees.

– Department of Health

The health department is the central primary and preventative health care service provider in the city and ensures the availability of safe, quality medication. It operates and manages local clinics, provides education programmes and workshops, supports other healthcare bodies and monitors residents' health. The department has a central unit that is responsible for planning, monitoring and evaluating, reporting, norms and service level standards and policy, as well as procedure and guideline development. Seven implementation units, based in each of the city's regions, are responsible for managing 96 clinics under the city's jurisdiction and delivering primary and environmental health services. The departmental expenses are primarily funded by municipal taxes, although limited income is generated from specific service fees.

– Department of Development Planning and Urban Management

The department's vision for Johannesburg is *"... a spatial form and functionality that embraces the principles of integration, efficiency and sustainability, and realises tangible increases in accessibility, amenities, opportunities and quality of life for all communities,*

especially the poor.” The department is the key to spatial and settlement transformation within Johannesburg, creating:

- a city with an urban form that is efficient, sustainable and accessible;
- a city with a quality urban environment providing for integrated and sustainable settlements and well-designed urban spaces;
- an appropriate and efficient land use system that facilitates investment and continuous regeneration;
- effective urban management to ensure maintenance of appropriate standards of safety, cleanliness and orderliness across the city; and
- an efficient and effective spatial information service that meets the standards of a world-class African city.

Johannesburg's long-term strategy sets out goals for the city, including reducing urban sprawl, improving bylaw enforcement, creating a well-defined north-south and east-west development axis, improving sectoral clustering and fostering a well-defined urban boundary.

Both the national spatial development perspective and the provincial spatial development perspective inform the department's strategic planning for the city. These plans call for development and investment to be structured along nodes and mobility routes, to improve urban efficiencies and functionality. The department generates moderate income from applicable fees for town planning approvals, inspections and administrative services.

The reforms introduced by the metropolitan local government organisation pose the questions whether the entrepreneurial performance of these agencies differ from that of the core departments and whether the organisational and business characteristics as well as behaviour of managerial staff in the different organisational units have any relationship with differences in entrepreneurial performance. The establishment of separate utilities and agencies and maintenance of traditional 'core departments' relate to the concept of CE that requires further assessment and evaluation in order to determine relationships, possible benefits and learning experiences.

4.4 Corporate entrepreneurship

When evaluating options and tendencies with respect to entrepreneurship in local government, it is essential to consider related concepts and variables as defined in CE literature, since the relevant 'institutional nature' is similar.

According to Antoncic and Hisrich (2004:520) various terms, such as intrapreneuring, entrepreneurship, intra-CE, corporate venturing, internal CE, innovative and entrepreneurial strategy-making, as well as firm-level entrepreneurial posture and orientation, have all been used to describe the phenomenon of CE. In the view of Antoncic and Hisrich (2003:15), CE can be described in several ways, namely:

- A process by which individuals inside organisations pursue opportunities independent of the resources they currently control;
- Doing new things and departing from the customary to pursue opportunities;
- A spirit of entrepreneurship within the existing organisation; and
- The creation of new organisations by an organisation, or as an instigation of renewal and innovation within that organisation.

The authors, however, define CE as entrepreneurship within an existing organisation, referring to emergent behavioural intentions and behaviours of an organisation, which deviate from the customary way of doing business (Antoncic & Hisrich (2004:520).

In addition Ireland *et al.* (2009:22) provide a comprehensive schedule of models and focus points of entrepreneurship in established organisations that highlight the extent of variations over time between firm-level characteristics such as EO and organisational antecedents, organisational and administrative mechanisms as well as managerial and individual behaviour. The integration of these dimensions and acknowledgement that firm-level characteristics and individual behaviour at operational and senior management levels are intertwined are of specific importance in a local government context in view of the prominent impact of bureaucratic and political tendencies. As addressed in Chapters 2 and 3, individual behaviour, competencies and characteristics have long been recognised and accepted as key dimensions of entrepreneurship and it is thus essential to build onto these

basic premises when evaluating tendencies and dimensions at a firm/institutional level. The distinction made by Burgelman (1983) between ‘induced’ and ‘autonomous’ behaviour should therefore be noted specifically in the context of institutional dispensations where organisational cultures have a prominent effect.

Burgelman (1983), cited by Kuratko *et al.* (2005:703), argue that innovation-oriented CE can take two primary forms, *autonomous strategic behaviour* and *induced strategic behaviour*. Induced strategic behaviour is regarded as a top-down process in which the firm’s current strategy and structure shape the entrepreneurial actions taken to develop product, process and administrative innovations. Autonomous strategic behaviour is a bottom-up process in which product champions pursue new ideas and coordinate activities associated with an innovation until it achieves success. According to Russel and Russell (1992:640), Burgelman defined CE as extending the firm’s domain of competence and corresponding opportunity set through internally generated new resource combinations. Ireland *et al.* (2009:23) assert that the focus of both Burgelman’s (1983) and Floyd and Lane’s (2000) CE models is primarily on the process in the sense that they depict how the venturing and renewal processes manifest themselves within organisations, which emphasise the roles and behaviours of various levels of management.

Stevenson and Jarillo (1990:21, 22) argue that ‘*how entrepreneurs act*’ should be the centre of attention, since it focusses on understanding actual managerial practice and promises most relevance for the field of CE. In the view of Stevenson and Jarillo (1990:23), CE is a process by which individuals – either on their own or inside organisations, pursue opportunities without regard to resources they currently control. In this regard ‘opportunity’ is described as a ‘future situation which is deemed desirable and feasible’. According to the authors, such a behavioural, situational definition accommodates the experience that the ‘level of entrepreneurship’ varies across the life of an individual, or even across the different activities of an individual at a given moment. The primary advantage of the approach is considered to be the fact that it does not concentrate on traits of character but on practice and knowledge that results from training and experience that has been accumulated over years and will assist in problem-solving. The authors argue that the

approach allows researchers to deal with both individual and organisational entrepreneurship and the following six propositions related to the proposed definition are provided:-

- *“An entrepreneurial organisation pursues opportunity, regardless of resources currently controlled.*
- *The level of entrepreneurship within the firm (i.e. the pursuit of opportunities) is critically dependent on the attitude of individuals within the firm, below the ranks of top management.*
- *The entrepreneurial behaviour exhibited by a firm will be positively correlated with its efforts to put individuals in a position to detect opportunities, to train them to be able to do so and to reward them for doing so.*
- *Firms which make a conscious effort to lessen negative consequences of failure when opportunity is pursued will exhibit a higher degree of entrepreneurial behaviour.*
- *Not only the success rate, but the very amount of entrepreneurial behaviour will be a function of the employees’ ability to exploit opportunities.*
- *Organisations which facilitate the emergence of informal and external networks and allow the gradual allocation and sharing of resources will exhibit a higher degree of entrepreneurial behaviour” (Stevenson & Jarillo, 1990:23-25) .*

Van Wijk *et al.* (2007:5,7) distinguish three approaches to defining who an institutional entrepreneur is: a trait, a behavioural and a relational approach. The *trait* approach pictures the institutional entrepreneur as an actor with particular features, skills and interests. The *behavioural* approach defines the institutional entrepreneur by the activities produced to create a new institution or modify (shape) an existing one. The *relational* approach emphasises the network position of the institutional entrepreneur as a crucial antecedent of its engagement in working for change. According to Van Wijk *et al.*, institutional entrepreneurs are no longer defined by particular traits, but by what they do and under which circumstances.

It is important to note the emphasis placed on the importance of individual behaviour as a key determinant of entrepreneurial performance by Antoncic and Hisrich (2004), Burgelman (1983), cited by Kuratko *et al.* (2005), Stevenson and Jarillo (1990) and Van Wijk *et al.* (2007), which is in contrast to the view of Covin and Slevin (1991), who in essence portray CE as primarily a firm-level phenomenon.

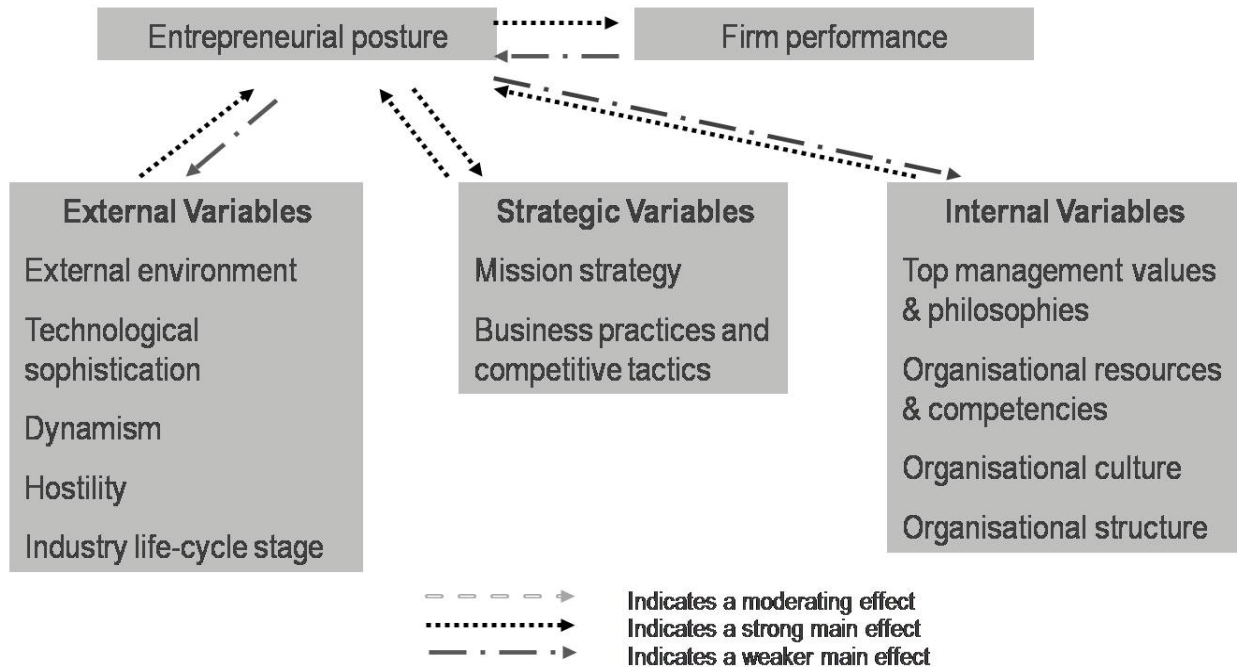
Covin and Slevin (1991:15) argue that a firm's ability to engage in entrepreneurial behaviour depends on its resources and competencies, which provide the bases for all forms of *organisational action*, serve as either facilitators or deterrents of entrepreneurial behaviour and influence the specific form of entrepreneurship in which the firm engages. According to the authors, firms with entrepreneurial postures are risk-taking, innovative, proactive, willing to take on high-risk projects and are bold and aggressive in pursuing opportunities. Entrepreneurial organisations often initiate actions, are frequently first with new product offerings to the market and emphasise technological leadership as well as research and development (Covin & Slevin, 1991:7).

Accordingly, Covin and Slevin (1991) propose a firm-level model of entrepreneurship, which is based on a behavioural approach, in view of the following:-

- Behaviours rather than attributes are regarded as giving meaning to the entrepreneurial process.
- An individual's psychological profile does not make a person an entrepreneur but entrepreneurs are rather known through their actions.
- Non-behavioural organisational-level attributes, such as organisational structure or culture, do not make a firm entrepreneurial but an organisation's actions make it entrepreneurial.
- Behaviour is the central and essential element in the entrepreneurial process.
- Organisation-level variables such as business strategy, organisational structure, and organisational culture appear essential.
- Individual managers can have a strong and direct impact on the entrepreneurial potential, behaviour, and effectiveness of firms (Covin & Slevin, 1991:8-9).

In summary, the model of Covin and Slevin (1991:9) consists of three levels of variables - *environmental, organisational and individual*, as depicted in figure 12 below.

Figure 12: A conceptual model of entrepreneurship as firm behaviour



Source: Covin & Slevin (1991:10)

The authors further define an entrepreneurial posture as reflected in figure 12, in three types of organisation-level behaviours:

- Top management risk-taking with regard to investment decisions and strategic actions in the face of uncertainty;
- The extensiveness and frequency of product innovation and the related tendency toward technological leadership; and
- The pioneering nature of the firm as evident in the firm's propensity to compete with industry rivals aggressively and proactively (Covin & Slevin, 1991:10).

Covin and Slevin's arguments (1991) highlight the following aspects of CE that should be noted:-

- Resources and competencies provide the bases for all forms of *organisational action* that can serve as either facilitators or deterrents of entrepreneurial behaviour.
- Firm performance is regarded as a function of both organisational and individual-level behaviour.
- Individual-level behaviour on the part of the entrepreneur may affect an organisation's actions, and in many cases the two will be synonymous.
- Organisational-level behaviour is a predictor of the key entrepreneurial effectiveness criterion of firm performance.
- Entrepreneurial effectiveness is a firm-level phenomenon.

The view of Covin and Slevin (1991) that organisational-level behaviour (entrepreneurial orientation) (posture) is a predictor of entrepreneurial effectiveness has been confirmed in research findings and should thus be acknowledged. Although the authors acknowledge the importance of individual behaviour, the relationships are not clearly portrayed in the model provided. It is essential that the antecedents and relationships of such 'organisation-level behaviour' (organisational culture/entrepreneurial orientation) be determined specifically to enable the promotion and development of such cultures in a local government context. In this regard the findings and views of authors such as Burgelman (1983), Hjorth (2003), Kuratko *et al.* (2005) and Stevenson and Jarillo (1990) should be noted. These authors all acknowledge the importance of individual behaviour, be that at operational or senior managerial level, and the interactive moderating effects between individual behaviour and organisational culture that ultimately affect entrepreneurial performance collectively. The view of Burgelman (1983), cited by Kuratko *et al.* (2005:703), namely that innovation-oriented CE can take two primary forms, *autonomous strategic behaviour* and *induced strategic behaviour*, is thus of specific importance. This view complements similar sentiments, namely that organisations as such cannot behave or act on their own and in the final analysis any behaviour or action must be related to individual behaviour of some kind.

Zahra (1993), however, suggested a revision of the Covin and Slevin model and highlighted the following four distinct changes and differences:-

- A more parsimonious classification of the external environment set than originally suggested, which eliminates the technological sophistication variable because it appears to be redundant with environmental dynamism, and adding another important environmental attribute: munificence, which refers to the abundance of opportunities for innovation in the industry;
- Adopting a broader definition of a firm's entrepreneurial behaviour than originally proposed to include the intensity, formality, type, and duration of these activities. This highlights the need to consider domestic and international entrepreneurial activities;
- Revising the internal set to include four subsets of variables: (1) managerial values and background (including age, past experience and functional expertise); (2) organisational structure (including centralisation, formalisation, complexity, and organicity); (3) managerial process (including participation and fairness); and (4) organisational culture (including openness and empowerment), and
- Considering both financial and non-financial outcomes of entrepreneurial activities. It also proposes that some non-financial benefits from entrepreneurship can produce financial results (Zahra, 1993:13, 18).

The additions proposed by Zahra (1993) on the Covin and Slevin model, however, also fail to stipulate clearly additional critical relationships at different levels of an organisation that clarify the interactive nature of organisational characteristics, culture and individual behaviour on senior and operational levels.

According to Russel and Russell (1992:641), an '*entrepreneurial strategy*' entails the *pro-active* search for new opportunities, as well as the on-going management of the process of innovation. In summary, CE is thus portrayed as including a firm's engagement in single, infrequent efforts to gain advantage through innovation and engaging in *persistent patterns* of innovation. In contrast, an entrepreneurial strategy is regarded as involving a persistent, organisationally sanctioned '*pattern of innovation-related activities*' and resource allocations that comprise one component of the firm's comprehensive *corporate strategy*.

In the view of Hornsby *et al.* (1993:34) (paragraphs 2.4 and 4.5), the decision to act intrapreneurially is actually the culmination of the interaction of three factors: organisation characteristics, individual characteristics and a precipitating event. Hornsby *et al.* (1993:35) are of the view that the 'intrapreneur' is only one part of the intrapreneurial process and the interactive nature of the process is critically important. Intrapreneurship is regarded as multidimensional and relies on the successful interaction of several activities rather than events occurring in isolation.

Hitt *et al.* (2002:173) indicate that CE requires changes in the patterns of resource deployment and the creation of new capabilities to add new possibilities for positioning markets. In the view of Hitt *et al.*, the development and configuration of organisational resources and capabilities are an essential aspect of CE, since it relates to theories that take a 'resource-based' view of the firm. The authors propose a '*knowledge-based*' approach to CE and regard knowledge as a critical resource and organisational design as a capability that leverages knowledge in the service of *innovation and venturing*, which is considered as the hallmark of CE. This view is also highlighted by Von Krogh *et al.* (2000:6), who indicate that knowledge creation depends on an enabling environment that is defined as dynamic, relational and based on *human action*. It depends on the situation and people involved and is regarded as a *circular motion* that is always aimed at enhancing the 'knowledge-creating' potential of the company.

In the view of Morris and Kuratko (2002:15), the ultimate aim of the business environment is sustainable competitive advantage, which can no longer be found simply in lowering costs, higher quality, or better service, but rather in the following core aspects that define entrepreneurship:-

- Adaptability
- Flexibility
- Speed
- Aggressiveness
- Innovativeness.

Morris and Kuratko (2002:31) cite Sharma and Chrisman (1999) who define CE as *entrepreneurial behaviour* inside established midsize and large organisations, as well as a *process* whereby an *individual or group of individuals*, in association with an established company, creates a new organisation or instigates renewal or innovation within a current organisation. Accordingly strategic renewal, innovation and corporate venturing are regarded as important and legitimate parts of the concept of CE. The authors further mention that Guth and Ginsberg (1990) considered the domain of CE to encompass two types of processes: *internal innovation* (venturing through the creation of new businesses within existing organisations) and *strategic renewal* initiatives that transform operations within organisations. Key components in this model include the *environment, strategic leaders, organisation form and performance*. Ireland *et al.* (2009:23) are further of the view that the model of Guth and Ginsberg (1990) depicts some possible determinants and effects of corporate venturing and strategic renewal with respect to CE, but the model is regarded as very general in that it does not distinguish between the causes and effects of these two entrepreneurial phenomena, which, they argue, constitute the CE domain (paragraph 4.6).

Morris and Kuratko (2002:34) mention in addition that entrepreneurship is not just something that a person or team does, but it rather captures the essence of what an organisation is about and *how it operates*. It is further asserted that '*entrepreneurial orientation*' or intensity has a direct and positive influence on company performance. According to the authors the overall theme behind all of these frameworks is a revitalisation of *personal creativity*, product and process innovation and ongoing management development. The concept of *entrepreneurial intensity* is accordingly emphasised that refers to the degree and frequency to which entrepreneurial events are *innovative, risky and proactive*. Kuratko *et al.* (2005:701), however, adopted the Sharma and Chrisman (1999) definition of CE as being the process through which an individual or a group of individuals, in association with an existing organisation, create a new organisation or instigate renewal or innovation within that organisation.

The definition as adopted by Kuratko *et al.* (2005:701) can be applied directly to the local government context. Apart from the fact that the relevant environments in which private

corporate institutions operate differ from the local government environment, the inherent dimensions related to entrepreneurial behaviour/orientation are in principle similar. In this regard the innovations introduced by the metropolitan local government organisation where the research was conducted, to establish separate utilities and agencies in order to overcome barriers related to bureaucracy and political influence and improve service delivery, are relevant examples. The definition further highlights key factors, such as *individuals or a group of individuals that* operate in association with an established company. These factors again emphasise the interactive nature of organisational characteristics and individual behaviour that need to be considered as enablers of entrepreneurial performance in an institutional environment, whether private or public .

In the view of Dess, Ireland, Zahra, Floyd, Janney and Lane (2003:358) CE is a system of roles and social exchanges that highlight the challenges of CE leadership as managing a social learning process involving roles and relationships among managers at the top, middle and operating levels of the organisation. It depends not only on the skills and abilities of individuals but also on the quality of interactions within the management hierarchy, shared understanding and the level of inter-personal trust in the organisation. The authors adopt a social exchange perspective of CE whereby individual actions and decisions are seen in a *relational context*. Roles and role expectations develop through interaction and exchange of information, which are embedded in the organisational context (Dess *et al.*, 2003:360).

In the view of Ireland *et al.* (2009:23), the model of Dess *et al.* (2003) presents an alternative to how *knowledge is created* through four types of CE activity, based on the four forms of CE proposed by Covin and Miles (1999), namely sustained regeneration, organisational rejuvenation, strategic renewal and domain redefinition.

Dess *et al.* (2003) make an important contribution by indicating that organisation members interact and exchange information, developing roles and role expectations that are embedded in relationships specific to the organisational context. Such embedded relationships, practices and shared understanding ultimately create a *specific culture*, which should be regarded as a function of individual behaviour and practices as well as

organisational characteristics that are developed and maintained over time. It can therefore be deduced that firm-level EO is a function of specific individual and collective behaviour sustained over time. It should further be acknowledged that such an established culture would again affect and moderate individual behaviour, together with environmental factors related to the applicable industry.

In accordance with the 'firm-level' view of Antoncic and Hisrich (2004:520), the cCE processes refer not only to the creation of new business ventures, but also to other innovative activities such as the development of new products, services, technologies, administrative techniques, strategies and competitive postures. The authors indicate that literature on CE has identified two main sets of CE antecedents: one set refers to the organisation and the other to the external environment of the firm. Antoncic and Hisrich (2003:9: 13, 20) identify CE characteristic dimensions as new business venturing, product/service innovation, process innovation, self-renewal, risk taking, proactiveness, and competitive aggressiveness. It is further proposed that CE should be viewed as an essentially *activity-based* or *activity-oriented* concept on which future research should be based. The key concepts of *EO* and *CE* are further regarded to span the boundaries of entrepreneurship and strategic management (Antoncic & Hisrich, 2003:20-21).

Although the arguments of Antoncic and Hisrich (2003 and 2004) highlight critical dimensions of CE, such as its activity-based nature, they fail to distinguish between the desired results (outcomes) and enablers (input) of entrepreneurship. New business venturing, product/service innovation, process innovation and self-renewal relate to the desired outcomes of entrepreneurship while risk-taking, proactiveness and competitive aggressiveness refer to the 'behavioural dimension' (inputs) that affect the desired outcomes. Such a distinction is of critical importance to determine applicable factors that may contribute to the enhancement of entrepreneurship.

Hjorth (2003:64,65) makes a valuable contribution to the debate by highlighting important differences between management and entrepreneurship and argues that the two concepts might be in conflict (paragraphs 1.3, 1.4, 1.6.1 and 4.2). In this regard the author is of the

view that the prime enemy of 'excellence-as-enterprising' is bureaucratic behaviour and the subject of 'enterprise' is the individual entrepreneur who is willing to take individual responsibility and accountability. Hjorth (2003:123) argues that management theories on renewal and change try to re-invent the manager from being identified with efficient bureaucracy to being identified with entrepreneurship. The author cites Kanter (1989) (Hjorth, 2003:132,133) and mentions that "... *entrepreneurship, like innovation, actually thrives on conditions of chaos while the task of management is to control that chaos*". In the view of Hjorth, 'enterprising' emphasises less structure and higher speed, while the stress is placed on discovering and using opportunities. To take initiative is, however, regarded as an individual responsibility, which 'makes structures surplus'. In proposing an alternative approach to accommodate the paradoxes in managerial and change management theories, Hjorth (2003:142) asserts that the concept of 'enterprising' skilfully 'consumes bureaucracy' instead of portraying 'bureaucratic' to be against the 'entrepreneurial'.

According to Hjorth (2003:151) entrepreneurship has become a sub-division of management in the institutional context. The author argues that entrepreneurship in formal organisations used to be considered to be basically a management challenge and organisations were expected to become dynamic and independent of individual actors. In this regard several 'corporate concepts' were established that defined "... *the unity of the manager, as a discursive construct as well as a formal organisation in which individual characteristics is contrasted between managers and entrepreneurs.*" (Hjorth, 2003:157,158). According to Hjorth (2003:159-160), it should be clear that "... *the 'entrepreneur' or 'entrepreneurship' is not related to a possible subject position or a process in organisational contexts*".

Hjorth (2003:160-161) mentions in addition that "... *authors try to deal with entrepreneurship as an organisational phenomenon and it appears if the managerial 'thinking-acting' division is threatened by corporate entrepreneurship or intrapreneurship. Entrepreneurship breaks down this distinction and makes individuals act according to their 'own' initiatives.*" The author asserts that there is a need to separate the manager from the entrepreneur to enable the entrepreneur to play a normal organisational role. Hjorth (2003:177) argues that entrepreneurial characteristics such as intuitive, spontaneous, and

passionate behaviour represent a threat to the possibility of control and securing a stable identity, which is central to 'managerialism'. The main criticism of attempts to deal with entrepreneurial processes in the the context of the formal organisation is regarded to be that *"... it has neglected the problem, or are unaware of the influences from managerialism as constituting the problems for which entrepreneurship is represented as a solution ..."* (Hjorth, 2003:179). It is further argued that *"... managerialism forget the enabling factor of the 'rationality of passion', i.e. the creative response and initiative, expressed in action, that has always characterised human contribution to the continuous becoming of the world ..."* (Hjorth, 2003:181).

As a solution to the 'logic of the bureau' [bureaucracy and management] in which control is maintained by someone else, Hjorth (2003:195) proposes the concept of 'enterprise' that *"... blurs the already drawn line although it keeps the need for control."* Control is thus placed with the individual in the form of accountability and self-regulation. It is thus suggested that an 'emergence perspective' (a managerial entrepreneur) be accepted, which requires an employee who knows what to do, and why: 'the enterprising self' (Hjorth, 2003:204). In summary, Hjorth defines a new perspective for entrepreneurship and mentions the following distinctive characteristics in an organisational context:-

- Change/renewal departs from the linear determination typical of the decision-making approach (rational model) of managerialism (Hjorth, 2003:220).
- Entrepreneurship is a tactical use of occasions in order to channel/construct passages for opportunities and strategic representations constitute the space in which the tactician has to operate through a sense of timing (Hjorth, 2003:221).
- Governing organisational life in an enterprising manner means 'waking up' new ways for people to be; it refers to the importance of individuals acquiring and exhibiting specific entrepreneurial capabilities and dispositions (Hjorth, 2003:222).
- What makes consumption into production and allows the disclosure of crucial aspects of entrepreneurial processes, is how the strategic is made actual in different concrete applications (Hjorth, 2003:228).

- Instrumentality and bureaucracy both set the individual aside for the benefit of the systematic, while enterprise changes this through its emphasis on individuality according to new – totalised rationality – governmentality (Hjorth, 2003:235).
- ‘Enterprising self’ provides a space for the individual to be in business for himself within the company (Hjorth, 2003:228).
- ‘Enterprise’ is about passion, timing, tactics and actualisation (Hjorth, 2003:259).

The observations and arguments of Hjorth (2003) pinpoint critical dilemmas related to the public sector and especially local government in South Africa. On the one side local government is traditionally entrusted with public funds and is thus required to be bureaucratic in nature, since a primary objective is in fact to exercise efficient control of public funds and limit risks or chaos. The inherent responsibilities of governance and management of public expectations and resources are thus in some sense contradictory to the nature of entrepreneurship in the private sector. Notwithstanding this, the challenges facing local government require innovation, creativity and entrepreneurship to enable the delivery of improved services with limited resources to ever-expanding communities. These contrasting objectives call for the careful consideration of alternative modes of operation in the public sector that balance the requirements of efficient managerial control while allowing sufficient space for entrepreneurship that can enable renewal and improved service provision.

As indicated by Hjorth (2003:132,133), ‘enterprising’ emphasises less structure and higher speed, while stress is placed on the discovery and use of opportunities by individual roleplayers or roleplayers operating collectively. In addition, the author correctly criticises attempts to deal with entrepreneurial processes in the context of the formal organisation while neglecting or ignoring the fundamental premises related to individual behaviour on which entrepreneurship is essentially based. The argument of Hjorth (2003:179) that “... *managerialism is constituting the problems for which entrepreneurship is represented as a solution*”, has valid premises that should thus be acknowledged and noted.

The proposed concept of Hjorth (2003:195), namely 'enterprising individuals', through which control is placed with the individual, should thus be noted as being worth exploring in public and local government contexts. The proposal, however, has wide-ranging implications for the regulatory framework in which local government employees are required to operate in South Africa. It further strengthens the arguments for the introduction of alternative modes of operation through reforms such as privatisation and corporatisation as introduced by the metropolitan local government organisation where the research was conducted.

Holt *et al.* (2007) mention in addition that Hornsby (2002), Kuratko (2005) and Ireland (2006) have attempted to identify a set of factors that influence CE empirically and theoretically. Generally, these researchers have argued that there are five key issues that leaders must manage if they are to encourage CE in organisations:

- *"Management support, that includes 'the willingness of top level managers to facilitate and promote entrepreneurial behaviour, including the championing of innovative ideas and providing the resources people require to take entrepreneurial actions';*
- *Work discretion, which refers to 'top-level' managers' commitment to tolerate failure, provide decision-making latitude and freedom from excessive oversight, and to delegate authority and responsibility to middle-level managers;*
- *Rewards and reinforcement that concern 'developing and using systems that reward based on performance, highlight significant achievements, and encourage pursuit of challenging work';*
- *Availability of time, which is about 'evaluating workloads to ensure that individuals and groups have the time needed to pursue innovation and that their jobs are structured in ways that support efforts to achieve short- and long-term organisational goals;*
- *Organisational boundaries that are 'precise explanations of outcomes expected from organisational work and development of mechanisms for evaluating, selecting, and using innovations'" (Holt et al., 2007:44).*

According to Holt *et al.* (2007:44) empirical findings have consistently demonstrated a relationship between these factors and CE.

The factors identified by Holt *et al.* relate to organisational characteristics and key business behavioural dimensions as defined by Morris and Kuratko (2002:291-294) in terms of the EPI. It also has a strong resemblance to those identified in public institutions by Kearney *et al.* (2007:280) (paragraph 4.2), namely political tendencies, complexity, munificence and dynamism, as well as public organisational dimensions such as structure/formalisation, decision-making, control and rewards/motivation. These factors should therefore be acknowledged as variables related to the organisational environment and characteristics of an organisation, whether a public/local government institution or any other, that affect entrepreneurial behaviour and that are themselves also affected by individual and collective behaviour in an interactive manner.

Dess and Lumpkin (2005:147) support the firm-level EO concept but assert that EO refers to the strategy-making practices that businesses use to identify and launch corporate ventures. In the view of the authors it represents a frame of mind and a perspective about entrepreneurship that are reflected in a firm's ongoing processes and corporate culture. Dess and Lumpkin mention that the EO concept relates to research that views strategy-making in terms of *patterns of action or decision-making styles* that are generalisable across organisations. The authors propose the dimensions of innovativeness, risk-taking and proactiveness for an EO but also add two additional dimensions that are regarded as critical, namely competitive aggressiveness and autonomy, as defined in table 6.

Table 6 : Dimensions of entrepreneurial orientation

Dimension	Definition
Autonomy	Independent action by an individual or team aimed at bringing forth a business concept or vision and carrying it through to completion
Innovativeness	A willingness to introduce newness and novelty through experimentation and creative processes aimed at developing new products and services as well as new processes
Proactiveness	A forward-looking perspective characteristic of a marketplace leader that has the foresight to

Dimension	Definition
	seize opportunities in anticipation of future demand
Competitive aggressiveness	An intense effort to outperform industry rivals. It is characterized by a combative posture or an aggressive response aimed at improving position or overcoming a threat in a competitive market place
Risk-taking	Making decisions and taking action without certain knowledge of probable outcomes; some undertakings may also involve making substantial resource commitments in the process of venturing forward

Source: Dess and Lumpkin (2005:148)

According to Dess and Lumpkin (2005:147) the five dimensions of innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy collectively permeate the decision-making styles and practices of a firm's members. The factors often work together to enhance a firm's entrepreneurial performance.

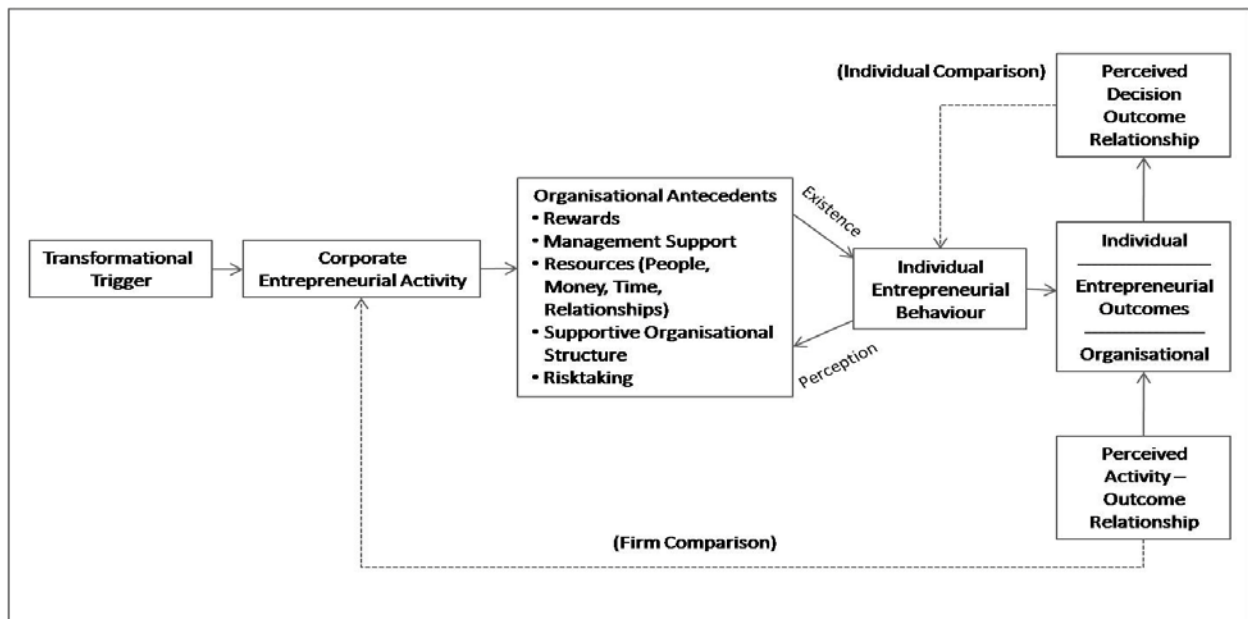
It should, however, be noted that the dimensions highlighted by the authors and the definitions related thereto, as indicated in the table above, mostly relate directly to individual behaviour. The critical question that should therefore be clarified is whether EO as defined by Dess and Lumpkin (2005) within an organisation/firm context, can in fact in all instances be equated to the 'behaviour' of the organisation/firm or whether it relates more directly to individual behaviour. The primary assessment is that 'organisation culture' (EO) is portrayed as being synonymous with individual behaviour. Such a conclusion is not supported in organisational behaviour theories and is correctly also questioned by Frese (2009:463) who argues that EO is a psychological concept. It can therefore be deduced that the concept of EO as defined by Dess and Lumpkin rather applies to individual behaviour as the core point of reference that interactively influences and is being influenced by a variety of factors in an organisational context that includes the environment, organisational characteristics and culture, as portrayed in figure 1 (paragraph 1.5). These factors are directly applicable to staff of public/local government institutions, since they relate to generic individual dimensions of behaviour.

Wiklund (1998) also questions the concept of EO in an institutional context and indicates that it is not the key to performance but one of several contributing ingredients. The author, however, argues that EO and entrepreneurial behaviour are not the same concept and that the two concepts should not be confused. According to Wiklund (1998), EO comprises two components. The first, which is *action-orientated*, results in actual entrepreneurial behaviour that is labelled *strategic action*. The other component does not have a strong link to entrepreneurial behaviour but rather reflects the mental orientation or *way of thinking, which is not necessarily put into action*. The fact that EO involves these 'softer' characteristics that are not converted into action probably contributes to reducing explanatory power in the EO-performance relationship, according to Wiklund. It is consequently concluded that the measurement of EO is useful but far from perfect. A measurement instrument that more clearly reflects strategic action would probably increase the explanatory power of EO, in the author's view.

Morris *et al.* (2008:33,35) highlight that although entrepreneurship is a universal construct, it takes on unique characteristics when pursued inside established companies. In an established organisation, the company instead of the individual entrepreneur assumes risks in a start-up venture. Similarly, rewards are primarily in the interest of the company instead of the individual, while resources are more readily available in the established organisation and factors related to organisational politics should be taken into account. The authors (Morris *et al.*, 2008:54-69) regard the primary dimensions of entrepreneurship as being innovativeness, risk-taking and pro-activeness and introduce the concept of degree as a mechanism of combining the different dimensions. The 'degree of entrepreneurship' refers to the extent to which events are innovative, risky and pro-active. In addition the frequency of entrepreneurial initiatives is highlighted as a factor that determines outcomes. The degree and frequency of initiatives thus determine the intensity of entrepreneurial activity.

According to Morris *et al.* (2008:48) an organisation's ability to sustain entrepreneurship on an ongoing basis is contingent upon individual members continuing to undertake innovative activities and upon positive perceptions of these activities by executive management, as portrayed in figure 13 below.

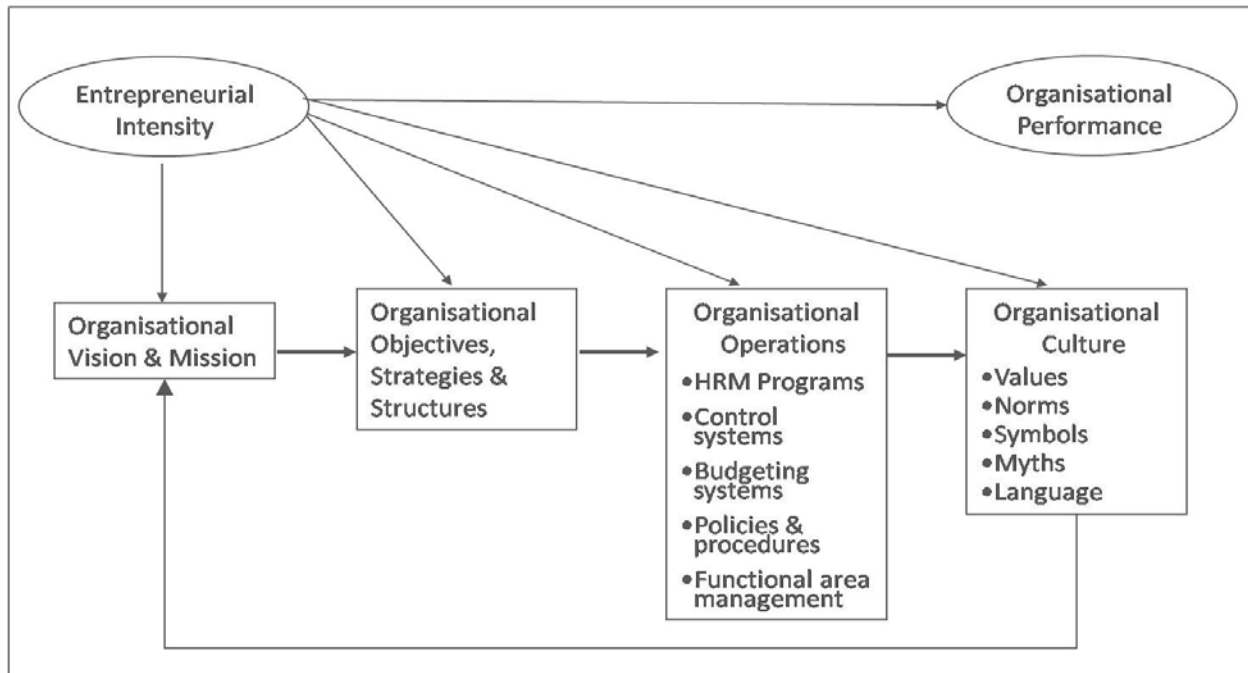
Figure 13: A model of sustained corporate entrepreneurship



Source: Morris *et al.* (2008:48)

In terms of the model portrayed in figure 13, Morris *et al.* (2008) accept the fact that an organisation's ability to sustain entrepreneurship on an ongoing basis is contingent upon individual members' behaviour, which succeeds in clarifying relationships related to the firm-level EO perspective as originally proposed by Covin and Slevin (1991), as well as Dess and Lumpkin (2005). Morris *et al.* (2008:49), however, also highlight an alternative viewpoint when reference is made to the strategic integration framework. The focus in this model is the ongoing integration of entrepreneurship throughout the entire organisation, which is very different from viewing it as a discrete activity, event or behaviour. According to this view, entrepreneurship is not just something that a person or team does at a point in time, but it refers to what an organisation is about and how it operates, which is in essence similar to the 'EO' concept. Entrepreneurial intensity is, however, highlighted in addition, which has a direct and positive influence on company performance, according to the authors, as depicted in figure 14 below.

Figure 14: Strategic integration of entrepreneurship throughout the organisation

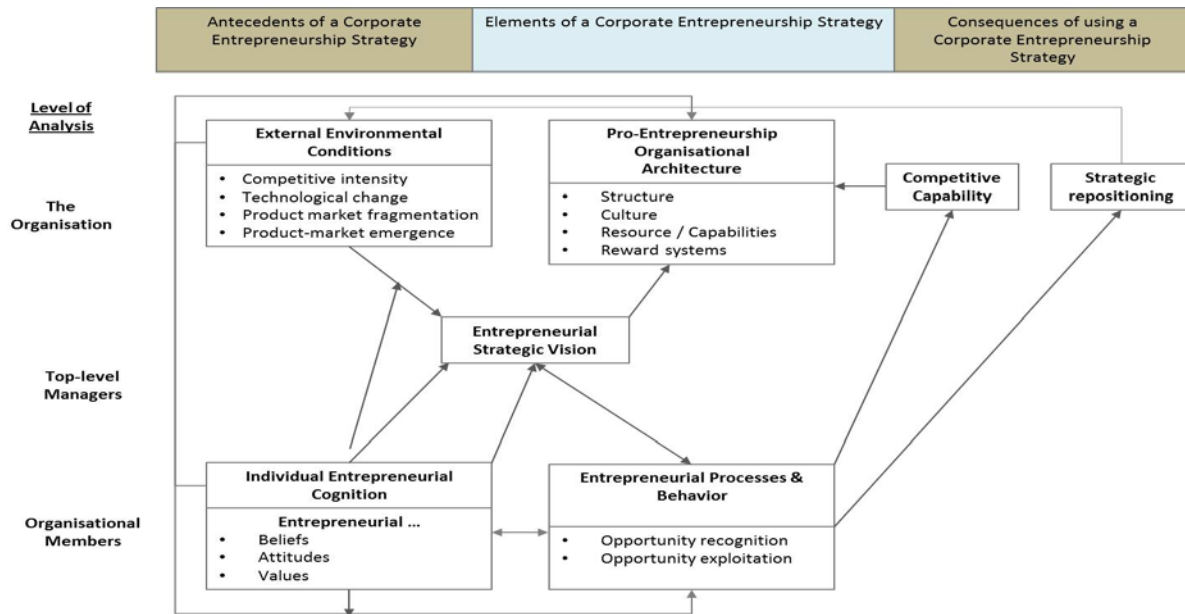


Source: Morris *et al.* (2008:49)

The premises on which the model depicted in figure 14 are based are similar to those of Covin and Slevin (1991); they also fail to distinguish clearly between organisational culture and individual behaviour and do not show the applicable relationships at different levels in an organisation.

Ireland *et al.* (2009:21) outline a CE strategy model to depict the individual (i.e. person-based) and environmental antecedents of a CE strategy (including the relationships among these elements), as well as the organisational outcomes associated with using a CE strategy, as depicted in figure 15 below.

Figure 15: Integrative model of corporate entrepreneurship strategy



Source: Ireland *et al.* (2009:24)

According to Ireland *et al.* (2009) the proposed model is similar to Covin and Slevin's (1991) and Lumpkin and Dess's (1996) models but distinct from previous models of entrepreneurship in established organisations in four important aspects, namely the behavioural dimension, the locus of entrepreneurship, the philosophical justification and the fact that CE is defined as a unique and identifiable strategy. Ireland *et al.* (2009:25) mention that a CE strategy entails three elements: an entrepreneurial strategic vision, a pro-entrepreneurship organisational architecture and *entrepreneurial processes and behaviour* that occur across the organisational hierarchy. The concept is based on Mintzberg's definitions, which regard strategy as a perspective and as a pattern. As a perspective, it "... represents a shared ideology favouring the pursuit of competitive advantage principally through innovation and entrepreneurial behavior on a sustained basis." As pattern, it "... denotes a continuous, consistent reliance on entrepreneurial behavior, whether intended or not." The authors argue that consistent behaviour is required to enact a CE strategy, which is portrayed in the proposed model by *entrepreneurial processes and behaviour* (Ireland *et al.*, 2009:21, 23, 25).

The proposal of Ireland *et al.* (2009:21) as described above clearly acknowledges the need to accommodate different levels of analysis within an institutional context and introduces another dimension, namely 'entrepreneurial strategy' to the CE debate. This view moves away from the trend to define entrepreneurship as a specific 'posture' in either an individual or organisational context.

Ireland *et al.* (2009:23) also mention that the proposed model of a CE strategy differs from commonly cited models of EO in the following four important ways:-

- By conceptualising EO as an organisational state or quality;
- By specifying organisational locations from which entrepreneurial behaviour and processes may emerge;
- By explicitly specifying a philosophical component of a CE strategy; and
- By specifying that organisations can pursue entrepreneurship as a separate and identifiable strategy.

As referred to in paragraph 3.4, Frese (2009:463) similarly emphasises that in contrast to all other constructs in the 'action theory', EO is a construct that uses the 'firm' and not the individual as point of reference, which raises the question whether the firm is entrepreneurially oriented or not. The author argues that EO is regarded as a psychological concept, since it is about a manager's perceptions of his or her firm, and the firm is not really the unit of analysis but the culture or climate of the firm, which is a typical variable of organisational psychology.

The author mentions in addition that although EO has been shown to relate highly and relatively consistently with organisational success. Studies that considered individual action orientation with the individual as the unit of analysis (psychological perspective), have also shown relationships with firm success. The interaction between the environment and EO has been shown as well. In an environment characterised by high complexity, hostility and uncertainty, there is a close relationship between EO and firm success, while in a less difficult environment, this relationship does not exist (Frese, 2009:463).

The arguments presented by Frese (2009:463) confirm that the environment, organisational culture (EO at firm level) and individual behaviour (action orientation) (with the individual as referent) have been proven to be separately related to the success of the firm. These findings are important in confirming primary factors related to entrepreneurial success that can be applied in any context, whether in a private corporate environment, public/local government institution or at individual level. It further emphasises the importance of distinguishing between variables related to these factors and determining inter-relationships that may exist.

4.5 The individual/collective interface in an institutional context of entrepreneurship

Literature related to both public and corporate entrepreneurship focussed extensively over time on individual/managerial behaviour, firm-/organisational level characteristics and environmental tendencies in which an organisation operates. Recently, however, various authors have acknowledged that analyses directed at a single level do not adequately capture the variety of factors associated with entrepreneurial performance in an organisation and it is essential to accommodate factors at different levels and integrate these to understand and analyse entrepreneurial performance properly in an organisational context (Alvarez & Barney, 2007:28; Frese, 2009:463; Ireland *et al.*, 2009:21; Morris *et al.*, 2008:33, 35; Ropo & Hunt, 1995:106; Shepherd *et al.*, 2010:73,74; Stevenson & Jarillo, 1990:21,22). These views are not limited to any specific context i.e. corporate or public domains, but instead are applicable in any context in a generic sense.

In this regard, the reasoning of Davidson and Wiklund (2001) is of specific importance. The authors cite Schumpeter (1934) and indicate that it is individuals who carry out entrepreneurial initiatives. Research has illustrated that studies on different levels of analysis can be valuable and has clearly shown that these levels are intimately intertwined, which necessitates the integration of different levels of analysis. The choice and definition of a level of analysis are regarded as essential to determine the appropriateness of the use of different theories and the suitability of different conceptualisations of entrepreneurship. The authors postulate that theories have been specifically developed to address specific

issues (i.e. organisational or individual) and are therefore not equally well suited for all levels of analysis (Davidson & Wiklund, 2001:82).

The views of Schumpeter (1934), cited by Davidson and Wiklund (2001:82), confirm the inherent dimensions of entrepreneurship in which individual behaviour plays a central role. The premises that analyses of entrepreneurial variables should be performed at different levels and not only at one level, since different factors have an effect on different levels of analysis, should thus be noted. Of particular importance is the argument that specific theories are applicable to specific levels of analysis. This implies that cultural analyses directed to the organisational level should not be confused or taken to represent factors related to individual behaviour in general, since the theories and variables applicable to the different levels of analysis differ extensively.

Stevenson and Jarillo (1990:23,24) confirm the above-mentioned view and also highlight the importance of distinguishing between individuals and organisations, since an organisation's direction is regarded as being determined by top managers. The authors postulate that the level of entrepreneurship within a firm (i.e. the pursuit of opportunities) is critically dependent on the attitude of individuals within the firm, below the ranks of top management. The spotting of opportunities is accordingly portrayed as a function of the individual's abilities that includes his/her intimate knowledge of the market, technologies involved and customer needs. It is thus argued that entrepreneurial behaviour exhibited by a firm will be positively correlated with its efforts to put individuals in a position to detect opportunities and to train and reward them.

Davidson and Wiklund (2001:89), however, propose that 'new enterprise' as a level of analysis can carve out a distinct research domain for entrepreneurship. The authors are critical of the increasing dominance of firm-level analysis without addressing the 'new enterprise level' and mention that researchers who want to make a unique and worthwhile contribution to entrepreneurship research should seriously consider making the effort to study 'new enterprise' efforts.

Hjorth (2003) is again critical of the tendency to incorporate entrepreneurship as an additional focus to managerial theory in an organisational context and indicates that the way in which entrepreneurship is approached in literature has the following consequences:

- *Since ‘the entrepreneurial’ is ascribed to the individual, managerial perspectives force entrepreneurship into the individual sphere;*
- *Since entrepreneurship is an individual issue, it can be excluded from the normality of the ‘body corporate’ that runs according to economic rationality;*
- *The very name ‘corporate entrepreneur’ or ‘intrapreneur’ signifies that the proper home for the entrepreneur is not the formal organisation or the modern corporation;*
- *Managers use the ‘corporate entrepreneur’ as a device or tool in a corporate context to generate abnormality, which re-emphasises the need for a manager to guard ‘normal’ practices.” (Hjorth, 2003:164).*

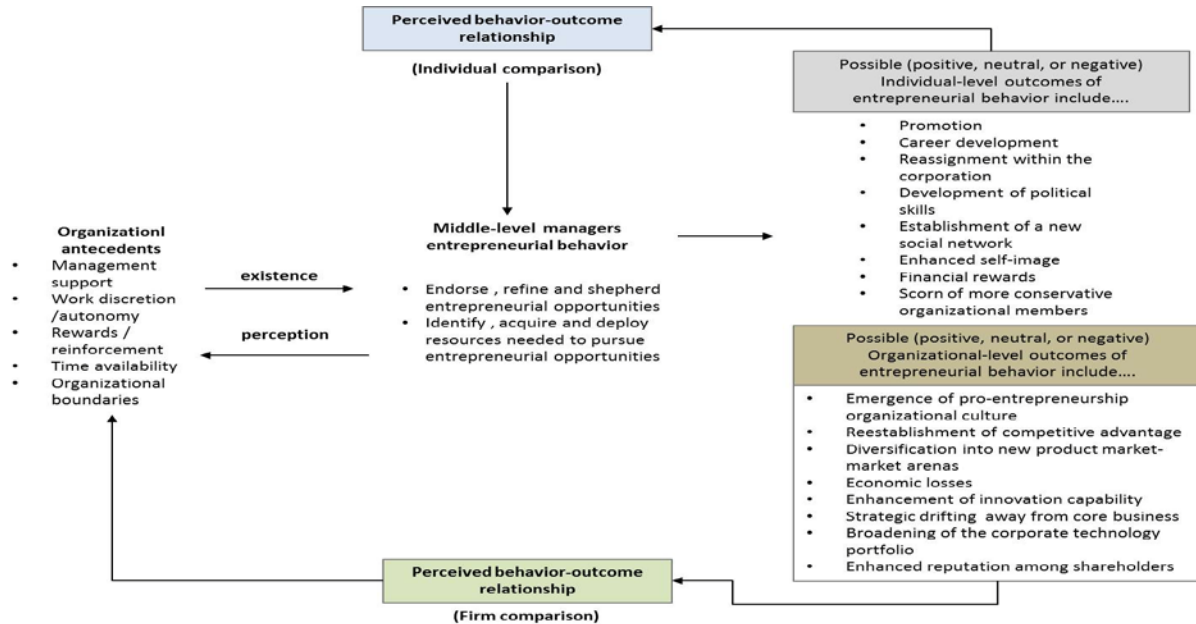
As indicated in paragraph 4.4, Hjorth (2003:160-161) is of the opinion that authors try to deal with entrepreneurship as an organisational phenomenon, while entrepreneurship is actually related to individuals who act according to their ‘own’ initiatives. It is therefore argued that there is a need to separate the manager from the entrepreneur and make entrepreneurship as ‘normal’ an organisational role as possible. The author’s major criticism of attempts to deal with entrepreneurial processes in the context of the formal organisation is that these ignore the fact that ‘managerialism’ constitutes the problems for which entrepreneurship is presented as a solution (Hjorth, 2003:179).

The view of Hjorth (2003:160-161) correlates with that of Davidson and Wiklund (2001) and is of particular importance in as far as it questions the relevance to analyse firm-level entrepreneurship without acknowledgement of the impact of individual behaviour. Similarly, the contradictory objectives of managerial control and entrepreneurial objectives should be noted as a critical matter for consideration in a corporate as well as local government context.

Kuratko *et al.* (2005:701) argue that middle-level managers’ entrepreneurial behaviour may be most critical to the effective implementation of CE, regardless of the primary reason

(either the creation of new ventures or strategic renewal) that is being pursued, owing to their central roles within the entrepreneurial process, as depicted in figure 16 below.

Figure 16 : A model of middle managers' entrepreneurial behaviour



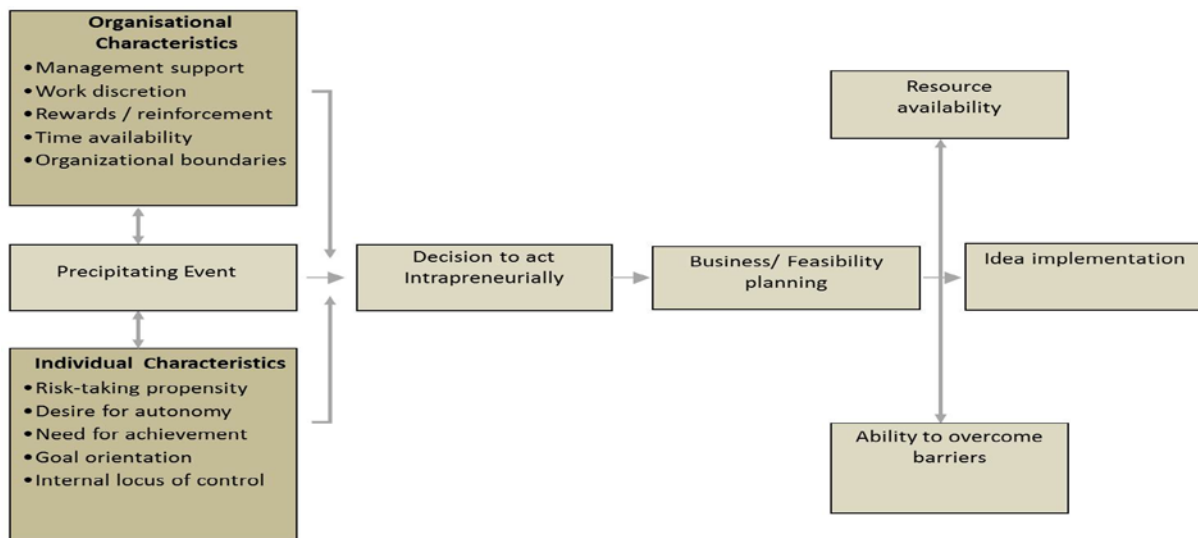
Source: Kuratko *et al.* (2005:701)

As depicted, Kuratko *et al.* (2005:700,701) portray the integrative role of middle managers as especially crucial for effective CE, since research suggests that middle-level managerial behaviour is strongly linked to effective CE. The role of top-level managers revolves around the making of effective strategic decisions, which are concerned with setting the firm's direction and reaching its objectives. The role of middle-level managers focusses on effectively communicating information between top-level managers and operating-level managers. Middle-level managers integrate information and disseminate that information to both top- and operating-level managers and champion projects that are intended to create novelty (e.g., a product, service, or business unit). This viewpoint of the authors correlates with that of Frese (2009:463), Ireland *et al.* (2009:21) as well as Nonaka and Takeuchi (1995:127) who assert that middle managers are the key to continuous innovation. Covin and Slevin (1991:8,9) similarly indicate that the individual manager/entrepreneur has

been portrayed as the key component in theories and models of the entrepreneurial process.

Hornsby *et al.* (1993:30) focussed on the *interaction of organisational factors and individual characteristics* that is ignited by a precipitating event and that leads to successful CE, as depicted in figure 17 below.

Figure 17 : Interactive model of corporate entrepreneurship



Source: Hornsby *et al.* (1993:31)

According to Hornsby (1993:32) the decision to act intrapreneurially actually refers to the interaction between three factors: organisation characteristics, individual characteristics and a precipitating event (paragraph 4.4). Hornsby *et al.* (1993:35) argue that the understanding of the intrapreneur is only one part of understanding the intrapreneurial process and the interactive nature of the process is critical. Intrapreneurship is regarded as multidimensional and relies on the successful interaction of several activities rather than events occurring in isolation. Hornsby's distinction between organisational and individual characteristics provides a valuable contribution that delineates applicable variables clearly, assisting in clarifying the confusion created by the 'firm-level' 'EO' concept.

Ireland *et al.* (2009:23) are, however, of the opinion that the model is similar to the Burgelman (1983) model in that it focuses on the specific CE phenomenon of internal corporate venturing and is regarded to be more limited in scope, focusing on what causes individuals to act intrapreneurially. The authors mention in addition that variations on the Hornsby model have been proposed by Kuratko (2004) and Kuratko *et al.* (2005). Specifically, the Kuratko (2004) model extends the model of Hornsby by depicting individuals' and organisations' evaluations of entrepreneurial outcomes as determinants of future individual-level entrepreneurial behaviour.

According to Zahra (1993:7) a review of past research shows increased recognition of several levels of analysis in studying entrepreneurship. Some researchers have focused on the corporate level of analysis, while others have focused primarily on the business (or strategic business unit) level, or on entrepreneurial activities at the functional level of analysis. The author highlights the following two points that emerge from these diverse efforts:

- Entrepreneurship activities occur at (and cut across) multiple levels within a firm.
- A generic model of firm-level entrepreneurship, such as Covin and Slevin's model, should account for these multiple levels in conceptualising the entrepreneurship-performance relationship.

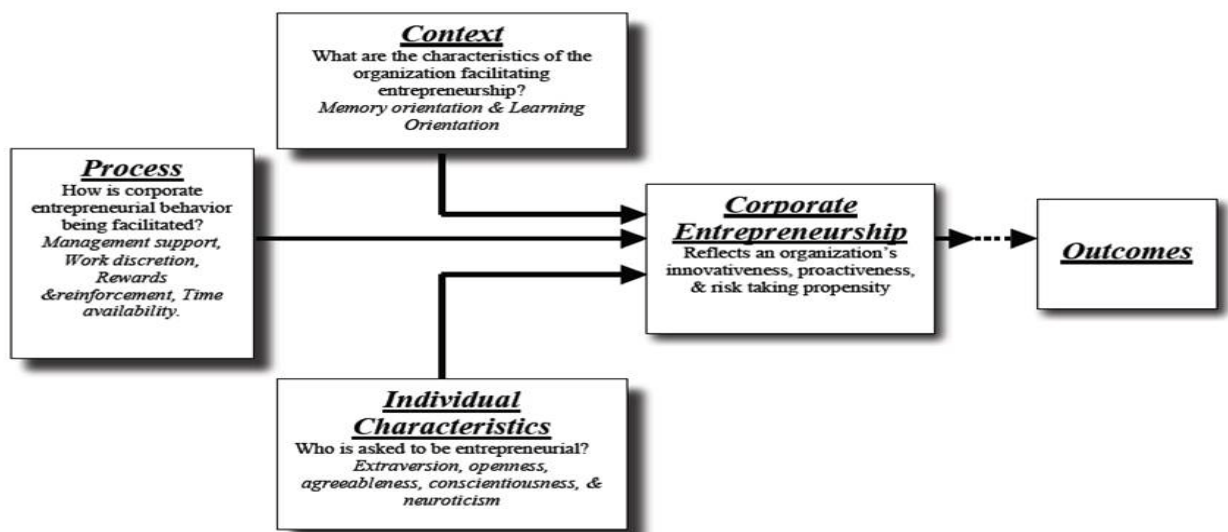
In the view of Zahra (1993:7, 8) there are three possible advantages for incorporating level-specific issues into the CE model. Firstly, it draws attention to the unique needs of particular entrepreneurship activities at different organisational levels, since it is possible that the factors that stimulate entrepreneurship at one level of the firm may impede it at a different level. Secondly, different levels of analysis draw attention to possible interactions of different variables across these levels; and thirdly, integration of multiple levels of analysis into the Covin-Slevin model will help future scholars to synthesise relevant research results.

The emphasis placed on the interactive nature of organisational characteristics and individual behaviour by Burgelman (1983) cited by Kuratko *et al.* (2005:703), Hornsby

(1993:32), Kuratko (2004), Kuratko *et al.* (2005), Stevenson and Jarillo (1990) and Zahra (1993:7, 8) highlight the importance of distinguishing between levels of analysis. Although these factors are acknowledged to be interrelated, different variables are applicable to each. Zahra's arguments are particularly important, since they emphasise that different levels of analysis draw attention to possible interactions between and across levels that often determine the success of entrepreneurship.

Holt *et al.* (2007:41) propose an integrated model of CE that includes individual, context, process and outcome variables, as portrayed in figure 18 below.

Figure 18: An integrated model of corporate entrepreneurship that includes individual, context, process and outcome variables



Source: Holt *et al.* (2007:41)

According to Holt *et al.* (2007:42) individual, context, and process variables are the primary constructs of CE. Individual characteristics are personality, including extraversion, agreeableness, openness, conscientiousness, and neuroticism. Contextual variables are regarded as memory and *learning orientation*, while process variables include management support, work discretion, rewards and reinforcement and availability of time. The authors argue that individual characteristics should have some impact on each person's *propensity*

to *act* entrepreneurially and any particular organisation will, over time, develop a collective orientation or propensity toward CE that becomes embedded in its culture.

The variables and factors identified by Holt *et al.* above at both the individual and organisational level could be regarded as generic and thus applicable in any organisational context, whether a private corporate or public/local government institution. Of importance, however, is that the environment in which entrepreneurship is exercised and the relevant organisational characteristics and culture would ultimately have a different effect on the behaviour, outcomes and overall success. As indicated by Kearney *et al.* (2007:280), such organisational and environmental factors are different in the local government context and would therefore have a different effect on the entrepreneurial behaviour of local government staff.

In support of the relevance of individual behaviour, Holt *et al.* (2007:42) postulate in addition that knowledge will become the primary source of competitive advantage. The authors mention that recently, researchers have suggested that less than 25% of the value in today's organisations can be expressed by traditional financial measures and other, more intangible, elements such as knowledge make up the remainder of the value equation.

Holt *et al.* (2007:50) indicate in conclusion that in terms of a research study, innovativeness, proactiveness and risk taking were largely effective in explaining CE perceptions. These findings confirm, according to the authors, that an organisation's CE is influenced by the attributes of the organisation's line workers and that CE should be diffused through front-line and mid-level managers. When the findings are considered along with other studies of personality and entrepreneurship that have found a link between personality and propensity to be entrepreneurial, the findings suggest that organisations may be starting with a deficit in their CE capacity where the individual characteristics of the members may be an inherent barrier to the introduction and diffusion of CE. Holt *et al.* postulate that the *process* seems to be an important precursor to CE after controlling for the characteristics of the members and important cultural dimensions of the organisation. This suggests that the manner in which CE behaviour is encouraged organisation-wide is the key (*how*). In

assessing the mediating effect that CE played between the identified components (individual characteristics, context, and process) and desirable outcomes (job satisfaction, affective commitment and performance) the authors found that perceptions of CE mediated 21% of the relationship between individual characteristics, context, and process variables and *job satisfaction*; 39% of the relationship between individual characteristics, context, and process variables and *affective commitment*; and 29.7% of the relationship between individual characteristics, context and process variables and *performance*.

The views of Holt *et al.* (2007) correlate with those of Huczynski and Buchanan (2001:8) who emphasise that organisations cannot have goals; instead people have goals. It also relates to similar viewpoints of Kim and Mauborgne (2003:6) (paragraph 4.6) who are of the opinion that companies and industries are the wrong unit of analysis for success or failure, since the real difference depends on the leaders and managers who should initiate strategic moves by ensuring *progressive actions* of players in conceiving, launching and realising business ideas. The argument leads to the conclusion of Huczynski and Buchanan (2001:8) that organisations do not exist as separate entities but instead are a collection of individual people in pursuit of a common goal.

This view of Huczynski and Buchanan (2001:8) concurs with that of a variety of authors, which has wide implications for entrepreneurial research that is conducted at the organisation or firm level only, without acknowledging level-specific determinants simultaneously. Owing to the generic nature, such implications could be regarded as being applicable to entrepreneurial research in general and that conducted in public or local government institutions specifically.

In summary, the arguments presented in the aforementioned literature overwhelmingly acknowledge the necessity to accommodate individual- and level-specific dimensions when evaluating entrepreneurship in an institutional/organisational context in any environment. These arguments further question a key assumption of 'entrepreneurial orientation' as defined at the firm/organisational level, namely that 'entrepreneurial orientation' can be equated to 'firm behaviour' without any distinction in terms of variables related to

individual behaviour and the interrelatedness of these factors. In this regard, the recent arguments of Ropo and Hunt (1995:106) and Shepherd *et al.* (2010:60) with respect to the concept of an entrepreneurial spiral, as discussed in paragraphs 2.5 and 3.4, should be noted, since it provides a viable conceptual alternative for the integration of individual and organisational level variables that explains how and why entrepreneurialness changes over time as a function of relationships between the two levels. Shepherd *et al.* (2010:73,74) suggest that the spiral concept provides a means through which individual-level heuristics might become embedded in the organisational culture in the form of routines, and indicate how organisational routines that promote *entrepreneurial action* may be adopted at the individual level as heuristics. An entrepreneurial spiral provides an explanation for how both individual heuristics and organisational routines may be informed by each other and evolve over time, which strongly supports the original views of Burgelman (1983), cited by Kuratko *et al.* (2005:703), that innovation-oriented CE can take two primary forms: autonomous strategic behaviour (individual behaviour) and induced strategic behaviour (corporate culture/firm-level entrepreneurial orientation), that is thus specifically noted.

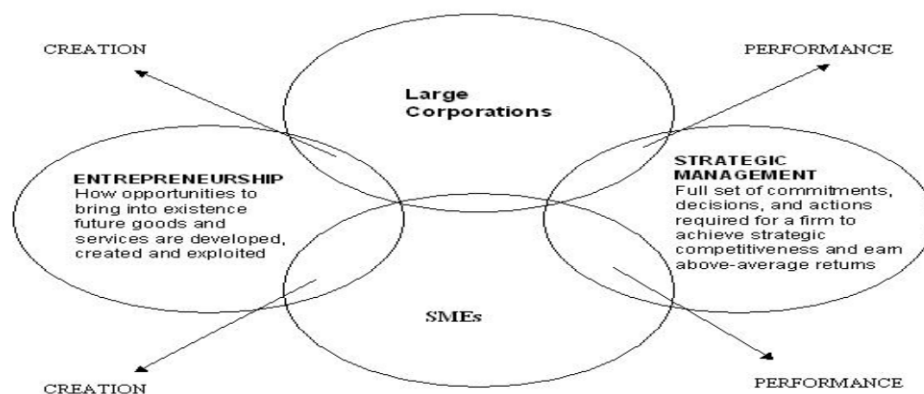
4.6 Strategic management and entrepreneurship

The relationship between strategic management and entrepreneurship is of specific significance when applying entrepreneurship in the public management/local government contexts, since public institutions traditionally apply strategic management practices with the objective of ensuring effectiveness and improving efficiency (performance), in contrast to private institutions that emphasise profit or wealth creation. It is therefore important to distinguish primary concepts in this regard and evaluate applicable alternatives that can be applied in the local government context.

According to Van Gelderen and Frese (1998:1), strategy can be studied by what is done (strategy content) and by how it is done (strategy process). Strategy content specifies how a goal can be reached, for example by low costs or product differentiation, while the strategy process on the other hand refers to how one formulates and implements strategy content.

Hitt *et al.* (2002:173) indicate that the link between strategic management and CE is a fundamental one that is well supported by empirical research. The relationship between CE and strategic management practices of scanning, planning and control has been demonstrated, while a link has also been found between CE and corporate governance and ownership according to the authors. Hitt *et al.* (2002:34) provide a conceptual model for the entrepreneurship-strategic management interface, which is portrayed in figure 19 below.

Figure 19: The entrepreneurship-strategic management interface



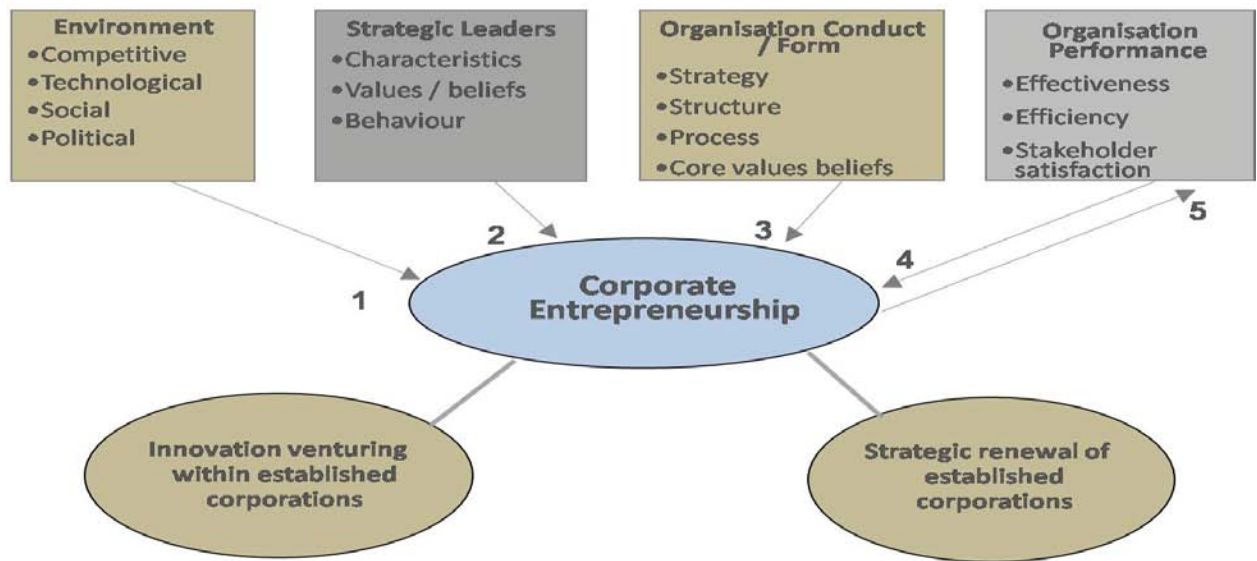
Source: Hitt *et al.* (2002:34)

According to Hitt *et al.* (2002:3), *entrepreneurial and strategic actions* are complementary and can achieve the greatest wealth when integrated. It is suggested that the most important type of *entrepreneurial action* identifies entrepreneurial opportunities that in turn lead to the development of new industries. The integration of *entrepreneurial actions* and complementary *strategic actions* that result in the creation of new industries through marketplace competition is consequently regarded as a *critical area* for future research in strategic management and entrepreneurship. The authors define strategic entrepreneurship as comprising *entrepreneurial actions* that are taken using a strategic perspective. Thus, strategic entrepreneurship facilitates a firm's efforts to identify the best opportunities and then to exploit them with the discipline of a strategic business plan (Hitt *et al.*, 2002:13).

Although the argument for the integration of entrepreneurial and strategic actions as depicted by Hitt (2002) is based on sound premises, the distinction in the objectives of entrepreneurship and strategic management, namely ‘creation’ and ‘performance’ as portrayed in figure 19 could be interpreted differently. Strategic management is purely a methodology to achieve any objective, which may or may not include entrepreneurship. It may therefore be argued that the proposition that the objective of strategic management is essentially performance is incorrect. Entrepreneurship, on the other hand, has a predefined implicit objective of ‘creation/renewal’ with an inherent methodology of its own. The view that both disciplines can greatly benefit by sharing and integrating methodologies should however be acknowledged. It could further be argued that the methodology of entrepreneurship is not particularly well defined and clear, as in the case of strategic management, which is a major point of concern. Public and local government specifically is in desperate need of applicable methodologies that could supplement or enhance strategic management practices with the intention of creation/renewal to improve service delivery to communities. The challenges facing local government require the introduction of interventions that enable renewal, which implies that local government should change long-term intentions to accommodate entrepreneurial objectives instead. Such changes have been accommodated by the metropolitan local government organisation where the research was conducted through the establishment of alternative operating models, such as the establishment of separate utilities and agencies that prioritise revenue generation, which could serve as applicable learning experiences, as highlighted in paragraph 4.3.

In relation to the strategic management/CE link, Morris and Kuratko (2002:31) mention that the model of Guth and Ginsberg (1990) identified the following key components: the *environment, strategic leaders, organisation form, and performance*, as portrayed in figure 20 below.

Figure 20: Fitting corporate entrepreneurship into strategic management



Source: Morris and Kuratko (2002:32)

As depicted in figure 20 above, Morris and Kuratko (2002:31) in essence argue that the primary distinction between CE and strategic management lies in the fact that CE has innovation and strategic renewal as core objectives, which can be accommodated within the generic strategic management model. Such distinction therefore implies that CE can as such be applicable to the local government and public management domains if long-term intentions such as innovation and strategic renewal are accommodated. This proposition accommodates alternative arguments applicable to the reasoning of Hitt *et al.* (2002:3) as discussed above, but still fails to determine methodologies inherently related to entrepreneurship adequately, which would promote the achievement of entrepreneurial objectives in a local government dispensation specifically. The difference in the basic premises and methodologies of entrepreneurship and strategic management might be much wider, relating to distinct differences in systematic planning and bureaucratic control in contrast to flexibility, speed and autonomy to act, change direction and shape situations to create opportunities that could benefit an organisation. It could be argued that these dimensions of entrepreneurship are much more difficult to apply in public institutions and local government with bureaucratic dispensations, together with current traditional models

of strategic management, since the relevant dispensations and methodologies have conflicting baseline premises to some extent.

Robson (1997:6) is of the opinion that strategic management encompasses the entire enterprise and is looking beyond day-to-day operating concerns in order to focus upon the organisation's long-term prospects and development. Prinsloo (2000:44), however, suggests a strategic planning model, from which it can be deduced that strategic analysis is of critical importance. Prinsloo's viewpoint suggests that significant changes in strategy should be informed by rational, analytical systems as described in the planning literature.

Mintzberg (1994:108) postulates that quite frequently the contrary is true and he describes 'logical incrementalism' as a process of gradual evolution of strategy driven by conscious managerial thought. Mintzberg (1994:110, 242 - 243) raises the term 'crafting strategy' and argues that crafting captures the process by which effective strategies come to be much more effective. The accepted distinction in planning between issues that are long-range strategic and short-range tactical is therefore also questioned. This observation correlates with that of Hjorth (2003:221)(paragraph 4.4) who indicates that "*... entrepreneurship is a tactical use of occasions in order to channel/construct passages for opportunities and strategic representations constitute the space wherein the tactician has to operate through a sense of timing ...*".

According to Mintzberg (1994:275) the root of the problem with strategic planning lies in the basic 'design' model that underlies prescriptive approaches to strategy-making. The fundamental problem is regarded as the separation of thinking from acting. Mintzberg (1994:12) also states that strategy is a pattern of 'consistent behaviour' over time. The 'planning' part is referred to as the intended strategy and the 'pattern' part as the realised strategy (Mintzberg, 1994:23, 24). In the view of the author, the most appealing concept concerning strategic response is the description of a strategic window, namely the brief time an organisation may have to exploit a fleeting opportunity. In this regard Mintzberg is of the opinion that decisions made for immediate purposes under short run pressures – whether to handle a crisis or seize an opportunity – can have the most long-range and strategic of

consequences. However, according to the author, “... *‘strategic’ decisions can seemingly sometimes fizzle like a punctured balloon ...*”. Mintzberg thus regards the trouble with the strategy-tactics distinction as being that one can never be sure which is which until specific results are known.

The arguments of Mintzberg as stated above capture essential problems related to traditional strategic management practices that jeopardise entrepreneurship in an institutional environment and especially in local government. The views of the author, however, highlight very important shortcomings of traditional strategic management methodologies that could possibly be addressed by applicable entrepreneurial alternatives, such as the tendency to separate ‘thinking and acting’, consistency in behaviour over long periods of time, exploiting a fleeting opportunity that appears as a ‘strategic window’ and the trouble with the ‘strategy-tactics’ distinction. These challenges relate to the conflicting premises of bureaucratic and strategic management principles in contrast to flexibility, speed and autonomy which are required for entrepreneurship and are highly applicable to CE in general and in public and local government.

Miller and Dess (1996:5-6) indicate that strategy refers to either the plans made or the *actions taken*, in an effort to help an organisation fulfil its intended purposes. The former is part of an intended strategy, while the latter is part of a realised strategy. The strategic intent of an enterprise refers to the purpose the enterprise strives to achieve, according to the authors. Miller and Dess (1996:379) concur with Mintzberg when stating that knowledge without action is of little value to organisations attempting to improve their performance, in the same way that strategy formulation without strategy implementation is of little practical significance. It is similarly argued that continuous organisational learning can only be ensured if “... *embedded in a practical experience derived from action ...*”. The authors conclude that one of the most fundamental misunderstandings about what is involved in organisational learning is the idea that “... *learning or knowledge does not need to be related to action*”. These sentiments as expressed also highlight potential areas in which entrepreneurship could make a useful contribution, since the active nature of

entrepreneurship is widely acknowledged in contrast to cognitive analytical and planning tendencies as prescribed in terms of strategic management methodologies.

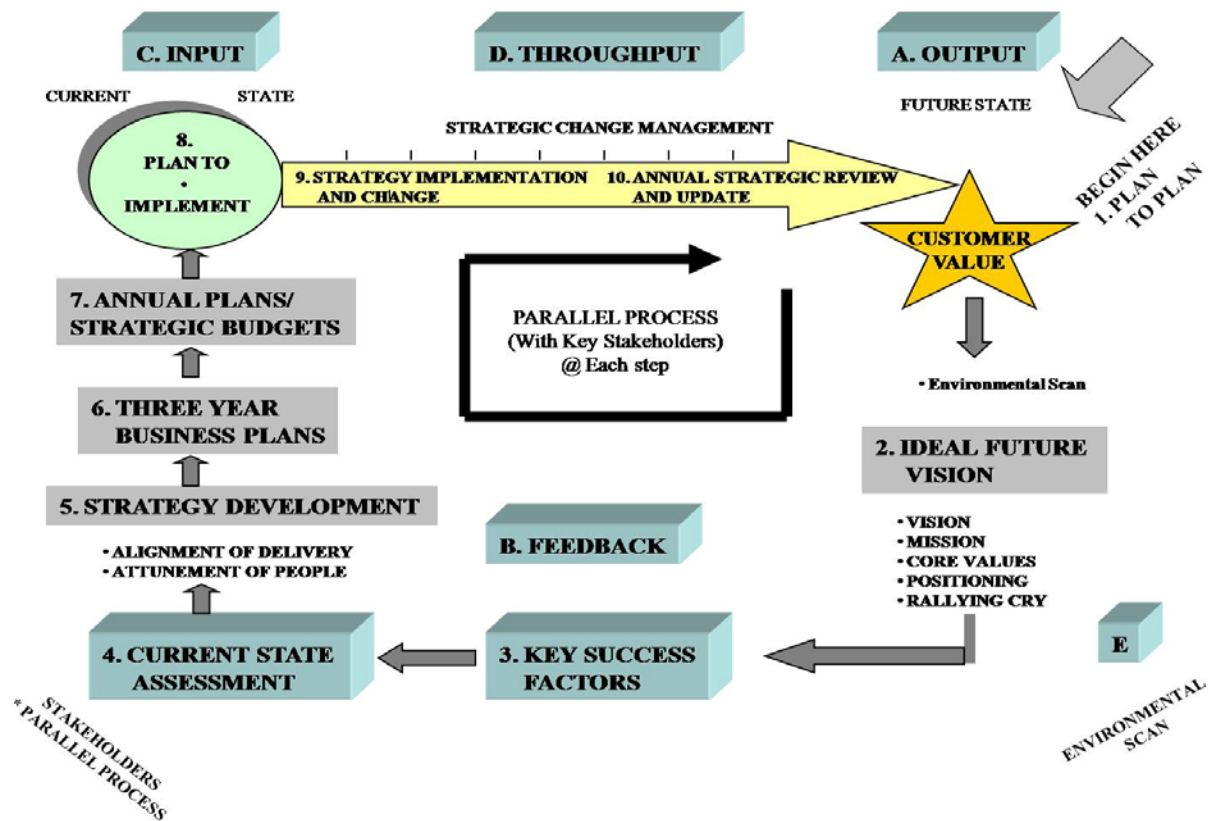
Frese and Bausch (2003) considered whether planning is useful for small entrepreneurs, under which conditions it is useful and what the prerequisites of good planning are. The authors used a meta-analytic approach and analysed a set of nine studies on pre-planning and entrepreneurial success. It was found that pre-planning was positively related to growth and size parameters, while failure to pre-plan was negatively related. In summary, the authors concluded that planning is positively related to success, although in certain cases it may lead to lower *action orientation* (procrastination). This observation of the authors stresses the dilemma in which strategic management finds itself and highlights an opportunity for the field of entrepreneurship to explore. On the one hand, flexibility for action is required to enable entrepreneurship, while strict pre-planning requirements inhibit spontaneous action in response to immediate opportunities and tendencies that occur.

As indicated in paragraph 4.5, Kim and Mauborgne (2003:6) are of the opinion that companies and industries are the wrong unit of analysis for success or failure. Instead, it is stated that the real difference depends on the leaders and managers who should initiate strategic moves by ensuring *progressive action* of players in conceiving, launching and realising business ideas. Miller and Dess (1996:379) also emphasise the critical element of *action* and distinguish excellent companies from all others by stating that there is no more important trait among excellent companies than *action orientation*. The need to re-define and review the nature of strategic management and traditional long-range planning cycles is consequently also emphasised by Strickland (2002:4,5). Strickland argues that without the ability to become adaptable, flexible and quick, enterprises will be caught in a death spiral of old thinking, traditional strategies and insecure futures. The arguments of these authors support those of Mintzberg (1994) and identify a possible area of interest for entrepreneurship to explore.

Haines (2000:30–31) introduces another angle and describes strategic planning as being only one part of an overall process of strategic management. It is thus postulated that

expanding strategic planning towards strategic management, means making a commitment throughout an organisation to “... *on-going strategic (backwards) thinking and continuous improvement* ...”. A ‘systems thinking approach’ to strategic management is thus proposed. In contrast to the arguments of Mintzberg, Haines (2000:13-15) still maintains that the success of strategic planning and management is dependent on a system or structure that guides the total process. A ‘systems thinking approach’ to strategic management, which is structured on the basic principles of the general systems theory as depicted in figure 21 below is therefore proposed:

Figure 21: Systems thinking approach to strategic planning and management



Source: Haines (2000:50)

The model above as proposed by Haines (2000) covers distinct phases of input to action, throughput, output, environmental scanning and provides for a feedback loop. Similar approaches are widely applied by public institutions and local government in South Africa in particular. Planning frameworks and cycles generally accommodate long-term frameworks

that span timeframes of five years and longer in accordance with national and provincial growth and development strategies, while provision is also made for annual revisions of these, in accordance with immediate tendencies identified. The primary concern, however, still relates to the need for flexibility and autonomy within predominantly bureaucratic structures and systems that resulted in the consideration of alternative modes of operation in the metropolitan local government organisation where the research was conducted.

In contrast to the views of Haines (2000) and in accordance with the arguments of Kim and Mauborgne (2003:6), Mintzberg (1994:23-24) and Miller and Dess (1996:379); Sunter and Ilbury (2001:15) emphasise that one point which is consistently missed by management text books and business school courses is that 80% of the success of world-class companies is due to excellence in implementation and delivery under a variety of conditions and not the quality of its original plans or the conceptual part of the management process. Instead, Sunter and Ilbury (2001:15) indicate that excellence is only built up one shot at a time, upon an *incremental approach* to change the status quo. This viewpoint is consistent with the arguments of Schon (1983:79), who mentions that professional practitioners actually shape situations (paragraph 2.3). It also strongly relates to the 'creation theory' of entrepreneurship of Alvarez and Barney (2007:28) and the spiral concept of Shepherd *et al.* (2010:60). These viewpoints have important implications, especially for the field of entrepreneurship in general and in a local government context, since it is implied that innovation and opportunities are not static, constructs that are 'out there', waiting to be exploited by someone who passes by. Instead, innovations and opportunities are created, constructed or developed by a unique integration and manipulation of circumstances, environmental factors and occurrences through the actual *engagement and actions* of individuals or groups within a specific environment. The manner in which interventions of this kind can be supported and achieved in a local government context is of critical importance that points to the development of specific behavioural competencies that are related to entrepreneurship, as discussed in Chapters 2 and 3.

Coveney, Ganster, Hartlen and King (2003:5) also mention that the world is littered with the remnants of organisations and enterprises that failed to implement their strategic plans.

Coveney *et al.* (2003:27) therefore state that "... organizations that continue to apply traditional strategic planning practices such as defining goals, setting priorities and developing strategies, can be assured that somebody will beat them by the finish line ...". Since they cannot plan fast enough, the authors are of the opinion that new behaviours that are far more bold and attuned to the unique nature of our time are required instead.

Van Gelderen and Frese (1998) provide support for the propositions of Alvarez and Barney (2007), Kim and Mauborgne (2003), Miller and Dess (1996), Mintzberg (1994), Shepherd *et al.* (2010) and Sunter and Ilbury (2001). The authors conducted a study that focussed on the characteristics of the strategy process that are operationalised by a behavioural measure of the manners in which small business founders deal with situations. The results showed that process characteristics of *action strategies* predict entrepreneurial success and the other way round. Van Gelderen and Frese (1998:12) further state that the study shows the relationship between a firm's performance and a '*process concept of action strategies*' that differentiates various forms of planning and reacting to the environment by individual owners. In addition, the study made a *circular process* of strategy and success plausible (Van Gelderen & Frese, 1998:1-2).

The emphasis on *action strategies* as indicated by Van Gelderen and Frese, as discussed above, further highlights previous work by Schumpeter. In this regard Gos (2005:205) indicates that Schumpeter's work on entrepreneurship points towards a theory of '*entrepreneurial action*' where social interaction and emotions are key variables. Schumpeter locates such action within the wider context of what he terms the '*circular flow*', which is interpreted as a stable socio-economic system. This statement of Gos is consistent with Van Gelderen and Frese's identification of a '*strategy of habit*', as included in their framework of *action strategies*.

According to Coveney *et al.* (2003:34), no specific methodology guarantees success. Integration simply requires that *systematic action* be taken to formulate and achieve the linkage. The authors argue that the standard practice whereby top-level management defines strategy and lower-level managers are required to attend to operations, results in

conflicting areas of concern and a general tendency to blame the other for failures. Although operations are regarded as an important element in the strategic landscape, Coveney *et al.* (2003:35) postulate that there is a *difference between action and execution*. In the view of Coveney *et al.*, operations need to be tied with strategic objectives since it is at the operational level that real strategic advantage can be achieved. Horizontal alignment of the individual processes and vertical alignment of the top-down and bottom-up views of an organisation are thus required.

Coveney *et al.* also highlight the fact that if people do not accept and support a strategic plan, they are unlikely to put in the right amount of effort to make it succeed. To achieve buy-in, management must therefore create a corporate culture and a set of values that supports the vision and guides employee's decisions and behaviour. A learning culture, "... *one that tracks, and learns from its own successes; failures and mistakes...* ", should therefore be ensured (Coveney *et al.*, 2003:5-6).

Garvin and Levesque (2006:5,6) similarly criticise long-range fixed strategic planning methods and emphasise that corporations must perform balancing acts in three areas: strategy, operations and organisation. The authors (Garvin & Levesque, 2006:105) regard the development of strategy by trial and error as important and indicate that new businesses operate in highly ambiguous environments. In ambiguous environments, the full range of alternatives and outcomes is not known and strategies will change over time. Experimentation is thus regarded as essential.

The criticism of traditional strategic management practices and the emphasis placed on the need for flexibility, autonomy, speed, action orientation and experimentation by various authors, such as Coveney *et al.* (2003), Garvin and Levesque (2006), Kim and Mauborgne (2003), Miller and Dess (1996), Mintzberg (1994), Sunter and Ilbury (2001) and Van Gelderen and Frese (1998) pinpoint key areas in which entrepreneurship research could provide a possible alternative solution to traditional strategic management methodology that is also applicable to local government. It is important to note the fact that the authors mentioned above all emphasise individual behavioural tendencies, practices and

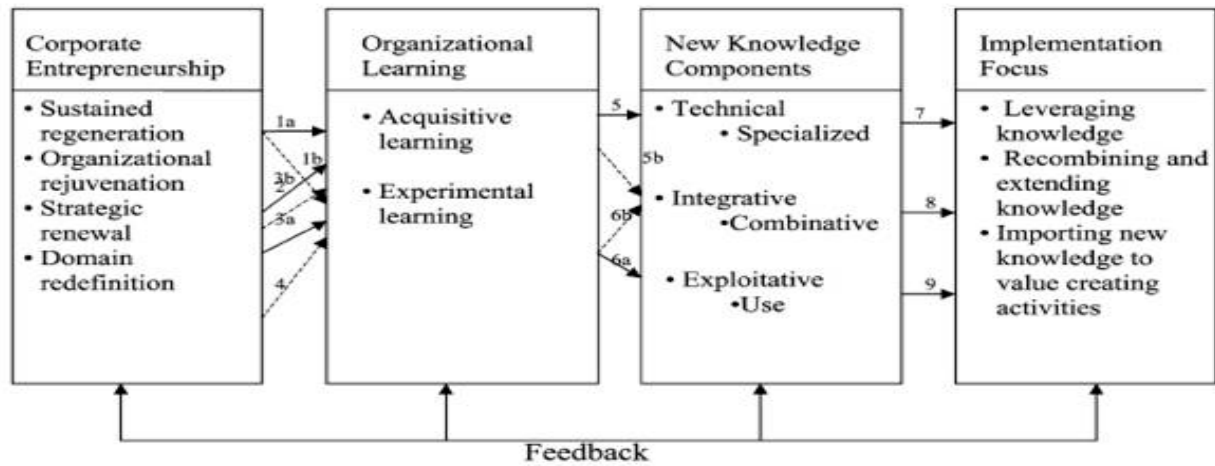
competencies that are regarded as of paramount importance to enable creation, innovation, renewal and ultimately business success. These views complement generic entrepreneurship theory and research findings related to entrepreneurial behaviour as addressed in Chapters 2 and 3 that should be accommodated in an institutional context. These tendencies are of primary importance and emphasise key dilemmas for local government, in particular since current practices and systems are not aligned to accommodate such alternatives to enable entrepreneurship within existing bureaucratic dispensations.

4.7 Organisational learning

In order to analyse knowledge creation dimensions as related to entrepreneurial performance in an organisational context, it is essential to consider recent trends with respect to the concept of 'organisational learning'.

According to Dess *et al.* (2003:353) formal and informal CE activities can enrich a company's performance by creating new knowledge that becomes a foundation for building new competencies or revitalising existing ones. The authors cite Nonaka and Takeuchi (1995) and mention that information that derives from experience, judgment, intuition and value is embedded primarily within a firm's human capital knowledge, which is both explicit and tacit in nature. The authors subsequently highlight the relationship between CE strategy, organisational learning, knowledge and implementation, as indicated in figure 22 below.

Figure 22: Relationship among CE strategy, organisational learning, knowledge and implementation



Source: Dess *et al.*, (2003:354)

In the view of Ireland *et al.* (2009:23), the model of Dess *et al.* (2003) presents an alternative to how *knowledge is created* through four types of CE activity, based on the four forms of CE proposed by Covin and Miles (1999), namely sustained regeneration, organisational rejuvenation, strategic renewal and domain redefinition. The model outlines how acquisitive and experimental learning processes mediate the relationships between the aforementioned CE forms and the emergence of specific types of knowledge (i.e. technical, integrative and exploitive). According to Ireland *et al.*, the model explores the causal interrelationships between specific CE forms and organisational learning and the antecedents and/or consequences are based on the organisational-level phenomenon of EO, defined by Lumpkin and Dess as “... *the processes, practices, and decision-making activities that lead to new entry ...*”. This view on the prominence of ‘organisational learning’ is also emphasised by Schon (1983:327) who criticises the tendency of corporate institutions and bureaucracies to rely on technical rationality and argues that the more an organisation depends for its survival on innovation and adaptation to a changing environment, the more essential is its interest in *organisational learning*.

Antoncic and Hisrich (2003:9) also highlight 'organisational learning' as a prominent concept. The authors mention that CE can be seen as a possible organisational predisposition that may lead to learning and a *reverse loop* from learning to CE may also be identified. In the view of the authors, there may be important linkages between learning and CE when CE is a process that evolves over time (Antoncic & Hisrich, 2003:13).

Mitchelmore and Rowley (2010:93, 96) are, however, of the view that in spite of the extensive literature which exists relating to organisational learning, there have been few attempts to operationalise the construct through the application of quantitative techniques, especially in the small firm sector. The authors mention that "*... research to determine whether identifiable relationships exist between the performance of the firm, the learning mode of the organisation and organisational competence does not provide clear statistically significant relationships and further work is clearly needed ...*". This observation of the authors is specifically noted, since it relates directly to a key objective of the research namely to identify relationships between knowledge creation and entrepreneurial performance.

As indicated in paragraphs 3.7 and 3.8, Grimbeek (2006:45), Holcomb *et al.* (2009:173) and Nonaka and Takeuchi (1995:56-57) also emphasise that experience (action) forms the basis of continuous learning and knowledge creation. Although these arguments hold in terms of individual learning dynamics, as discussed in paragraph 3.8, the interpretation in terms of an institutional context is controversial. In this regard the proposition of Nonaka and Takeuchi (1995:72) (paragraph 3.7), that an organisation cannot create knowledge by itself but that the tacit knowledge of individuals is the basis of organisational knowledge, should be noted. Similar to the views expressed in paragraph 4.4 by various authors with regard to EO at firm level, the key point of contention that still requires clarification is whether organisational learning can be equated to an 'organisational culture' (EO at firm level) without acknowledgement of individual dynamics involved and the interrelatedness of these factors. It can therefore be deduced that the antecedents of organisational learning include a variety of variables that spans the environment in which an organisation operates, the

organisational characteristics applicable, as well as variables related to individual learning and knowledge creation at different levels of the organisation, which are all interrelated.

4.8 Performance assessment/management

Performance assessment and management in an organisational context should be considered in relation to the premises adopted in terms of the objectives of entrepreneurship as well as strategic management. In this regard the propositions of Hitt *et al.* (2002:34), as addressed in paragraph 4.6, should be noted.

In the context of 'firm-level' entrepreneurship, Antoncic and Hisrich (2004:521) assert that the most important consequence of CE is the performance of a firm. One important question to be addressed, according to the author, is whether the effects of CE and its correlates are more, less or equally important as the interaction effects of these elements on performance. This comment questions the underlying premises as provided by Hitt *et al.* (2002:34) (paragraph 4.6 refers) who assert that the objective of strategic management is primarily performance, while entrepreneurship is directed at 'creation'.

Antoncic and Hisrich (2004:523) refer to a study they previously conducted (Antoncic and Hisrich, 2001) that explicitly tested for the indirect effects of CE antecedents on firm performance, which confirmed the implicit findings of other empirical studies. In three studies (Dess, 1997; Zahra, 1993; Zahra & Covin, 1995), the effects of moderation or interaction of the environment with CE in affecting performance were tested without accounting for organisational characteristics. The results of these empirical studies do not identify what is more important for firm performance, CE *per se* or its interaction with environmental or organisational factors, which leaves some important relationships in the CE model unresolved according to the authors.

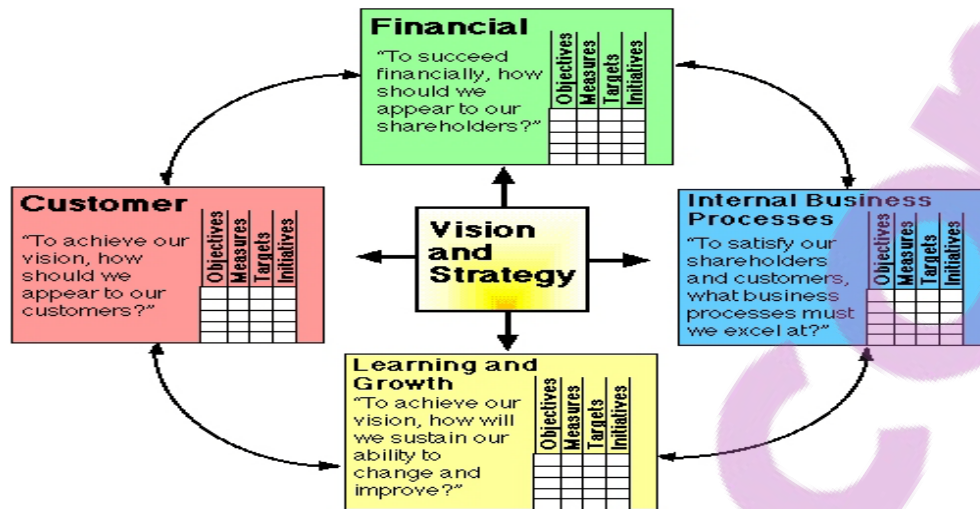
The questions raised by Antoncic and Hisrich (2004) about the importance of entrepreneurial performance assessments and the relationship with overall 'firm' performance is important. It can therefore be deduced that unless relationships between entrepreneurial performance and overall performance of an institution/organisation can be

explained and confirmed, the relevance of entrepreneurial performance assessments might remain of academic interest without any practical use or interest.

Noorzaman (1999:17) highlights in addition that performance management is a multi-level experience, since it takes place around a range of arenas that include citizens, political management, strategic planning, organisational performance, quality standards and operational frameworks. Dutta and Manzoni (1999:5) agree with the above-mentioned statement and refer to the '7-S model' that describes a way to analyse a company or organisation and encourages systems thinking in terms of six shared values: strategy, skills, structure, staff, systems and style. In addition, the authors mention the 'business integration model' as developed by Andersen Consulting, which is based on the premise that business performance derives from the alignment of a company's people, processes and technology with its strategy. As a result, the model suggests that a consistent and comprehensive organisational change programme should incorporate strategy, people, business processes and technology.

According to Dutta and Manzoni (1999:5), a key similarity between the '7-S' and 'business integration models' is the joint emphasis that performance improvement programmes succeed only when they focus on multiple dimensions of the organisation. Dutta and Manzoni (1999:210- 212) further indicate that the concept of the 'balanced scorecard' is based on the view that no single performance indicator can capture the full complexity of an organisation's performance. The 'balanced scorecard', as developed by Kaplan and Norton, therefore defines a set of leading and lagging performance indicators, grouped together into four different perspectives: financial, customer, internal processes, learning/growth and strategy, as indicated in figure 23 below.

Figure 23: The balanced scorecard



Source: Kaplan & Norton (2002:9)

As depicted in figure 23, the different perspectives represent three of the major stakeholders of a business (shareholders, customers and employees), which ensures that a holistic view of the organisation is used for strategic reflection and implementation. The importance of each of these perspectives is that the perspectives themselves and the measures chosen are consistent with the corporate strategy. The scorecard thus provides a framework for translating strategy into operational themes, thus facilitating the role of management (Kaplan & Norton, 2002:9,10).

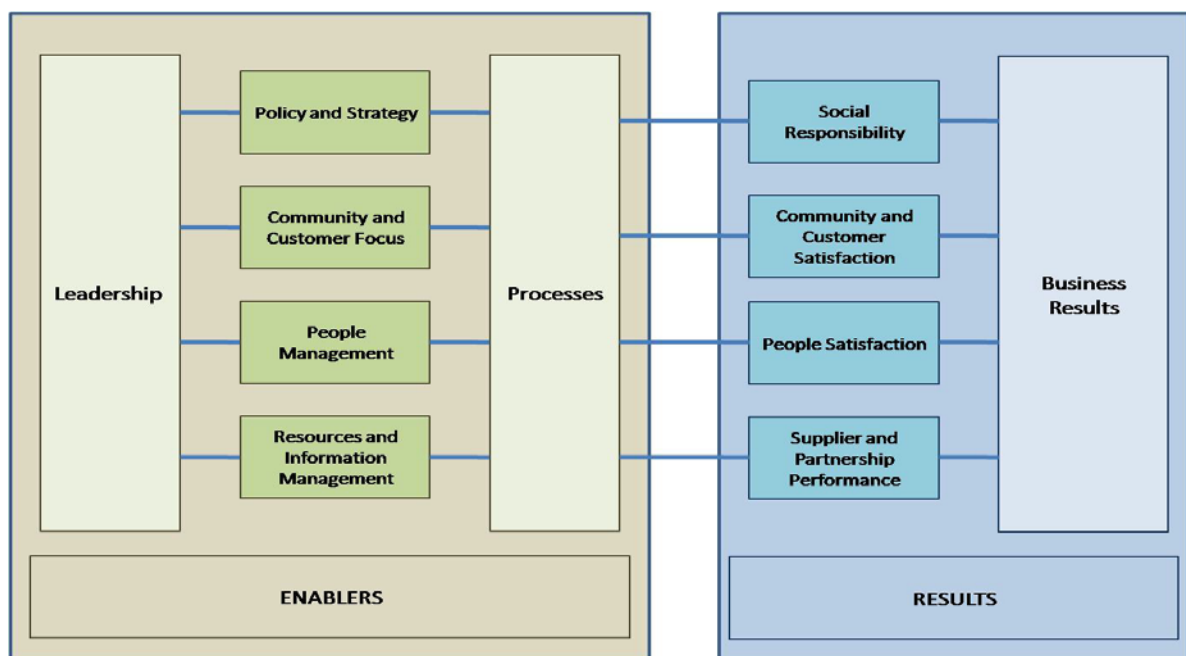
The balanced scorecard approach as mentioned above is widely accepted and has been introduced by local governments in general in South Africa and at the metropolitan local government organisation where the research was conducted. Independent utilities and agencies of the organisation also adopted the approach and performance management mechanisms are primarily based on its core dimensions and relate to similarly defined long-term strategic objectives.

Noorzaman (1999:140 - 142) mentions in addition the European Business Excellence Model that was developed from ideas about 'stakeholder', 'total quality' and 'benchmarking' in the private sector. According to Noorzaman (1999:142), the model clearly draws on the

‘continuous improvement school of thought’ and provides a common framework and criteria against which to measure any organisation. It is thus regarded as extremely helpful for benchmarking a local authority as a whole and in specific areas of activity.

The South African Excellence Foundation (1997-2001:E1) mentions that the South African Excellence Model is based on similar principles as the European Business Excellence model of the European Foundation for Quality Management; however, additional elements such as supplier and partnership performance, as well as customer and market focus, are provided for, as depicted in figure 24.

Figure 24: The South African Excellence Model



Source: South African Excellence Foundation (2001:m5)

The model is a diagnostic methodology (South African Excellence Foundation, 2001), which allows management to assess how well they are managing all key areas of their business and the quality of the results they are achieving. It allows an organisation to identify its strengths and areas for improvement and to establish a system for planned improvements, which can be monitored for progress. Each of the 11 elements provided can be used to assess an organisation’s progress towards performance excellence and the elements are

categorised in terms of 'enabler' and 'result' dimensions. 'Enabler' elements are concerned with how results are achieved through leadership that drives policy and strategy, customer and market focus, people management, resources and information management, as well as processes. The 'results' elements are concerned with what the company has achieved and aims to achieve and accommodate assessments on the impact on society, customer satisfaction, people satisfaction, supplier and partnership performance, as well as overall business results (South African Excellence Foundation, 2001:7-11).

It is furthermore mentioned in publications of the South African Excellence Foundation that detailed criteria for assessments have been developed for each element applicable to private companies, small and medium enterprises and local government.

Williams (2008:39,91) indicates that the South African Excellence Foundation ceased to operate in 2003 and was liquidated in 2005, with the result that the further application and utilisation of the model were in effect suspended. The author believes, however, that the South African Excellence model is of value; although business excellence is notably something that benefits the private sector, the public sector can also benefit from it and in the long term its benefits will contribute to the competitiveness of the country as a whole.

Following a comparison of the balanced scorecard and the excellence model via the systems approach, Van der Watt, van Wijck and von Benecke (2001) argue that a holistic structure is needed to determine whether or not the two frameworks are indeed synergistic. The authors express the opinion that the balanced scorecard does not lend itself to being an assessment tool, while the excellence model is only considered as a diagnostic assessment tool, used by organisations to improve themselves continuously. When an organisation is seeking to better all or just some of its operations and/or functions continually, the excellence model will prove most beneficial, as it highlights the organisation's strengths as well as areas for improvement (Van der Watt *et al.*, 2001:6-9).

The conclusion of Van der Watt *et al.* (2001) that the balanced scorecard does not lend itself to being an assessment tool, while the excellence model is only considered as a diagnostic assessment tool that provides for benchmarking requirements, should be noted. Of

importance to note in both the balanced scorecard and excellence models is that no provision for explicit entrepreneurial performance dimensions is made. With respect to the public sector and especially local government, it is essential that assessment methodologies must provide for benchmarking capabilities in order to evaluate performance standards of different organisations/institutions in order consider alternative interventions.

With specific reference to the entrepreneurship domain, Wiklund (1998) indicates that there is no consensus on appropriate small firm performance measures and research has tended to focus on variables that are easy to gather information about rather than variables that are important. In the view of Wiklund, researchers advocate growth as the most appropriate performance measure in small firms, since it is argued that growth is a more accurate and easily accessible performance indicator than accounting measures and superior to indicators of financial performance. An alternative view is that performance is multidimensional in nature and that it is advantageous to integrate different dimensions of performance in empirical studies. This viewpoint correlates with that contained in the general management field, as articulated by Dutta and Manzoni (1999).

According to Kearney *et al.* (2007:291-292), there is a greater challenge in the public sector for measuring performance than in the private sector. The financial and non-financial stakeholders to which a public sector organisation are aligned are regarded as greater in number and more varied, resulting in greater complexity in managing these relationships. According to the authors, the challenge of measuring performance in the public sector is significant in view of non-quantifiability, multi-causality and perspective differences. A genuine assessment of public sector corporate entrepreneurial success is not regarded as a *“ ‘once off’ success in the short term, but continuous long-term sustained development, such as generating revenue from products and services that did not previously exist, and improved productivity (efficiency and effectiveness) in meeting clients’ needs and using resources.”* According to the authors *“... success relates to the overall social entrepreneurial process and its ability to consistently contribute to the future development and productivity of the social enterprise ...”*.

In the view of Morris *et al.* (2008:324-336), it is especially complex to assess performance when it comes to entrepreneurship, since entrepreneurship is both a way of thinking (cognition) and a way of acting (behaviour). Morris *et al.* (2008:325) mention further that beyond the need to measure cognitions and behaviours, it is important to assess performance outcomes that result from entrepreneurial actions within the firm. The authors propose an 'entrepreneurial health audit' to assess entrepreneurship in an established company that includes the following primary steps:-

- Assessing the firm's entrepreneurial intensity that covers the degree and frequency of entrepreneurship;
- Diagnosing the climate for CE that determines the reasons why a given level of entrepreneurial intensity exists; and
- Creating an organisation-wide understanding of the CE/innovation processes (i.e. determining the degree to which a CE strategy and the entrepreneurial behaviour through which it is implemented are understood and accepted by affected parties).

Although Morris *et al.* (2008) make a useful contribution in defining entrepreneurial intensity as a measure of entrepreneurial performance, the key question that needs to be addressed in an institutional context is the relationship of entrepreneurial intensity with overall organisational performance. Unless relationships can be identified and confirmed in this regard, the useful application of such assessments in practice remains debateable, as also indicated by Antoncic and Hisrich (2004). It might further be argued that it is essential to accommodate critical elements of entrepreneurial performance within available accepted models of performance measurements such as the balanced scorecard and Business Excellence Model that are widely recognised and applied internationally in order to accommodate requirements for benchmarking. In summary, the available literature indicates a serious lack of acknowledged, respected and widely applied methodologies that accommodate entrepreneurial dimensions in a broader context of organisational performance that can be applied in practice and can accommodate public and local government management requirements as well.

4.9 Conclusion

In general, agreement exists on the need for entrepreneurship in public sector institutions, including local government, while it is further argued that the basic steps in the entrepreneurial process should be no different from those in the corporate environment. It is, however, emphasised that the applicable environment differs from the private sector and unique circumstances such as political tendencies and bureaucratic systems will have a prominent impact on innovation, creativity and entrepreneurship in general.

No generic definition of entrepreneurship could be identified that can consistently be applied universally while accommodating different perspectives, dimensions, dynamics and applicable contexts within an agreed framework of reference and scope. With reference to CE, the Sharma and Chrisman (1999) definition of CE as cited by Kuratko *et al.* (2005:701), which defines CE as the process whereby an individual or a group of individuals, in association with an existing organisation, creates a new organisation or instigates renewal or innovation within that organisation, provides in principle a generally appropriate basis for further refinement.

In an organisational context of entrepreneurship, strong support for analysing entrepreneurship in terms of a 'firm-level' perspective could be identified. Such perspective is currently primarily dominated by a strong preference for the EO concept as originally proposed by Covin and Slevin (1991). The firm-level perspective on CE, however, seems to completely ignore original generic fundamental premises related to entrepreneurial behaviour and cognition or to equate 'organisation culture' (firm-level entrepreneurial orientation) to 'individual behavioural' characteristics, which is debateable. Alternative viewpoints could, however, be identified that argue against the evaluation of entrepreneurial variables in terms of the organisation as the unit of analysis (Hjorth, 2003; Kuratko *et al.*, 2005; Stevenson & Jarillo, 1990; Wiklund 1998) and calls are made for analyses on various levels that include individual and middle managers, which are all regarded as having a prominent impact on the overall culture and performance of an organisation. In this regard the concept of an entrepreneurial spiral, as suggested by

Shepherd *et al.* (2010:73,74) (paragraph 2.5), is specifically noted, which suggests “... *a means by which individual-level heuristics might become embedded in the organisational culture in the form of routines, and reciprocally indicate how organisational routines that promote entrepreneurial action may become adopted at the individual level as heuristics.*”

The concept of an entrepreneurial spiral is thus acknowledged as a possible explanation for how both individual behaviour (heuristics) and organisational routines may be informed by each other and evolves over time. This approach necessitates the acknowledgement and accommodation of basic generic entrepreneurial behavioural dimensions as addressed in Chapters 2 and 3 in order to accommodate analyses at both the organisational and individual levels in an organisation.

With reference to the relationship of entrepreneurship and strategic management, different viewpoints could be identified. In some instances authors justify the integration of the relevant concepts, while authors such as Hjorth (2003) and Mintzberg (1994) criticise strategic management concepts and propose that a more tactical approach be accepted to accommodate a more *action-orientated* nature that is an inherent characteristic of entrepreneurship. The need for autonomy, flexibility, speed and experimentation is further highlighted. These are regarded as being in conflict with bureaucratic management approaches, which requires specific behaviour not only to identify opportunities, but rather to create opportunities for innovation by allowing space for active initiative.

Consensus on the measurement of entrepreneurial performance could not be found. Morris *et al.* (2008) propose that entrepreneurial performance be assessed by evaluating the EO (i.e. intensity), while Wiklund (1998) states that different approaches can be followed that measure venture growth or financial performance. In addition, a wide variety of other measurement instruments is available in the general management field, which have not yet been considered or accepted in the entrepreneurial domain of research. It can further be argued that it is essential that the relationship between entrepreneurial performance and overall organisational performance be determined in order to entrench the practical value of entrepreneurship in an institutional context that include public and local government institutions.

In summary, it is thus concluded that a proper evaluation of entrepreneurship in an institutional context, including local government, should accommodate overall organisational performance, the level of entrepreneurial performance with specific reference to the intensity of entrepreneurship, organisational characteristics and key business dimensions of the relevant organisational units, as well as entrepreneurial behaviour at different levels of management in the organisation. The relevant factors as identified on the individual level as well as 'firm-level' are accordingly consolidated in Chapter 5 – to determine an appropriate research methodology framework to address the propositions.

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

5.1 Introduction

Consequent to the theoretical literature review as addressed in Chapters 2 to 4, Chapter 5 describes the empirical study with reference to the background of the identified problem, articulates the research concepts, constructs and the primary question, and explains the theme and applicable hypotheses of the study. The research methodology that was followed is furthermore portrayed by providing a description of sampling and research instruments used, as well as descriptive and inferential statistics applied.

5.2 Research problem

Local government institutions (cities) in South Africa have to become more entrepreneurial to overcome the variety of challenges that they face. Cities are required to deliver more and better services, which they can only do with more/better resources. Cities require capacity and skills to develop revenue-enhancement strategies, actively seeking external funding from outside the usual inter-governmental fiscal system and diversifying existing investment portfolios. Given the scale and pace of change and the importance of cities in regional and national economies, it is important for cities to change bureaucracies, operating methods and existing relationships with national and central government. Currently, however, cities do not display sufficient entrepreneurial skills and behaviour to overcome the challenges that they face. On the one hand local government is responsible for promoting the socio-economic conditions of the community and therefore needs to establish an enabling environment for entrepreneurs. On the other hand, local government itself needs entrepreneurial skills and an entrepreneurial culture to recognise and exploit innovations

and opportunities to reach its strategic intentions, while the current situation indicates a serious lack of skill, competence and capacity.

Traditionally local government mainly applies bureaucratic management approaches based on generally accepted strategic management practices that rely on rational, analytical planning and programming systems that are commonly used in both the public and private sectors. Entrepreneurship, however, concerns itself with distinctive ways of *thinking, behaving and management that promote creativity and innovation*. The creation theory of entrepreneurship suggests an alternative to traditional bureaucratic and strategic management approaches whereby planning and execution are in principle separated by proposing the integration of thinking and acting that is regarded as the source of opportunity creation and exploitation.

The metropolitan local government organisation where the research was conducted accordingly introduced alternative organisation and management structures during 2002 and established separate utilities for trading services such as electricity, water and sanitation, as well as waste management. In addition, independent agencies were created to deal with services concerning roads and storm water, as well as parks, recreation and cemeteries. It is thus prudent to determine whether these interventions contributed to entrepreneurial knowledge creation, had any impact on the actual entrepreneurial characteristics and performance of the relevant entities and departments of the city and whether the behaviour of managerial staff is related to entrepreneurial performance.

The establishment of separate utilities and agencies and maintenance of traditional 'core departments' relate to the concept of CE that requires further assessment and evaluation in order to determine relationships, possible benefits and learning experiences that could promote entrepreneurship in a local government institution. In summary the research problem is thus two fold namely; to determine whether there is a positive correlation between different operating models and structures and entrepreneurial performance of an organisation and secondly, to determine specific managerial behavioural characteristics that relate positively to entrepreneurial knowledge creation and performance.

5.3 Research objectives

In summary, the objectives of the research are to:--

- Determine knowledge creation dimensions that relate to entrepreneurial performance;
- Determine factors that relate to entrepreneurial performance of an organisation/institution in a local government context;
- Determine the nature of relationships that exist between individual behavioural factors (knowledge creation dimension), organisational/institutional factors and entrepreneurial performance in different organisational units of the metropolitan local government organisation; and
- Make inferences about the identified relationships that can be applied in a local government context to improve entrepreneurial performance.

Research was therefore conducted to determine the perceived entrepreneurial performance, organisational characteristics and key business dimensions of core departments and agencies in the metropolitan local government organisation in the first instance; and secondly to determine the levels of RO, CRT, AI and PE at different managerial levels in core departments and agencies as critical dimensions of *learning/knowledge creation*. In the final instance relationships between the perceived entrepreneurial performance, organisational characteristics and key business dimensions of the organisational units of the metropolitan local government, as well as learning styles of staff (knowledge creation dimension) at different managerial levels, of core departments and municipal entities (agencies) were determined.

Confirmed relationships between the identified behavioural tendencies and entrepreneurial performance would thus provide substantiated arguments for the re-alignment of managerial and leadership practices, systems and human development initiatives to

accommodate a balance between the need for monitoring, control and the freedom to act entrepreneurially.

5.4 Research questions

In order to achieve the objectives of the research, the following key research questions are addressed:-

- What are the key knowledge creation dimensions (individual behaviour) related to entrepreneurial performance?
- What are the organisation/institutional factors that relate to entrepreneurial performance in a local government context?
- Is the perceived entrepreneurial performance of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- Are the perceived organisational characteristics and key business dimensions of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- Are factors related to key knowledge creation dimensions (learning styles) of managerial staff in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation and at different managerial levels significantly different?
- Are there significant relationships between the perceived entrepreneurial performance, organisational characteristics and key business dimensions, as well as learning styles (knowledge creation dimension), of managerial staff at different managerial levels and in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation?

The relationship between the 'action' and 'cognitive' propensities of staff refers to knowledge creation dimensions and highlights the extent to which tacit knowledge is converted to explicit knowledge, which might have distinct relationships with entrepreneurial performance that needs to be determined. In addition, the local government environment and context, as well as organisational characteristics of different organisational units in which the research is conducted, affect and are affected by the behaviour (learning styles) of managerial staff that should be taken into account.

The determination of specific factors and development of behaviours and practices that enhance the potential of entrepreneurial success are of critical importance for individual, commercial, corporate and public entrepreneurship, as well to promote socio-economic development at local, national and international level.

5.5 Integration of literature review findings and empirical study design

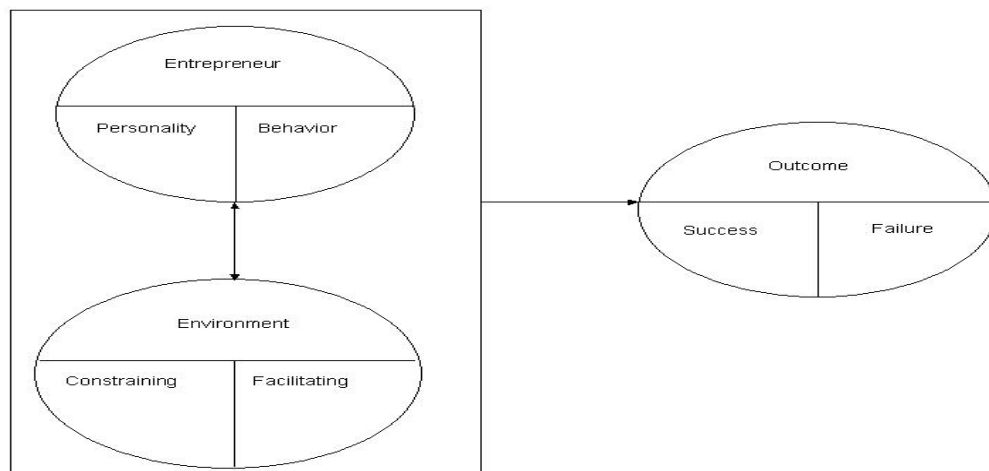
As described in the literature review and summarised in Chapter 1 (paragraph 1.5), several propositions and hypotheses could be identified in terms of the applicable literature review, which contain a variety of concepts, constructs and variables that are regarded as influencing entrepreneurial performance on either the individual or organisation level.

Although the wide spectrum of entrepreneurship perspectives is acknowledged, there is strong agreement that entrepreneurship is not restricted to only business *per se*, but is indeed also evident in a range of circumstances and environments that include 'not-for-profit' organisations and by implication therefore also local government institutions. In accordance with the views of Morris and Kuratko (2002:307), as well as Chell (2000:63), entrepreneurship is regarded as a universal construct but the applicable environment, whether at the individual, new/small business or large organisational/corporate level, has different circumstances and objectives that create a moderating effect, which needs to be taken into account.

In terms of the reasoning of Chell (2000:63) (paragraphs 1.5 and 2.4), entrepreneurship is regarded as a *process* in which the owner-manager's actions are contextually embedded.

The idea of an entrepreneur and of the *entrepreneurial process* is regarded as aspects of the same phenomenon embodied in certain persons at certain times and observable in a series of events. It is further argued that “... *the entrepreneur cannot be isolated from the context*...” and the author provides a valuable and concise summary of the applicable variables related to the entrepreneurial process as discussed in the literature review (Chapters 2, 3 and 4) which is depicted in the following simplified model:

Figure 25: The entrepreneurial process (Chell)



Source: Chell (2000:63)

The empirical study was accordingly designed in terms of the key variables as portrayed by Chell (200:63) and a conceptual model of the related interactions between the variables were constructed as depicted and discussed in figure 1 (Paragraph 1.5). The environment as presented in figure 25 relates to the context in which entrepreneurship is practised and can thus be regarded as referring to the local government environment and specifically the metropolitan local government organisation where the research was conducted. In accordance with the reasoning of Chell (2000:63), it is thus implied that entrepreneurial success/failure of the metropolitan local government organisation would be jointly affected by the personalities and individual behaviour of staff members and the applicable organisational environment of the local government institution.

The central notion of the entrepreneur as depicted by Chell and the related inherent entrepreneurial behaviour/activities in different contexts or environments as primary antecedent of entrepreneurial performance, is accordingly acknowledged by a variety of authors (Aldrich & Martinez, 2001; Alvarez & Barney, 2007; Gartner, 1989; Hitt *et al.*, 2002; Mitchell *et al.*, 2005; Stevenson & Jarillo, 1990; Ucbasaran *et al.*, 2001; Pretorius *et al.*, 2005). Recently extensive acknowledgement has also highlighted the critical role and impact of individual-level entrepreneurial behaviour in the CE context (Covin & Slevin, 1991; Davidson & Wiklund, 2001; Frese, 2009; Hjorth, 2003; Holt *et al.*, 2007; Huczynski & Buchanan, 2001; Kuratko *et al.*, 2005; Shepherd *et al.*, 2010; Stevenson & Jarillo, 1990; Zahra, 1993). In this regard the definition of CE as stated by Kuratko *et al.* (2005:701) is accepted, namely that, *“Corporate entrepreneurship (CE) is the process whereby an individual or group of individuals, in association with an existing organisation, create a new organisation or instigate renewal or innovation within that organisation”*.

The arguments of Wiklund (1998) with respect to EO in the context of firm-level behaviour (CE) is also acknowledged. In this regard the author argues that EO alone is not the key to performance but one of several contributing ingredients and it is thus regarded that EO and entrepreneurial behaviour are not the same concept and that the two concepts should not be confused. According to Wiklund (1998), EO comprises two components. One is *action-orientated*, resulting in actual entrepreneurial behaviour that is labelled *strategic action*. The other component does not have a strong link to entrepreneurial behaviour but rather reflects the mental orientation or *way of thinking, which is not necessarily put into action*. The fact that EO involves these ‘softer’ characteristics that are not converted into action probably contributes to reducing the explanatory power in the EO-performance relationship, according to the author. Wiklund concludes that the measurement of EO is useful but far from perfect. A measurement instrument that more clearly reflects strategic action would probably increase the explanatory power of EO, in the view of the author.

The observations of Wiklund (1998) are supported by the findings of Baum *et al.* (2003) (paragraph 3.8) who indicates that entrepreneurs who prefer to learn through *concrete experience* and *active experimentation* and who have high *practical intelligence* achieve

higher venture growth. These findings are also consistent with the recent prominent emphasis on 'action', as well as the '*spiral*' concept and the '*creation theory of entrepreneurship*'. In the light of these findings the recommendation of Baum *et al.* (2003), namely that a more complete study should be performed on *learning styles*, is accepted.

The reasoning of Dess and Lumpkin (2005) with respect to the proposed concept of EO at firm level is further questioned, since it might relate more directly to individual behaviour. The primary difficulty with the proposed concept is thus that 'organisation culture' (EO) is portrayed as synonymous with individual behaviour. Such a conclusion is not supported in organisational behaviour theories and is also questioned by Frese (2009:463). It is therefore postulated that the concept of EO should rather be seen in the context of individual behaviour as the core point of reference that interactively influences and is influenced by a variety of factors in an organisation, such as the particular environment, organisational characteristics and culture. Such individual behavioural factors are generic in nature and would therefore also be directly applicable to staff of public/local government institutions.

In the context of the above-mentioned definition and in accordance with the arguments of Baum *et al.* (2003) Nonaka and Takeuchi (1995) and Wiklund (1998), it can be deduced that behaviour that promotes entrepreneurial knowledge creation consists of dimensions related to 'a way of thinking', such as CAP and an 'action orientation' defined as PAP. These dimensions, which are together labelled EP, are possible enablers of entrepreneurial knowledge creation and subsequent performance. The identified constructs relate to 'knowledge creation' dimensions (learning styles) as referred to by Nonaka and Takeuchi (1995), as well as Baum *et al.* (2003), and further extend and specifically integrate the creation theory of entrepreneurship highlighted by Alvarez and Barney (2007:26, 28) and the 'action theory perspective' of entrepreneurship highlighted by Frese (2009:433), as depicted in figure 1 (Chapter 1, paragraph 1.5).

According to Subramaniam (2005:51, 52) organisational learning is dependent on the intellectual capital and on the skills and knowledge of organisational members where learning results in constant acquisition of knowledge. The author postulates that

organisational learning links itself to cognition and action and it is suggested that for learning to take place at the organisational level, information first needs to be obtained and processed and secondly an outcome in terms of action has to occur. In accordance with the reasoning of Subramaniam (2005), it is postulated that CAP and PAP are key constructs that relate to the behavioural dimensions of managerial staff of the metropolitan local government organisation and its organisational units, which enable *knowledge creation* and competence development through learning that might have positive correlations with entrepreneurial performance.

The 'knowledge creation' dimension as portrayed in figure 1 (Chapter 1) differs from EO and 'proactiveness' at the firm level, as described by Dess and Lumpkin (2005) in the following sense:-

- Entrepreneurial orientation is defined as 'firm-level' behaviour in the CE context with the organisation as unit of analysis, according to Frese (2009:463), while the 'knowledge creation dimension' as proposed refers to individual behaviour on both operational and management levels on which the collective nature of organisational culture (firm-level EO) is dependent.
- Proactiveness refers to a forward-looking perspective characteristic of a market leader that has the foresight to seize opportunities in anticipation of future demand, according to Dess and Lumpkin (2005:148).
- The proposed 'knowledge creation dimension', however, refers to a continuous propensity to act in pursuit of long-term entrepreneurial objectives, thereby shaping change that creates opportunities for exploitation and innovation.
- The primary nature and focus of 'proactiveness' are the identification of possible pre-existing opportunities for the future and acting in advance to exploit these, i.e. 'discovery of pre-existing opportunities'. In contrast to a 'once-off' discovery situation, the proposed knowledge creation dimension refers to a continuous spiral of recursive action (constituting a procedure that repeats) that enables knowledge conversion from tacit to explicit, '*shapes*' change and creates opportunities for exploitation and innovation in pursuit of prosperity.

The similarity of AI, PE and RO with ‘*networking*’ dimensions as an accepted enabler of entrepreneurship should further be noted and emphasised. These factors are regarded as including ‘*networking*’ dimensions within the behavioural dimension that results in continuous engagement and feedback from the relevant environment, enabling knowledge creation and learning that shape change over time to create opportunities for exploitation.

As further also highlighted by Morris *et al.* (2008:330), the entrepreneurial climate of an organisation and the environment in which it functions can either facilitate or constrain entrepreneurial performance and as such has a moderating effect that needs to be taken into account. In terms of the research conducted, the environment and organisational climate (culture) refer to the local government context, specifically the metropolitan local government organisation where the research was conducted, which has particular influences and moderating effects on entrepreneurial performance.

While acknowledging that entrepreneurship represents a dynamic process defined by multiple actors situated in a specific context, the concept of a ‘*spiral*’ as originally defined by Nonaka and Takeuchi (1995:57-61) as the basis of knowledge creation, and subsequently introduced in the entrepreneurship field by both Ropo and Hunt (1995:106), and Shepherd *et al.* (2010:60), is further specifically noted. The ‘*spiral*’ concept and ‘*knowledge creation*’ dynamics (behavioural dimension) of entrepreneurship are based on similar antecedents defined in the ‘*creation theory of entrepreneurship*’ and share baseline premises, which argue that entrepreneurial behaviour actually ‘*shapes*’ change and creates opportunities for exploitation and innovation by means of continuously recursive and progressive actions. In the light of these arguments the ‘*spiral*’ concept as an alternative view related to the entrepreneurial process, dynamics and methodology, has been accepted.

In summary, as depicted in figure 1 (Chapter 1, paragraph 1.5) the following key constructs related to the defined hypotheses had to be measured:

- Entrepreneurial performance, with specific reference to the level of entrepreneurial intensity of organisational units in the metropolitan local government organisation;

- Organisational characteristics and business dimensions as variables related to firm-level EO (organisational culture) of the metropolitan local government organisation's organisational units; and
- Knowledge creation dimensions (learning styles) that facilitate EP and competencies which include the concepts of CAP and PAP with the following related variables:-

Cognitive analytical propensity (cognitive dimension)

- RO
- CRT.

Progressive action propensity (active dimension)

- AI
- PE.

Cognitive analytical propensity is based on learning style preferences as described by Honey and Mumford (1992:15) and refers to a preference for cognitive activities (thinking) instead of active engagement in physical behaviour or activity that is defined as follows:

- 'Reflective observation' is defined as a behavioural tendency to stand back to ponder experiences and observe them from many different perspectives. It refers to the collection of data, both first-hand and from others, and the preference to think about it thoroughly before coming to any conclusion. The thorough collection and analysis of data about experiences and events are regarded as of paramount importance, resulting in a tendency to postpone reaching definitive conclusions for as long as possible. The preference is to be cautious and to consider all possible angles and implications before making a move. Key behavioural characteristics include carefulness, good listening skills, holding back from participation, being methodical, refraining from jumping to conclusions, being slow to decide, thorough and thoughtful.
- 'Cognitive reasoning tendency' is defined as the tendency to adapt and integrate observations into complex but logically sound theories. Problems are thought through in a vertical, step-by-step, logical way. Disparate facts are assimilated into coherent

theories. Related behaviour tends to be of a perfectionist nature and the person will not rest easy until things are tidy and fit into a rational scheme. Preference is given to analysis and synthesising, with a keen interest in basic assumptions, principles, theories, models and systems thinking. Key considerations and preferences are analysis, rationality and logic. Behavioural characteristics include discipline, intolerance of subjective intuitive ideas, being logical, low tolerance of uncertainty and ambiguity, objectiveness, being parental in approach and being rational.

Progressive action propensity is also based on learning style preferences, as described by Honey and Mumford (1992:16), and refers to a preference for physical behaviour or activity instead of cognitive activities (thinking) that is defined as follows:

- 'Active initiative' is defined as a tendency to become involved fully and without bias in new experiences. It refers to open-mindedness and non-sceptical behaviour showing enthusiasm for anything new. The general practice is to 'try anything once', to act first and consider the consequences afterwards. Continuous activity is a key priority, problems are tackled by brainstorming and as soon as the excitement from one activity has died down, a new experience is identified. New experiences are regarded as a challenge but implementation and longer-term consolidation are viewed as boring. Key behavioural characteristics include flexibility, getting bored with consolidation, being happy to give things a try, open-mindedness, optimism about change, rushing into action without thorough preparation, taking immediate obvious action and taking unnecessary risks.
- 'Pragmatic execution' is defined as a tendency to try out ideas, theories and techniques to see if they work in practice. It refers to a positive search for new ideas and taking the first opportunity to experiment with applications. The preference is to try out new ideas in practice, to get on with things and act quickly and confidently on ideas that are regarded as attractive. Key behavioural preferences include practicality, a down-to-earth attitude, practical decision-making, solving problems, a business-like approach, getting to the point, dislike of theory, impatience with waffle, keenness to

test things out in practice, realism, rejecting ideas without clear application and being task- and technique-focused.

In addition, the local government context related to the metropolitan local government organisation in which the research was conducted constitutes the environment that influences entrepreneurial behaviour and moderates entrepreneurial performance. In this regard the organisational characteristics and business dimensions of the city's relevant organisational units needed to be assessed. The environment as the context in which entrepreneurship occurs, whether at an individual or organisational level, facilitates or constrains entrepreneurial performance.

5.6 Hypotheses

5.6.1 Defined hypotheses

In accordance with the identified research problem and questions as well as the stipulated constructs and variables as indicated and discussed in paragraph 1.5 (figure 1) and paragraph 5.5, the hypotheses as detailed in Chapter 1 paragraph 1.7 have thus been formulated with the following main themes:-

- Perceived entrepreneurial performance of departments and agencies;
- Perceived organisational characteristics and key business dimensions of departments and agencies;
- Knowledge creation dimensions (learning styles) of managerial staff with specific reference to:
 - Progressive action propensity levels as reflected by AI and PE, and
 - Cognitive analytical propensity levels as reflected by RO and CRT;
- Correlation between PAP levels of managerial staff and entrepreneurial performance;
- Correlation between CAP levels of managerial staff and entrepreneurial performance;
- Correlation between the perceived organisational characteristics and key business dimensions of organisational units with entrepreneurial performance.

5.6.2 Type of hypotheses

According to Cooper and Schindler (2003:50-51), descriptive hypotheses are propositions that typically state the existence, size, form, or distribution of some variable. Relational hypotheses are statements that describe a relationship between two variables with respect to some case. Correlational hypotheses merely state that the variables occur together in some specified manner without implying that one causes the other. With explanatory (causal) hypotheses there is, however, an implication that the existence of, or change in, one variable causes or leads to a change in another variable.

The formulated hypotheses for the study are accordingly defined as descriptive and relational, since they postulate a certain state/distribution, as well as correlation, without implying that the existence of, or change in, one variable causes or leads to change in another.

The relevant dependent and independent variables related to the relevant hypotheses are accordingly depicted in figure 1 (Chapter 1, paragraph 1.5).

5.6.3 Hypothesis testing

The purpose of hypothesis testing is to determine the accuracy of the stipulated hypotheses by determining the statistical likelihood that the data will reveal true differences. Cooper and Schindler (2003:521) mention that two approaches to hypothesis testing exist, namely classical statistics and Bayesian statistics. Classical statistics represent an objective view of probability in which the decision-making rests totally on an analysis of available sampling data. Bayesian statistics are an extension of the classical approach that also use sampling data for decision-making but go beyond that to consider all other available information, including subjective probability estimates stated in terms of degrees of belief.

The accuracy of hypotheses is determined by the statistical likelihood that the data reveal true differences. According to Cooper and Schindler (2003:521), a statistically significant difference is evaluated by weighing the practical significance of any change that is measured. A hypothesis is rejected or accepted on the basis of sampling information alone

and it is therefore important to assess whether differences are statistically significant or insignificant. A difference has statistical significance if there is good reason to believe that it does not represent random sampling fluctuations only. Diamantopoulos and Schlegelmilch (2004:140) indicate further that a test of significance assesses the strength of the evidence against the null hypothesis in terms of probability. If the observed outcome is unlikely under the supposition that the null hypothesis is true, but is more probable if the alternative hypothesis is true, the outcome is evidence against accepting the null hypothesis.

The t-test for independent samples was conducted to evaluate the differences in the means of the core departments and agencies and to determine the probability that the two corresponding means are different. An ANOVA was further done on the dependant variables, namely sub-scales one (1) to four (4) with the independent variables i.e. managerial level and organisational unit and the interaction between these variables, to test whether the population means are equal. A normal Blom transformation was used to comply with the assumptions of equal variances and the normal distribution of the residuals.

In order to determine a measure of association, the Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) was used to reveal the magnitude and direction of relationships.

The hypotheses testing is presented in chapter 6, Research Findings.

5.7 Research methodology

5.7.1 Research design

Cooper and Schindler (2003:146) indicate that research design constitutes the blueprint for the collection, measurement and analysis of data. The plan and structure of an investigation should be designed in such a manner as to obtain answers to research questions. Research studies can be classified as exploratory or formal. The essential distinctions between the two options are the degree of structure and the immediate objective of the study. The immediate purpose of exploratory studies is usually to develop hypotheses or questions

for further research. Formal studies take the process forward and usually begin with a hypothesis or research question and involve precise procedures and data source specifications. The goal of formal research design is to test the hypothesis or answer the research questions proposed, according to the authors.

The study has been designed as an exploratory as well as formal empirical research study. The exploratory study was directed at clarifying constructs and determining variables that were used to adjust the selected questionnaires to organisation-specific circumstances. The study was conducted by means of an analysis of secondary data that was mainly organisation-specific, as well as academic literature. The formal study was directed at assessing associations among the identified variables that relate to entrepreneurial performance in a local government context.

5.7.2 Purpose of study

The purpose of the research study is to determine whether:

- Knowledge creation variables as related to the behavioural dimension of entrepreneurship, namely cognitive and active learning style propensities of managerial staff at different levels, relate to the entrepreneurial intensity and performance of organisational units in a local government context;
- Organisational characteristics and key business dimensions of different organisational units in the metropolitan local government organisation as variables related to ‘firm-level’ entrepreneurial culture/orientation, relate to entrepreneurial intensity and performance in a local government context; and
- There is a relationship between organisational characteristics and key business dimensions of different organisational units and the cognitive and active learning style propensities of managerial staff at different levels, in the context of a local government institution.

In order to achieve the purpose of the study, the following variables had to be measured:-

- The perceived entrepreneurial performance, organisational characteristics and key business dimensions of core departments and agencies at the metropolitan local government organisation;
- The levels of RO, CRT, AI and PE of managerial staff at different levels in core departments and agencies; and
- Relationships between the perceived entrepreneurial performance, organisational characteristics and key business dimensions in the context of the metropolitan local government organisation, as well as the learning styles (behavioural dimension) of managerial staff at different core departments and municipal entities (agencies).

5.7.3 Topical scope

According to Cooper and Schindler (2003:150), topical scope refers to the depth or breadth of a study. Statistical studies are designed for breadth rather than depth and attempt to capture a population's characteristics by making inferences from the sample's characteristics. According to the authors, hypotheses are tested quantitatively and generalisations about findings are presented based on the representativeness of the sample and the validity of the design. Case studies, however, place more emphasis on a full contextual analysis of fewer events or conditions and their interrelations. Although hypotheses are often used, the reliance on qualitative data makes support or rejection more difficult.

The empirical method performed in this study is based on a statistical study directed at the capturing of the population's characteristics by making inferences from the sample's characteristics.

5.7.4 Sampling

Diamantopoulos and Schlegelmilch (2004:10) mention that a sample is a subset of a population, which is the totality of entities that elicit interest. The population of the study consists of the managerial staff of a metropolitan local government organisation in South Africa up to reporting level six (6), totalling 2 954 staff members.

Sampling means that certain population elements will be excluded from the sample; that causes sampling error, which refers to the difference between a result based on a sample and that which would have been obtained if the entire population were studied. Probability sampling refers to a procedure whereby each element in the population has a known, non-zero probability of being included in the sample while non-probability sampling refers to a selection of sampling elements left to the discretion of the researcher and no explicit scientific model is used to assess the degree of sampling error. The difference between probability sampling and non-probability sampling methods is not that the former will always produce a more representative sample than the latter, but rather that with the former a statistical evaluation of sampling error can be undertaken, thus enabling the researcher to assess how likely the sample is to be unrepresentative and by how much (Diamantopoulos & Schlegelmilch, 2004:13).

The study made use of a non-probability, judgemental sample. In determining the sample size the following factors, as indicated by Cooper and Schindler (2003:190), were considered: dispersion of variance, desired precision, interval range, confidence level and number of subgroups. Purposeful samples were drawn to include departments as well as municipal entities that realised high as well as low performance in terms of internal performance measurement evaluations. Three core departments as well as two independent municipal entities of the metropolitan local government organisation, which are registered as Section 21 companies, were selected as independent samples. Senior, middle and operational managerial staff up to reporting level six (6) in the selected departments and entities of the city represents the sample elements that amount to 1 020 staff members. The selected sample constitutes 34,53% of the entire population.

5.7.5 Data collection and instruments

Diamantopoulos and Schlegelmilch (2004:1) mention that the objective of data collection is always to secure responses from an individual with regard to certain characteristics of interest. Together, units of analysis, variables and values make up what is referred to as 'data'. The individuals approached are referred to as units of analysis, while the

characteristics studied are referred to as variables and the responses are known as values. The unit of analysis in the study was the selected organisational units, namely core departments and municipal entities, as well as individual managers up to reporting level six (6) in the different organisational units of the metropolitan local government organisation.

Primary data are collected with a specific purpose in mind and are usually gathered by the researcher via surveys, experiments or observation methods. Secondary data are data which have not been gathered expressly for the immediate study at hand but for some other purpose but that might be relevant to the project. In terms of the classification of data, the time dimension distinguishes between data relating to a single point of time and data relating to a number of time periods. From an analysis point of view the distinction between the two are important, because it determines whether inferences regarding change can be made. Data related to a single point of time are known as cross-sectional data while those relating to a number of periods are referred to as longitudinal data (Diamantopoulos & Schlegelmilch, 2004:5). The data collected for the study were cross-sectional data.

Cooper and Schindler (2003:223-227) further indicate that for each concept or construct, several types of data are possible. Each data type has its own set of underlying assumptions about how the numerical symbols correspond to real-world observations. The term 'nominal data' refers to information on a variable that naturally or by design can be grouped into two or more categories that are mutually exclusive and collectively exhaustive. Ordinal data include the characteristics of the nominal scale plus an indicator of order, while interval data have the power of nominal and ordinal data plus one additional strength, including the concept of equality of interval. Ratio data incorporate all the powers of the former data types mentioned plus provision for absolute zero or origin.

The parameters of interest and types of data associated with the population constructs and relevant variables as indicated in figure 1 (paragraph 1.5) are reflected in table 7 below.

Table 7: Parameters of interest and data types

Parameters of interest	Type of data
Entrepreneurial orientation (Firm level) (Moderating variables)	
Organisational characteristics	Ordinal
Key business dimensions	Ordinal
Organisational performance (Dependent variables)	
Rating of client customer satisfaction	Ratio
Rating of organisational effectiveness	Ratio
Rating of organisational efficiency	Ratio
Percentage of annual targets/objectives met	Ratio
Percentage of annual budget spent during past 2 years	Ratio
Entrepreneurial performance (dependent variable)	
Rating of new product/service introductions compared to competitors	Ordinal
Number of new products/services identified in past two years.	Ratio
Number of new products/services successfully introduced in past two years.	Ratio
Number of new product/service introductions compared to competitors	Ratio
Number of new methods/processes identified in past two years.	Ratio
Number of new methods/processes successfully introduced in past two years.	Ratio
Number of methods/processes introduced compared to industry average	Ratio
Number of new venture opportunities identified in past two years.	Ratio
Number of new venture opportunities successfully established in past two years.	Ratio
Number of new ventures opportunities introduced compared with industry average	Ratio
Progressive action propensity (independent variable)	
Degree of AI	Ratio
Degree of PE	Ratio
Cognitive analytical propensity (independent variable)	
Degree of RO	Ratio
Degree of CRT	Ratio

A self-administered structured questionnaire attached as Annexure A was used for the purposes of the empirical study in view of the following advantages:

- Instruments that have been developed through research with an identified reference group;
- Analysed statistically for validity and reliability;
- User-friendly scoring system; and
- Ease of comparing similarities and/or differences between groups.

As indicated in paragraph 1.11.3, the questionnaire comprised two sections, namely Section A that measures learning styles (behavioural patterns), which is based on the Honey and Momford (1992:89-91) LSQ, and Section B that assesses the perceived entrepreneurial performance as well as organisational characteristics and key business dimensions as dimensions of 'firm-level' entrepreneurial orientation, which is based on the EPI of Morris and Kurakto (2002:291 – 294).

Owing to the different access that senior and operational managerial staff has to electronic systems, questionnaires were distributed to staff on operational management level, while electronic versions were made available to senior managerial staff. A covering letter describing the study and ensuring confidentiality was provided.

For the purpose of the exploratory study, open-ended interviews with randomly selected managers and staff members were conducted to identify variables and determine adjustments required on the selected questionnaires. Since it is critically important to determine whether respondents understand the content of a questionnaire, a pilot test was conducted prior to final distribution.

5.7.5.1 Honey and Momford learning style questionnaire

The LSQ is popular and has been used extensively by British trainers and developers as a means of assessing learners. Its use in psychometric studies has made an important contribution to the learning style concept, according to Swailes and Senior (1999:10). As indicated in paragraph 3.8, Berings *et al.* (2008:427) concluded that the dimensions indicate

learning activities that can effectively be directed by the learners themselves and are applicable to the preparation of work, the performance of work and the innovation of work. According to the author they are applicable to both explicit and implicit learning processes and a social learning dimension is also included.

According to Honey and Mumford (1992) the LSQ comprises 80 statements, which respondents are asked to tick or cross, indicating broad agreement or disagreement respectively. It comprises an ordinal staple scale. The aim is to discover general behavioural trends and no item carries more weight than another. The 80 statements comprise four subsets of 20 randomly ordered items, each subset measuring a particular learning style. The four styles are broadly equivalent to the four stages of Kolb's learning cycle. *Activists* learn through involvement in new experiences, becoming bored with implementation and longer-term consolidation. *Reflectors* learn by observing events from different perspectives, collecting and analysing data about them. *Theorists* learn through integrating observations into a conceptual framework, relying on rationality and logic to achieve a synthesis. *Pragmatists* learn by testing ideas, theories and techniques to see if they work in practice, using them as a basis for decision-making and problem-solving (Honey & Mumford, 1992:5,6,9).

The LSQ is scored by awarding one point for each ticked item and no points for crossed items. Thus the maximum possible score for each learning style is 20. Raw scores are meaningful only when viewed in the context of normative data. Honey and Mumford (1992) provide norms for the LSQ based on studies of 1 302 British managers and professionals.

For the purpose of the research analysis the relevant dimensions and subsets of the LSQ have been labelled as indicated below to provide a clearer description of behavioural dimensions that are in line with the terminology identified in the literature review:-

- 'Doing' dimension renamed to 'Progressive Action Propensity' (PAP)
- 'Activist' renamed to 'Active Initiative'
- 'Pragmatist' renamed to 'Pragmatic Execution'
- 'Thinking' dimension renamed to 'Cognitive Analytical Propensity' (CAP)

- 'Theorist' renamed to 'Cognitive Reasoning Tendency'
- 'Reflector' renamed to 'Reflective Observation'.

5.7.5.2 Entrepreneurial performance Index

The EPI of Morris and Kurakto (2002:291 – 294) captures both the degree and frequency of entrepreneurship, as well as underlining dimensions of innovativeness, risk-taking and proactiveness. In addition, product, service and process innovation are covered. The original questionnaire consisted of 28 questions grouped into three distinct sections that measure a company/organisation's orientation (organisational characteristics) and key business behavioural dimensions, as well as the entrepreneurial intensity. The questionnaire is based on an ordinal Likert scale.

In order to accommodate all the constructs and dimensions identified in the literature review, nine additional questions as indicated below have been added:-

- Overall organisational performance
Five additional questions were added to evaluate perceptions related to the organisational unit's client/customer satisfaction, effectiveness in delivering services, efficiency, percentage of annual targets and objectives achieved, and annual budget spending.
- Entrepreneurial intensity
In order to distinguish between the number of new ventures, products/services and systems/processes *identified* and those successfully *implemented*, one additional question was added to each section related to entrepreneurial intensity to include a question on the number of interventions successfully *implemented*. In total, four additional questions were thus added to the original questionnaire under the applicable section.

5.7.6 Measurement of constructs

In the view of Cooper and Schindler (2003:231), the characteristics of good measurement refer in the first instance to an accurate counter or indicator of what is being measured. In

addition, it should be easy and efficient to use. The three primary criteria for evaluating a measurement tool are validity, reliability and practicality. Validity refers to the extent to which a test measures what is actually required for measurement; reliability has to do with the accuracy and precision of a measurement procedure and practicality is concerned with a wide range of factors of economy, convenience and interpretability.

It is indicated in the Electronic Statistical Textbook (2010) that the statistical significance of a result is the probability that the observed relationship (e.g. between variables) or a difference (e.g. between means) in a sample occurred by pure chance, and that in the population from which the sample was drawn, no such relationship or differences exist. The statistical significance of a result tells something about the degree to which the result is 'true' (in the sense of being 'representative of the population'). The value of the p-value represents a decreasing index of the reliability of a result. The higher the p-value, the less one can believe that the observed relation between variables in the sample is a reliable indicator of the relation between the respective variables in the population. Specifically, the p-value represents the probability of error that is involved in accepting an observed result as valid, that is, as 'representative of the population'.

Results that are significant at the $p \leq .05$ level are commonly considered statistically significant, and $p \leq .01$ levels are often called "highly" significant.

5.7.6.1 Validity of measurement instruments

Validity is referred to in a number of contexts to reflect the appropriateness of the research measures and findings. Cooper and Schindler (2003:231-233) mention two major forms: external and internal validity. External validity refers to the data's ability to be generalised to other settings, persons and times. Internal validity is referred to as the extent to which differences found with a measuring tool reflect true differences among respondents being tested. According to the authors, one widely accepted classification consists of three major forms of validity, namely content validity, criterion-related validity and construct validity. Content validity is the extent to which it provides adequate coverage of the investigative questions guiding the study. Criterion-related validity reflects the success of measures used

for prediction or estimation, while construct validity refers to the presence of abstract characteristics for which no empirical validation seems possible.

The EPI and LSQ have both been used widely in various research projects in which validity and reliability were reported. Dhliwayo (2007:183, 185), Groenewaldt (2010:164), Morris and Kuratko (2002:291) and Morris and Sexton (1996:9) respectively reported validity, consistency and reliability for the EPI. In the case of the LSQ (Section A of the research questionnaire), Honey and Mumford (1992:80) mention that the instrument's validity has been found to be largely accurate.

Honey and Mumford (1992:80) reported the following correlations between the four learning styles of the LSQ:

Table 8: Correlations between four learning styles: Honey and Mumford

	Activist	Reflector	Theorist	Pragmatist
Activist	x	-0.013	0.097	0.299
Reflector	-0.013	x	0.71	0.42
Theorist	0.097	0.71	x	0.54
Pragmatist	0.299	0.42	0.54	x

Source: Honey and Mumford (1992:80)

In accordance with the information provided in table 8 above, the authors mention that the most likely common combinations of learning styles in descending order of likelihood are:-

- 1st: Reflector/Theorist
- 2nd: Theorist/Pragmatist
- 3rd: Reflector/Pragmatist
- 4th: Activist/Pragmatist

In the view of Honey and Mumford (1992:80), combinations of activist/reflector and activist/theorist are less likely to occur, since in both cases the correlation between these styles is very low or close to zero.

Honey and Mumford (1992:17), however, also indicate that some researchers have suggested that there are only two learning styles or orientations, doing and thinking. The doing orientation tends to overlap with a combination of activist and pragmatist, while the thinking orientation overlaps with reflector and theorist (Grimbeek, 2006:87). In this regard Allison and Hayes (1988:273) reported the following loadings of the LSQ sub-scales on two factors:-

Table 9: Allison and Hayes comparison of loadings of LSQ sub-scales on two factors

Sub-scale	India		United Kingdom	
	Analysis	Action	Analysis	Action
Active Initiative (Activist)	0.20	0.85	0.06	0.81
Reflective Observation (Reflector)	0.39	0.70	0.07	-0.80
Cognitive Reasoning Tendency (Theorist)	0.81	0.28	0.68	-0.56
Pragmatic Execution (Pragmatist)	0.87	0.21	0.93	0.15
Eigenvalue	1.66	1.27	1.18	1.78
Percentage of variances explained	41.5	31.8	29.6	44.5

Source: Allison and Hayes (1988:273)

Duff (1997:270) indicates that the LSQ is applicable to management trainees' training and the author further cites Fung (1993) who found that the LSQ had some predictive validity when learning styles scores were related to preferences for different learning activities. Hawk and Shah (2007:13) indicated that there is solid support for instrument validity and reliability, while Allison and Hayes (1988:276) indicated that some evidence of construct validity exists that justifies the construction of the analyst and action concepts. In addition, Penger and Tekavcic (2009:12, 13) confirmed the logic/applicability of the Honey and Mumford learning style theory and indicated that four extracted factors appropriately characterise the dimensionality of the data.

Although alternative views on the factor structure of the LSQ have been noted, various authors confirmed a four-factor structure as the best fit and the relevant findings have thus been accepted (Cockerton, Rukhsana & Sheppard, 2002:516; Duff, 2001:194; Honey & Mumford, 1992:79; Penger & Tekavcic, 2009:11-12; Swailes & Senior, 1999:9,).

5.7.6.2 Reliability of measurement instrument

Muchinsky Kriek and Schreuder (1998:68-70) indicate that reliability refers to the consistency or stability of a measure. A measure should yield the same estimate on repeated use when the measured trait has not changed. According to Cooper and Scindler (2003:239), Cronbach's alpha has most utility for multi-item scales at the interval level. Schwab (1999:346-47) also mentions that a common method to estimate reliability is the Cronbach's alpha coefficient. It measures how well a set of items (or variables) measures a single one-dimensional latent construct. When data have a multidimensional structure, Cronbach's alpha coefficient will usually be low. Technically speaking, Cronbach's alpha coefficient is not a statistical test, but a coefficient of reliability (or consistency) according to the authors. The coefficient can be written as a function of the number of test items and the average inter-correlation among the items. The alpha coefficient increases when the number of items increases. In addition, if the average inter-item correlation is low, the alpha coefficient will be low. As the average inter-item correlation increases, Cronbach's alpha coefficient increases as well and there is then evidence that the items are measuring the same underlying construct. The higher the coefficient is, the more reliable the test is. Although there is no agreed cut-off point, an alpha coefficient of 0.7 and above is generally regarded as acceptable.

In addition, the Carmines' Theta coefficient can be used as an alternative measure of reliability and internal consistency that account for multidimensionality.

As indicated in paragraph 5.7.6.1, several studies by various authors reported consistency and reliability test results for the EPI (Dhliwayo, 2007:183, 185; Groenewaldt, 2010:164; Morris & Kuratko, 2002:291; Morris & Sexton, 1996:9).

With respect to the LSQ, Honey and Mumford (1992:79) mention that reliability is high for an instrument of this kind. The correlation (Pearson's product moment coefficient of correlation) between sets of results was a very satisfactory 0.89. People with strong theorist and reflector preferences were most consistent, with correlations of .95 and .92 respectively. Pragmatists produced test-retest consistency of .87 and activists were least consistent with a correlation of 0.81. The authors further cite D.K Wilson of Sunderland Business School who also found high reliability with test-retest results ranging from 0.80 for reflectors to 0.86 for activists. Grimbeek (2006:16) cites Duff (2001) who relates several studies by various authors who reported wide-ranging consistency and reliability of test results, but the author recommends caution.

Duff (2001:189) provides the following summary of internal consistency reliability estimates on the LSQ reported in previous research:

Table 10: Learning Style Questionnaire internal consistency reliability estimates reported in previous research

<i>Study</i>	<i>Subjects</i>	<i>n</i>	<i>Coefficientα</i>			
			<i>Activist</i>	<i>Reflector</i>	<i>Theorist</i>	<i>Pragmatist</i>
Allinson and Hayes (1988)	UK managers	127	0.58			0.74
	African and Indian managers	40	0.71			0.63
Sims <i>et al.</i> (1989)	US business students	270	0.68	0.68	0.78	0.75
Fung <i>et al.</i> (1993)	Hong Kong undergraduate students	381	0.39	0.42	0.33	0.31
Tepper <i>et al.</i> (1993)	US undergraduate students	227	0.75	0.76	0.67	0.52
De Ciantis and Kirton (1996)	British and Irish managers	185	0.76	0.76	0.67	0.64

Source: Duff (2001:189)

In addition, Duff (2001:190) reports the following alpha coefficients obtained during a study involving undergraduate accounting students at a UK university:

Table 11: Internal consistency reliability estimates for the LSQ - Duff

Scale	N	Coefficient
Activist	126	0.71
Pragmatist	87	0.52
Reflector	124	0.73
Theorist	97	0.63

Source: Duff (2001:190)

Although the above results portrayed by Duff can be accepted as adequate, they should still be regarded as low in terms of standard requirements.

Cockerton *et al.* (2002:515), Penger and Tekavcic (2009, 11-12) and Swailes and Senior (1999:4) found modest alpha coefficients for the LSQ that suggested responses for the four scales are satisfactorily consistent and close to satisfactory. Penger and Tekavcic (2009, 11-12) accordingly reported the following reliability coefficients, which are satisfactory:

Table 12: Reliability (Cronbach alpha coefficients) of Honey and Momford's learning styles

Factors	Cronbach Alpha
Pragmatist	0.744
Reflector	0.743
Activist	0.688
Theorist	0.630

Source: Penger and Tekavcic (2009:12)

5.7.7 Factor analysis

Diamantopoulos and Schlegelmilch (2004) indicate that factor analysis refers to a range of techniques of which the aims are to describe a larger number of variables by means of a smaller set of composite variables called factors. According to the authors, there are two main types of factor analysis, namely common factor analysis and principal component analysis. Common factor analysis focusses on the common variance (i.e. the variance shared among the original variables) and seeks to identify underlying dimensions known as factors. Principal component analysis, on the other hand, focuses on the total variance (i.e. the

entire variation in the data set) and seeks to reduce the original set of variables to a smaller set of composite variables, which are uncorrelated to one another. The key difference between principal component analysis and common factor analysis is that, in the former case, the sole aim is to reduce the original set of variables to a smaller set of composite variables (components). In contrast, common factor analysis focusses explicitly on the interrelationships among the original variables and seeks to describe them in terms of common underlying dimensions; the focus is thus on explaining patterns of relationships among the original variables by means of a factor structure (Diamantopoulos & Schlegelmilch, 2004:216).

According to Cooper and Schindler (2003:635-636) the objective of factor analysis is to reduce to a manageable number many variables that belong together and have overlapping measurement characteristics. Factor analysis begins with the construction of a new set of variables based on the relationship in the correlation matrix. Although this can be done in a number of ways, the most frequently used approach is principal component analysis. This method transforms a set of variables into a new set of composite variables or principal components that are not correlated with one another. These linear combinations of variables, called factors, account for the variance in the data as a whole. The best combination makes up the first principal component and is the first factor. The second principal component is defined as the best linear combination of variables for explaining the variance not accounted for by the first factor. In turn there may be a third or more components. The correlation coefficients determined as such are referred to as factor loadings.

Cooper and Schindler (2003:637) indicate further that factor analysis is largely used for exploration, since one can detect patterns in latent variables, discover new concepts and reduce data. Factor analysis is also applied to test hypotheses with confirmatory models.

An explanatory examination of the LSQ (Section A of the research questionnaire) factor structure was therefore performed. Since dichotomous data are not really suitable for factor analysis, a principal component analysis on the *four sub-scales* as apposed to the

scores on the individual items was done to evaluate construct consistency, validity and reliability and to test the homogeneity of the underlying constructs. A direct quartim rotation for simple loadings with Kaisers normalisation was performed and the results are discussed in Chapter 6: Research Findings.

5.7.8 Data processing and analysis

5.7.8.1 Data processing

The primary focus of the analysis is to test the hypotheses as stated in paragraph 1.7, concerning the variables of interest, and to use the evidence provided to draw conclusions regarding these propositions for the population as a whole.

Questionnaires were distributed in hard copy as well as by electronic media to senior managers and responses were captured directly by data processors from the University of Pretoria onto SAS software. For the analysis of quantitative data aspects of the questionnaires, the SAS of the University of Pretoria's Statistics Department was used. For comparative purposes; statistical tools were used, such as principal component factor analysis for Section A of the questionnaire, the t-test for independent samples and ANOVA and Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) to determine measures of association.

5.7.8.2 Descriptive statistics

Descriptive statistics provide a very useful initial examination of the data even when the ultimate concern is inferential in nature (i.e. involving estimation and/or hypothesis testing. The purpose of descriptive statistics is specifically to provide preliminary insights as to the nature of the responses obtained, as reflected in the distribution of values for each variable of interest. It further helps to detect errors in the coding process and provide means for presenting the data in a digestible manner through the use of tables and graphs (Diamantopoulos & Schlegelmilch, 2004:73).

An important aspect of the ‘description’ of a variable is the shape of its distribution, which portrays the frequency of values from different ranges of the variable (Electronic Statistical Textbook, 2011). The descriptive statistic used most often is the mean. The mean is a particularly informative measure of the ‘central tendency’ of the variable if it is reported along with its confidence intervals. Interest in descriptive statistics such as the mean is important in view of the extent to which one can infer information about the population. The *confidence intervals* for the mean give a range of values around the mean where one expects the ‘true’ (population) mean is located (with a given level of certainty). The width of the confidence interval depends on the sample size and on the variation of data values. The larger the sample size, the more reliable the mean is; the larger the variation, the less reliable the mean is. The calculation of confidence intervals is based on the assumption that the variable is normally distributed in the population. The estimate may not be valid if this assumption is not met, unless the sample size is large, i.e. more than 100.

Descriptive statistics for the study are presented in Chapter 6 : Research Findings.

5.7.8.3 Inferential statistics

When the focus of analysis is on estimation or hypothesis testing, inferences from the sample are made and the process is formally known as statistical inference. The various techniques employed are commonly referred to as inferential statistics, according to Diamantopoulos and Schlegelmilch (2004:65). The t-test and ANOVA which are appropriate methods of analysis to evaluate differences in the means of two independent groups (core departments and agencies) as well as multiple groups (various managerial levels) respectively, were used. The t-test and ANOVA accept similar applicable underlying assumptions namely:

- observations are independent,
- observations in each group are a random sample from a population with a normal distribution, and
- variances for the two independent groups are equal

The assumption of equal variances is automatically tested in the t-test and it allows for the application of an alternative test to use when the assumption is not met (Satterthwaite test). The assumption of normality is accommodated in accordance with the central limit theorem (CLT) which states that the means of sufficiently large number of independent random samples will be approximately normally distributed (Schlotzhauer, 2009: 35).

a) T-test for independent samples

Cooper and Schindler (2003:534, 535) recommend the z and t-tests for interval and ratio measurement scales of independent samples and indicate that when the sample sizes approach 120, the sample standard deviation becomes a very good estimate of the σ (variance) and beyond 120 the t and z distributions are virtually identical. Lomax (2007:126) mentions in addition that the independent t-test is fairly robust to abnormality in most situations. Since the sample sizes are greater than 120 and the variances are not equal in all instances, the t-test for independent samples with the Satterthwaite test statistic for unequal variances was conducted. The Satterthwaite test statistic is an alternative to the pooled-variance t-test and is used when the assumption that the two populations have equal variances seems unreasonable (Statistical Consulting Group, 2011). It provides a t-statistic that asymptotically (that is, as the sample sizes become large) approaches a t-distribution, allowing for an approximate t-test to be calculated when the population variances are not equal.

The t-test was conducted to evaluate the differences in the means of the core departments and agencies with respect to entrepreneurial intensity, organisational characteristics, key business dimensions and overall performance and to determine the probability that the two corresponding population means were different at a 95% confidence level and 5% probability (alpha level $p < 0.05$).

b) Analysis of variance

According to Cooper and Schindler (2003:546) the statistical method for testing the null hypothesis that the means of several populations are equal, is the ANOVA. ANOVA uses a

single-factor, fixed-effect model to compare the effects of one factor on a continuous dependent variable. The test statistic for ANOVA is the *F-ratio*. The mean square is formulated by means of the *F-ratio*. If the null hypothesis is true, there should be no difference between the populations and the ratio should be close to 1. If the population means are not equal, the *F-ratio* should be greater than 1. The *F-distribution* determines the size of ratio necessary to reject the null hypothesis for a particular sample size and level of significance. Together with the *F-statistic* a p-value is calculated. If the *p-value* < 0.05 , the null hypothesis is rejected. If the *p-value* is ≥ 0.05 the null hypothesis is not rejected because the means of all groups do not differ significantly. Cooper and Schindler (2003:546) indicate further that in order to use ANOVA, samples must be randomly selected from normal populations, and the populations should have equal variances. In addition, the distance from one value to its group's mean should be independent of the distances of other values to that mean (independence of error). ANOVA is reasonably robust, and minor variations from normality and equal variances are tolerable.

The two-way ANOVA test was accordingly used to test whether the population means of the null hypotheses are equal, if the means of the alternative hypotheses are not equal and to determine the interaction between factors.

c) Test for association and correlation

According to Muchinsky *et al.* (1998:26-27), a relationship refers to the correlation between two variables. The nature or pattern of a relationship is of further importance. While all relationships indicate the correlation between two variables, there is a special type of relationship that holds that the two variables are not only in correlation, but that one causes the other. This is the key distinction between a simple correlation relationship and a causal relationship. A correlation relationship simply indicates that two things perform in a synchronised manner. Two variables might be correlated but simply knowing that they are correlated does not indicate whether one causes the other. According to the authors, it is essential to be careful when interpreting correlations. There are several terms to describe the main different types of patterns one might find in a relationship. Firstly, no relationship

may exist. Secondly, a positive relationship may exist. In a positive relationship, high values on one variable are associated with high values on the other and low values on one are associated with low values on the other. On the other hand, a negative relationship implies that high values on one variable are associated with low values on the other. This is also sometimes termed an inverse relationship.

A statistical procedure that is useful in determining a relationship is called the correlation coefficient, according to Muchinsky *et al.* (1998). A correlation coefficient reflects the degree of linear relationship between two variables and ranges from -1.00 to $+1.00$, where $+1.00$ or -1.00 indicates a perfect relationship and 0.00 indicates no linear relationship. A correlation of 0.80 , for instance, indicates a very strong relationship, whereas a correlation of 0.10 indicates a very weak relationship (Muchinsky *et al.*, 1998:32-34).

In order to determine a measure of association, the Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) has been used to reveal the magnitude and direction of relationships.

5.8 Conclusion

The chapter described the research methodology as applied in the research and identified the research problem in the first instance, whereafter the primary objectives were stated. The hypotheses as detailed in Chapter 1 were summarised in terms of primary themes and the type of hypothesis was defined. In addition, measures to test the hypotheses were identified. The specific methodology used, as defined in the research design, was subsequently described by covering sampling, data collection methods, instruments used and the measurement of research instruments. Data processing and analysis methods were finally stipulated, indicating also applicable descriptive and inferential statistics used.

The population size for the study was 2954 managerial staff members and a purposeful sample of all managers up to level 6 was drawn from selected departments as well as municipal entities that realised high as well as low performance in terms of internal performance measurement totalling 1020 managers. Data were collected by means of self-

administered questionnaires. Apart from descriptive statistics, inferential statistics were also used.

The t-test for independent samples was conducted to evaluate the differences in the means of the core departments and agencies and to determine the probability that the two corresponding population means were different. Since five independent samples were drawn, the two-way ANOVA test was used to test whether the population means of the null hypotheses were equal and the means of the alternative hypotheses were unequal. In order to determine a measure of association, the Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) was used to reveal the magnitude and direction of relationships. Finally, the reliability of the analysis was evaluated by determining Cronbach's alpha coefficients.

The following chapter (Chapter 6) reports on the research results and interprets the findings.

CHAPTER 6: RESEARCH FINDINGS

6.1 Introduction

The results of the empirical study are reported in the chapter in a tabular format. Initially the response rate and demographic data are reflected, whereafter the results obtained from the factor analysis and inferential statistics are depicted.

In summary, the literature study as presented in Chapters 2 to 4 revealed the following:-

- A variety of inherent basic individual characteristics, competencies and behavioural factors are considered to relate positively to entrepreneurial performance, such as creativity, innovation, risk-taking, alertness, motivation, critical versus creative thinking, cognitive analytic ability, action orientation, networking, intuition, alertness, assertiveness, desire for autonomy, need for achievement, internal locus of control, adaptability and flexibility, competitiveness, business skills, knowledge, experience, management skills, etc.
- Two primary behavioural dimensions facilitate individual intuition, learning and knowledge creation to promote entrepreneurial behaviour through the conversion of tacit knowledge to explicit knowledge, namely the “active” and “cognitive” dimensions.
- Entrepreneurship is regarded as a universal construct that is applicable to any environment, including the public sector and local government, and the basic steps in the entrepreneurial process should be no different in the public sector context.
- Organisations do not exist on itsr own but are regarded as a collection of individuals who determine the nature of the organisation’s behaviour.

- Industry and organisational characteristics, such as an organisational culture, structure, resources, human resource and management practices related to the environment in which entrepreneurship is practised, have a distinct impact on individual behaviour as well as entrepreneurial performance and are in turn affected by individual behaviour at different levels of an organisation.
- Bureaucratic and political dynamics in public and local government institutions are regarded as prominent factors that determine organisational characteristics and cultures and affect individual staff behaviour and entrepreneurship that are distinct from private corporate environments.
- In an organisational context, different units of analysis that accommodate the organisation as a whole, as well as individual dimensions at different levels, should be accommodated to capture the variety of factors that affect entrepreneurial performance in an interactive manner.
- The relationship of entrepreneurial performance with the overall performance of an organisation should be considered to enable proper value determination.

In accordance with the findings of the literature review and the relevant hypotheses as defined in Chapter 1 (paragraph 1.7) the following constructs were assessed in the different municipal entities (agencies) and core departments of the metropolitan local government organisation:

- Entrepreneurial performance, with specific reference to the level of entrepreneurial intensity;
- Organisational characteristics and key business dimensions as variables related to firm-level EO (organisational culture),
- Individual knowledge creation dimensions (learning styles) at different managerial levels that include the concepts of CAP and PAP of managerial staff with the following related variables:

Cognitive Analytical Propensity

- RO

- CRT.

Progressive Action Propensity

- AI
- PE.

The relationships of the different constructs and variables that were assessed are depicted in figure 1 (paragraph 1.5).

The EPI was used to assess the perceived entrepreneurial performance as well as organisational characteristics and key business dimensions of core departments and agencies as dimensions of firm-level EO as adopted from Morris and Kurakto (2002:291-294), while knowledge creation dimensions (learning styles) were assessed with the Honey and Mumford LSQ (Honey & Mumford, 1992:89-91).

6.2 Descriptive statistics

As indicated in paragraph 5.7.6.2, descriptive statistics provide a very useful initial examination of the data even when the ultimate concern is inferential in nature (i.e. involving estimation and/or hypothesis testing) and provides measures of location (mean, frequency), shape (skewness) and measures of spread (variance and standard deviation). The purpose of descriptive statistics is specifically to provide preliminary insights into the nature of the responses obtained, as reflected in the distribution of values for each variable of interest. It further helps to detect errors in the coding process and provides means for presenting the data in a digestible manner through the use of tables and graphs (Diamantopoulos & Schlegelmilch, 2004:73).

The results of the empirical study are accordingly reported in a tabular format. Initially the applicable response rate and demographic data are reflected, whereafter the results obtained from the factor analysis and inferential statistics are depicted.

6.2.1 Response rate

Senior, middle and operational managerial staff up to reporting level six (6) in municipal entities (agencies) and core departments of the metropolitan local government organisation as indicated below represented the sample elements that amounted to 1 020 staff members (34,53% of the applicable population):

- Core departments
 - Department of Development Planning and Urban Management
 - Department of Community Development
 - Department of Health.
- Municipal entities (agencies)
 - Johannesburg Roads Agency (municipal entity)
 - City Power (municipal entity).

One thousand and twenty (1 020) questionnaires were distributed to all applicable managerial staff in the relevant units. Four hundred and seventy-three questionnaires (473) were returned, of which 38 were invalid/incomplete, resulting in 435 being accepted, that translates to a final response rate of 42,65%. In view of the inherent nature of the survey and relative high response rate obtained, non-response biasness was not considered as potentially significant.

The response rates of the municipal entities (agencies) and core departments were as follows:

- Core departments 41,9% (268 of 639)
 - Development Planning and Urban Management Department: 26,3% (54 of 205)
 - Community Development Department: 44,9% (93 of 207)
 - Health Department: 53,3% (121 of 227)
- Municipal entities (agencies) 43,8% (167 of 381)
 - Johannesburg Road Agency: 45,5% (81 of 178)
 - City Power: 42,4% (86 of 203).

6.2.2 Managerial level

Results obtained per managerial level in the different samples are as follows:

Figure 26: Managerial level distribution per samples

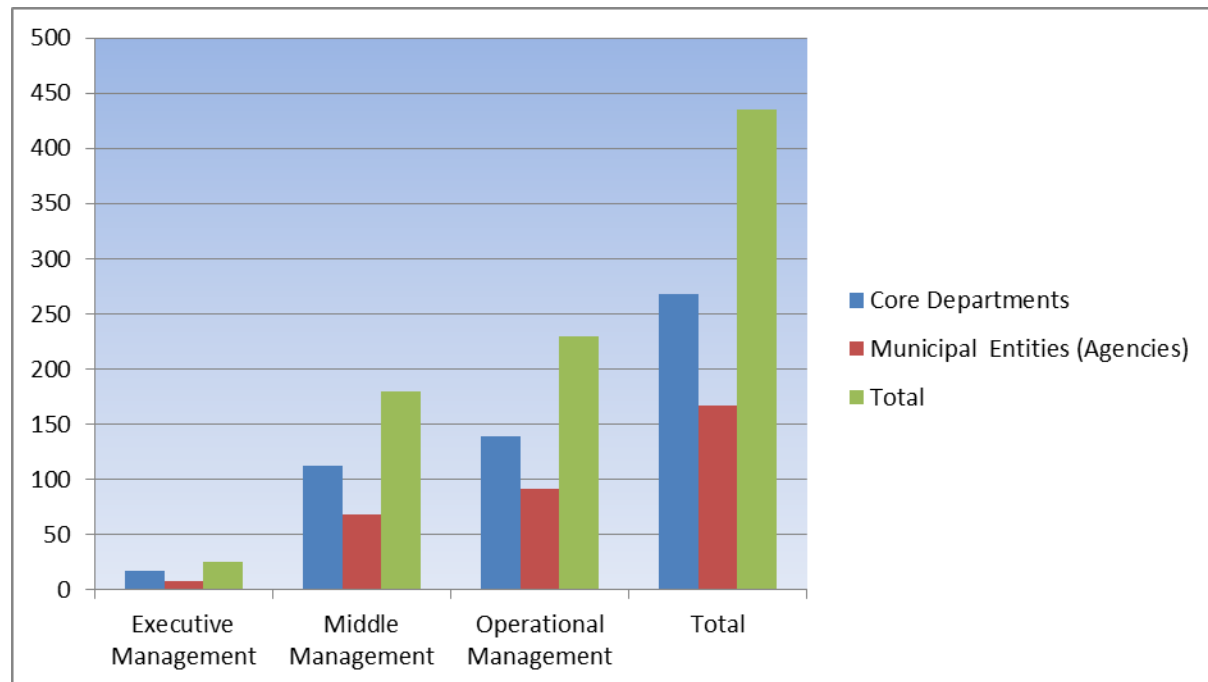


Table 13: Managerial level distribution per samples

		Senior Management		Operational Management
		Executive Management	Middle Management	
Development Planning and Urban Management Department	Frequency (n) (54)	3	30	21
	Percentage (%)	5,5%	55,5%	38,8%
Community Development Department	Frequency (n) (93)	8	43	42
	Percentage (%)	8,6%	46,2%	45,1%
Health Department	Frequency (n) (121)	6	39	76

		Senior Management		Operational Management
		Executive Management	Middle Management	
	Percentage (%)	4,9%	32,2%	62,8%
Total COJ core departments	Frequency (n) (268)	17	112	139
	Percentage (%)	6,3%	41,7%	51,8%
Johannesburg Road Agency	Frequency (n) (81)	4	29	48
	Percentage (%)	4,9%	35,8%	59,2%
City Power	Frequency (n) (86)	4	39	43
	Percentage (%)	4,65%	45,3%	50%
Total Municipal Entities (Agencies)	Frequency (n) (167)	8	68	91
	Percentage (%)	4,8%	40,7%	54,5%
Grand Total	Frequency (n) (435)	25	180	230
	Percentage (%)	5,75%	41,38%	52,87%

6.2.3 Gender

Results obtained per gender categories in the different samples are as follows:

Table 14: Gender category distribution per samples

		Male	Female
Development Planning and Urban Management Department	Frequency (n)(54)	30	24
	Percentage (%)	55,5%	44,4%
Community Development Department	Frequency (n)(93)	48	45
	Percentage (%)	51,6%	48,3%

		Male	Female
Health Department	Frequency (n)(121)	31	90
	Percentage (%)	25,6%	74,3%
Total COJ core departments	Frequency (n) (268)	109	159
	Percentage (%)	40,7%	53,4%
Johannesburg Road Agency	Frequency (n)(81)	56	25
	Percentage (%)	69,1%	30,8%
City Power	Frequency (n)(86)	68	18
	Percentage (%)	79%	20.9%
Total municipal entities (agencies)	Frequency (n) (167)	124	43
	Percentage (%)	74,3%	25,7%
Grand total	Frequency (n)	233	202
	Percentage (%)	53,56%	46,44%

6.2.4 Age

Results obtained per age categories in the different samples are as follows:

Table 15: Age category distribution per sample

		29 years or less	30-39 years	40 years or more
Development Planning and Urban Management Department	Frequency (n)(54)	4	19	31
	Percentage (%)	7,4%	35,2	57,4
Community Development Department	Frequency (n)(93)	3	33	57
	Percentage (%)	32,2%	35,5%	61,3%

		29 years or less	30-39 years	40 years or more
Health Department	Frequency (n)(121)	1	20	100
	Percentage (%)	0,8%	16,5%	82,6%
Total COJ core departments	Frequency (n) (268)	8	72	188
	Percentage (%)	2,9%	26,9%	70,1%
Johannesburg Road Agency	Frequency (n)(81)	5	22	54
	Percentage (%)	6,2%	27,1%	66,7%
City Power	Frequency (n)(86)	5	38	43
	Percentage (%) (86)	5,8%	44,1%	50%
Total municipal entities (agencies)	Frequency (n) (167)	10	60	97
	Percentage (%)	5,9%	35,9%	58,1%
Grand total	Frequency (n)	18	132	285
	Percentage (%)	4,1%	30,3%	65%

6.2.5 Qualification level

Results obtained per qualification level in the different samples are as follows:

Table 16: Qualification level distribution per samples

		Up to Grade 12 (NQF 4)	Graduate (NQF 5)	Post-graduate or higher (NQF 6 <)
Development Planning and Urban Management Department	Frequency (n)(54)	9	37	8
	Percentage (%)	16,6%	68,5%	14,8%
Community Development Department	Frequency (n)(93)	12	61	20
	Percentage (%)	12,9%	65,6%	21,5%

		Up to Grade 12 (NQF 4)	Graduate (NQF 5)	Post-graduate or higher (NQF 6 <)
Health Department	Frequency (n)(120)	12	93	15
	Percentage (%)	10%	77,5%	12,5%
Total COJ core departments	Frequency (n) (268)	33	191	43
	Percentage (%)	12,3%	71,3%	16%
Johannesburg Road Agency	Frequency (n)(80)	20	49	11
	Percentage (%)	25%	61,3%	13,8%
City Power	Frequency (n)(86)	3	69	14
	Percentage (%)	3,4%	80,2%	16,2%
Total municipal entities (agencies)	Frequency (n) (167)	23	118	25
	Percentage (%)	13,8%	70,7%	15%
Grand total	Frequency (n)(433)	56	309	68
	Percentage (%)	12,9%	71,4%	15,7%
NQF = National Qualification Framework				

6.2.6 Years' working experience

Results obtained per number of years' working experience in the different samples are as follows:

Table 17: Years' working experience per sample

		Up to 5 years	6 to 9 years	10 years or more
Development Planning and Urban Management Department	Frequency (n)(54)	3	4	47
	Percentage (%)	55,6%	74%	87%
Community Development Department	Frequency (n)(93)	5	13	75
	Percentage (%)	5,4%	13,9%	80,6%
Health Department	Frequency (n)(121)	1	0	120
	Percentage (%)	0,8%	0%	99,2%
Total COJ core departments	Frequency (n) (268)	9	17	242
	Percentage (%)	3,4%	6,3%	90,3%
Johannesburg Road Agency	Frequency (n)(80)	7	5	69
	Percentage (%)	8,8%	6,3%	86,3%
City Power	Frequency (n)(86)	0	14	72
	Percentage (%)	0%	16,2%	83,7%
Total municipal entities (agencies)	Frequency (n) (167)	7	19	141
	Percentage (%)	4,2%	11,4%	84,4%
Grand total	Frequency (n)(435)	16	36	383
	Percentage (%)	3,7%	8,2%	88,1%

6.3 Factor analysis

As indicated in paragraph 5.7.6.2, the literature review confirmed general consensus on the construct validity of the EPI and the relevant findings are thus accepted. However, with reference to the LSQ (Section A of measuring instrument), criticism and alternative

viewpoints on the factor structure have been noted that required further analysis and evaluation.

As discussed in paragraph 5.7.5.6, common factor analysis focusses on the common variance (i.e. the variance shared among the original variables) and seeks to identify underlying dimensions known as factors. Principal component analysis, on the other hand, focuses on the total variance (i.e. the entire variation in the data set) and seeks to reduce the original set of variables to a smaller set of composite variables, which are uncorrelated to one another. The key difference between principal component analysis and common factor analysis is that, in the former case, the sole aim is to reduce the original set of variables to a smaller set of composite variables (components). In contrast, common factor analysis focusses explicitly on the interrelationships among the original variables and seeks to describe them in terms of common underlying dimensions; the focus is thus on explaining patterns of relationships among the original variables by means of a factor structure (Diamantopoulos & Schlegelmilch, 2004:216).

An explanatory examination of the LSQ (Section A of the research questionnaire) factor structure was therefore performed. Since dichotomous data are not really suitable for factor analysis, a principal component analysis on the *four sub-scales* as apposed to the scores on the individual items was done to evaluate construct consistency, validity and reliability and to test the homogeneity of the underlying constructs. A direct quartim rotation for simple loadings with Kaisers normalisation was performed. The results obtained are portrayed in tables 18, 19 and 20 below.

Table 18: Learning Style Questionnaire: Squared multiple correlations and Eigen values of four sub-scales

Components	Squared Multiple Correlations (SMC)	Variance Explained (Eigen Value)	Communality obtained from two factors	Cumulative Proportion of variance		Carmines Theta Coefficient
				In data space	In Factor Space	
1	0.15915	1.7773	0.8197	0.4443	0.5915	0.5831
2	0.24668	1.2273	0.6541	0.7511	1.0000	

Components	Squared Multiple	Variance Explained	$\mu \exists \sigma$	Cumulative Proportion of variance		Carmines Theta
3	0.37117	0.5834	0.7498	0.8970		
4	0.29157	0.4120	0.7809	1.0000		

As reflected, two components or dimensions emerged with Eigen values of more than 1 that explain 75% of the variance in the data set. The communalities of sub-scales with the two components extracted ranges from .6541 to .8197, suggesting that the number of extracted components was appropriate. Component 1, labelled CAP, suggests a dimension measuring the extent to which a theoretical, analytical and thinking approach is adopted in contrast to active experimentation. The second component, labelled PAP, relates to behaviour that portrays AI, personal engagement and a tendency to experiment. The distinction in the two identified components relates to 'thinking' and 'doing' dimensions as highlighted by authors such as Kolb (1976), cited by Duff (2001:190), and Allison and Hayes (1988:270, 273), as well as Grimbeek (2006:87). Since a successful factor analysis explains a large proportion of variance with very few factors, the analysis can be regarded as successful. The Carmines' Theta coefficient of 0.58 as an alternative measure of reliability and internal consistency that accounts for multidimensionality should be noted as moderate in terms of generally accepted standards.

Table 19: Loadings of sub-scales on components

Sub-scales	Component 1 Cognitive Dimension (Cognitive Analytical Propensity)	Component 2 Active Dimension (Progressive Action Propensity)
F1: Active Initiative (Activist)	-0.229	0.877
F2: Reflective Observation (Reflector)	0.774	-0.238
F3: Cognitive Reasoning Tendency (Theorist)	0.865	0.032
F4: Pragmatic Execution (Pragmatist)	0.612	0.635

Sub-scales	Component 1 Cognitive Dimension (Cognitive Analytical Propensity)	Component 2 Active Dimension (Progressive Action Propensity)
F4: Pragmatic Execution (Pragmatist)	0.612	0.635
Variance Explained Percentage (%)	1.775 44.3%	1.230 30.75%

As expected, a high positive loading emerged for sub-scale 1 (AI) on component 2 with a low negative loading on component 1, while sub-scales 2 and 3 (RO and CRT) both loaded high on component 1 and either low or negatively on component 2. In contrast to the expectation that sub-scale 4 (pragmatic execution) would load positively on component 2 and low or negatively on component 1, it is of interest to note that in fact it loaded high on both components, indicating cross-loading with no discriminate validity that indicates it should be omitted. All other factor loadings, which show the relations between the observed variables and latent dimensions, are more than 0.45 and the difference between the two loadings is significantly more than 0.10.

Although the results are similar to the findings of authors such as Honey and Mumford (1992:80), Cockerton *et al.* (2002:511), Duff (2001:190) and Swailes and Senior (1999:5), who all reported low or negative correlations between activist and reflector, as well as theorist sub-scales, it differs in terms of the results obtained for the pragmatist sub-scale.

In this regard Duff (2001:190) reported low to moderate positive correlations between pragmatist and theorist, activist and reflector sub-scales, while Cockerton *et al.* (2002:511) found very low to moderate correlations between pragmatist and activist, as well as theorist sub-scales. Cockerton *et al.* (2002:511), as well as Swailes and Senior (1999:5), however, reported negative correlations between the pragmatist and reflector sub-scales.

The results obtained relate to Kolb's (1976) suggestion of two bipolar style dimensions, as cited by Allison and Hayes (1988:269), and the findings of Allison and Hayes (1988:270), who reported low to moderate positive correlations between pragmatist and activist, as well as

theorist, sub-scales for a sample extracted from the United Kingdom. It differs, however, from the authors' findings of a low positive correlation of 0.37 between reflector and activist sub-scales, as well as a negative correlation between pragmatist and reflector sub-scales. The research results relate more positively to the findings of the authors in terms of a sample extracted in India that found low to moderate positive correlations between pragmatist and activist, reflector and theorist sub-scales, while low negative correlations were reported for the activist and reflector as well as theorist sub-scales (Allison and Hayes, 1988:270).

The two primary components extracted from the component analysis, namely analysis and action dimensions, further relate to similar dimensions extracted by Allison and Hayes (1988:275). However, the authors presented the analysis dimension as a combination of the theorist and pragmatist sub-scales, while the Action dimension is represented by the activist and reflector sub-scales in accordance with the proposed learning model of Kolb (1976). This composition differs from that proposed by Grimbeek (2006:87) and the results of this research study, as portrayed in table 20 above.

Table 20: Correlations between components

	Component 1 Cognitive dimension (Cognitive Analytical Propensity)	Component 2 Active dimension (Progressive Action Propensity)
Component 1 Cognitive dimension	1.000	
Component 2 Active dimension	0.004	1.000

As indicated in table 20 above, the correlation between the two extracted components is close to zero, indicating no correlation with an orthogonal structure, meaning that one might score high on one and low on the other, or high or low on both. In summary, the results revealed two primary components, namely a cognitive dimension (CAP) which is represented by RO (reflector) and CRT (theorist) sub-scales and an active dimension (PAP)

that is represented by the AI (activist) sub-scale. The pragmatist sub-scale loaded on both. These results are similar to the findings of Allison and Hayes (1988:275), who identified two similar dimensions although the identified representative sub-scales differ.

In view of substantial differences that occur in the literature on the nature of the factor structure of the LSQ and the dominant view that four sub-scales are the best fit, as highlighted by Cockerton *et al.* (2002:516), Duff (2001:194), Honey and Mumford (1992:79), Penger and Tekavcic (2009:11-12) and Swailes and Senior (1999:9), the present study retained the four sub-scales for all remaining analyses.

6.4 Entrepreneurial performance, characteristics and key business dimensions of departments and Agencies

6.4.1 T-test for independent samples

The t-test was conducted to evaluate the differences in the means of core departments and agencies with respect to entrepreneurial intensity, organisational characteristics, key business dimensions and overall performance and to determine the probability that the two corresponding population means were different at a 5% probability (alpha level $p < 0.05$). As indicated in paragraph 5.7.8.3 (a), Cooper and Schindler (2003:534, 535) recommend the z and t-tests for interval and ratio measurement scales of independent samples and indicate that when the sample sizes approach 120, the sample standard deviation becomes a very good estimate of the σ (variance) and beyond 120 the t and Z distributions are virtually identical.

The hypotheses that were tested for each set of sub-scales/variables are as follows:-

$$H_0: \mu_A = \mu_B$$

$$H_a: \mu_A \neq \mu_B.$$

The mean value and standard deviation for each of the sub-scales and variables were calculated from the raw scores. If the p-value is less than the pre-specified alpha level of 0.05, it will be concluded that the difference is significantly different from zero.

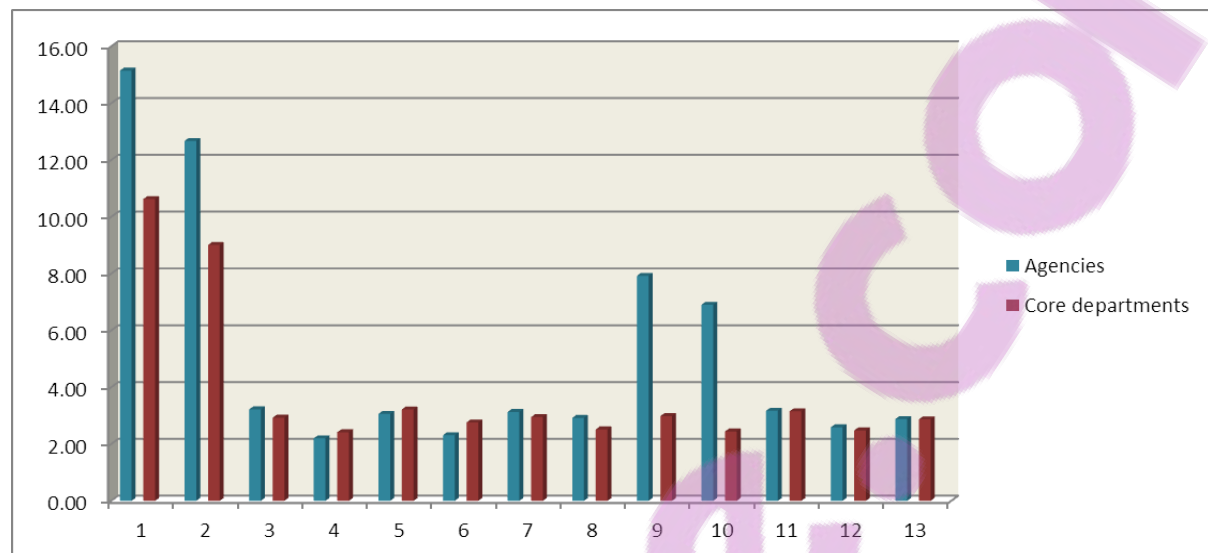
The results obtained are portrayed in table 21 below.

Table 21: T-test statistics for agencies and core departments

Variables	Agencies		Core departments		Satterthwaite (unequal)	
	Mean	StdDev	Mean	StdDev	T value	P value
Number of ventures, products, services, processes /systems <i>identified</i>	15.1481	34.5016	10.6265	14.3917	1.58	0.1155
Number of ventures, products, services, processes /systems <i>introduced</i>	12.6707	34.0619	9.008	14.0635	1.31	0.1931
Number of new ventures Identified (V111)	3.220472	6.520923	2.9267	5.06743	0.43	0.6684
Number of new ventures implemented (V112)	2.2	4.543331	2.41237	4.54284	-0.41	0.6804
Number of new products/services identified (V115)	3.057971	3.890411	3.21818	5.59498	-0.32	0.7498
Number of new products/services introduced (V116)	2.309859	3.122063	2.75664	5.62677	-0.98	0.3288
Number of existing products/services service revisions <i>identified</i> (V117)	3.126866	3.73446	2.94714	4.70613	0.4	0.6892
Number of existing products/services service revisions <i>introduced</i> (V118)	2.918519	7.516203	2.51542	4.64334	0.56	0.5744
Number of new methods/processes/systems identified (V123)	7.921053	33.20567	2.98319	2.75584	1.83	0.0693 p***
Number of new methods/processes/systems successfully <i>implemented</i> (V124)	6.903226	32.79863	2.44118	2.43105	1.69	0.0929 p***
Organisational characteristics	3.1704	0.4128	3.1533	0.4379	0.41	0.6807
Key business dimensions	2.5868	0.4529	2.477	0.55	2.26	0.0242 p**
Overall performance	2.879	0.6938	2.8649	0.6203	0.21	0.8301
P ** Statistical significance at the 5% level						
P*** Statistical significance at the 10% level						

A graphical presentation of the relevant mean scores is portrayed in figure 27 below.

Figure 27: Mean scores - Entrepreneurial performance, characteristics and key business dimensions of departments and agencies



Legend

Legend		7	Existing products/services identified for revision (V117)
1	No of ventures, products, services, processes/systems identified	8	Existing products/services revised (V118)
2	No of ventures, products, services, processes/systems introduced	9	New methods/processes/systems identified (V123)
3	New ventures identified (V111)	10	New methods/processes/systems introduced (V124)
4	New ventures introduced (V112)	11	Organisational characteristics
5	New products/services identified (V115)	12	Key business dimensions
6	New products/services introduced (V116)	13	Overall performance

6.4.2 Entrepreneurial performance (intensity) (Hypotheses H1o to H10o)

In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H1o, H2o, H3o, H4o, H5o, H6o, H7o, H8o, H9o and H10o. (Only the null hypotheses are mentioned.)

The differences in the means of core departments and agencies were in the first instance grouped and evaluated in terms of the following sub-scales:-

- Number of ventures, products/services, and systems/processes *identified* (V111, V115, V117, V123), and
 - Number of ventures, products/services, and systems/processes *successfully introduced* (V112, V116, V118, V124)
- a) Number of ventures, products/services, and systems/processes *identified* (Hypotheses H1o and H1a)

Based on the results ($P = 0.1155$) ***the alternative hypothesis H1a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies report similar numbers of ventures, products/services, and systems/processes *identified* during the past two years.

- b) Number of ventures, products/services, and systems/processes *successfully introduced* (Hypotheses H2o and H2a)

Based on the results ($P = 0.1931$), ***the alternative hypothesis H2a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of ventures, products/services, and systems/processes *introduced*, during the past two years.

- c) Number of new ventures *identified* (Hypotheses H3o and H3a)

Based on the results ($P = 0.6684$) ***the alternative hypothesis H3a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of new ventures *identified*.

- d) Number of new ventures *implemented* (Hypotheses H4o and H4a)

Based on the results ($P = 0.6804$) ***the alternative hypothesis H4a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of new ventures *implemented*.

- e) The number of new products/services *identified* (Hypotheses H5o and H5a).

Based on the results ($P = 0.7498$) **the alternative hypothesis H5a is rejected** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of new products/services *identified*.

- f) The number of new products/services *introduced* (Hypotheses H6o and H6a).

Based on the results ($P = 0.3288$) **the alternative hypothesis H6a is rejected** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of new products/services *introduced*.

- g) The number of existing products/service revisions *identified* (Hypotheses H7o and H7a)

Based on the results ($P = 0.6892$) **the alternative hypothesis H7a is rejected** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of existing products/service revisions *identified*.

- h) The number of existing products / service revisions *introduced* (Hypotheses H8o and H8a)

Based on the results ($P = 0.5744$) **the alternative hypothesis H8a is rejected** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of existing products/service revisions *introduced*.

- i) The number of new methods, operational processes, or systems *identified* (Hypotheses H9o and H9a)

Based on the results ($P = 0.0693$) ***the alternative hypothesis H9a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar numbers of new methods, operational processes or systems *identified* at a 5% level of probability. It is, however, noted that the differences in the mean scores is significant at a 10% level of probability.

- j) The number of new methods, operational processes or systems successfully *implemented* (Hypotheses H10o and H10a)

Based on the results ($P = 0.0929$) ***the alternative hypothesis H10a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is not significant on the 5% level, meaning that core departments and agencies reported similar numbers of new methods, operational processes or systems successfully *implemented*. It is, however, noted that the differences in the mean scores is significant at a 10% level of probability.

6.4.3 Overall performance (Hypothesis H11o and H11a)

Hypothesis H11o as described in paragraph 1.7 was evaluated. (Only the null hypothesis is mentioned.)

Differences in the means of the core departments and agencies were grouped and evaluated in terms of the perceived performance (V106-V110).

Based on the results ($P = 0.8301$) ***the alternative hypothesis H11a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar levels of overall performance during the past two years.

6.4.4 Departmental/agency characteristics and business dimensions

(Hypotheses H12o and H13o)

Hypotheses H12o and H13o as described in paragraph 1.7 were evaluated. (Only the null hypotheses are mentioned).

Differences in the means of the core departments and agencies were grouped and evaluated in terms of the perceived organisational characteristics (i.e. variables V93-V105) and key business dimensions (i.e. V127-V132).

a) Organisational characteristics (Hypotheses H12o and H12a)

Based on the results ($P = 0.6807$) ***the alternative hypothesis H12a is rejected*** in favour of the null hypothesis. The difference in the mean scores of core departments and agencies is insignificant, meaning that core departments and agencies reported similar values for organisational characteristics.

b) Key business dimensions (Hypotheses H13o and H13a)

Since $P < 0.05$ ($P = 0.0242$), ***the alternative hypothesis H13a is accepted*** instead of the null hypothesis. The difference in the mean scores of core departments and agencies is significant at the 5% level, meaning that core departments and agencies reported statistically significant different values for key business dimensions.

6.5 Knowledge creation dimension (learning styles) (Section A)

6.5.1 Analysis of variance for factors

The ANOVA is an extremely versatile and powerful method, reasonably robust, and can tolerate minor variations from normality and equal variances with a distinct advantage to test interaction, according to Cooper and Schindler (2003:552). The two-way ANOVA test was therefore used to test whether the population means of the null hypotheses are equal, if the means of the alternative hypotheses are unequal and to determine the interaction

between identified factors. To comply with the assumptions as indicated in paragraph 5.7.6.3 (b), a normal Blom transformation was used.

If the *p-value* < 0.05, the null hypothesis is rejected. If the *P-value* is ≥ 0.05 the null hypothesis is not rejected, because the means of all groups do not differ significantly.

In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H14o, H15o, H16o, H17o, H18o, H19o, H20o, H21o, H22o, H23o, H24o and H25o. (Only the null hypotheses are mentioned.) The results obtained are portrayed in table 22 below.

Table 22: ANOVA for learning style sub-scales (knowledge creation dimension), managerial levels and organisational units

Dependent Variable	Source	DF	Mean Square	F Value	Pr > F
F1 Active Initiative (Activist)	Managerial Level	1	0.28594275	0.29	0.5917
	Organisation Unit	1	0.59674982	0.6	0.4385
	Managerial Level*Organisation Unit	1	2.35104589	2.37	0.1245
F2 Reflective Observation (Reflector)	Managerial Level	1	11.73671342	12.24	0.0005 p**
	Organisation Unit	1	0.25229608	0.26	0.6083
	Managerial Level*Organisation Unit	1	6.94656243	7.24	0.0074 p**
F3 Cognitive Reasoning Tendency (Theorist)	Managerial Level	1	0.18988163	0.19	0.6624
	Organisation Unit	1	0.11679573	0.12	0.732
	Managerial Level*Organisation Unit	1	0.90057304	0.91	0.3418
F4 Pragmatic Execution (Pragmatist)	Managerial Level	1	0.76686257	0.77	0.3811
	Organisation Unit	1	0.4486387	0.45	0.5028
	Managerial Level*Organisation Unit	1	0.04449333	0.04	0.8328

Dependent Variable	Source	DF	Mean Square	F Value	Pr > F
<p>P ** Statistical significance at the 5% level P*** Statistical significance at the 10% level</p>					

Presentations on the relevant mean scores and applicable comparisons are portrayed in figure 28 and tables 23 and 24 below:-

Figure 28: Mean scores on learning style sub-scales (behavioural dimension) by management level and organisation unit

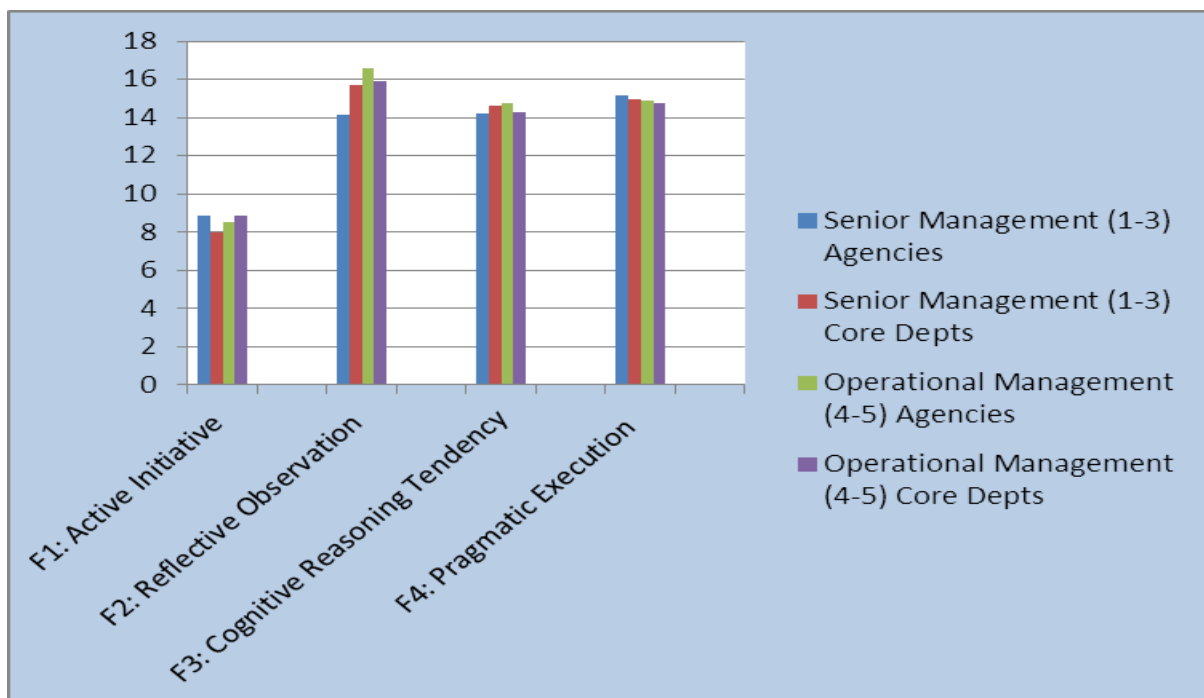


Table 23: Comparison of LSQ sub-scale means with other studies

	Managerial Level	Mean		
		City of Johannesburg (2011)	Zwanenberg (2000)	Honey & Mumford (1992)
Activist (Active Initiative)	1-3	8.31	9.7	9.3
	4-5	8.74		
Reflector (Reflective Observation)	1-3	15.17	13.7	13.6
	4-5	16.17		

		Mean		
	Managerial Level	City of Johannesburg (2011)	Zwanenberg (2000)	Honey & Mumford (1992)
Theorist (Cognitive Reasoning Tendency)	1-3	14.47	12.5	12.5
	4-5	14.47		
Pragmatist (Pragmatic Execution)	1-3	15.03	13.4	13.7
	4-5	14.79		
			Zwanenberg <i>et al.</i> (2000:373)	

Legend: 1-3 = Senior managerial level; 4-5 = Operational management level

Similar to the findings in other studies, the lowest mean scores were recorded for AI (activist) and the highest for RO (reflector).

Table 24: Means and standard deviations for learning style sub-scales (knowledge creation dimension) by management level and organisation unit

Management Level	N	F1: Active Initiative		F2: Reflective Observation		F3: Cognitive Reasoning Tendency		F4: Pragmatic Execution	
		Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev
1-3	77	8.311688	2.792187	15.16883	3.1009447	14.46753	2.6585731	15.02597	2.350666
4-5	358	8.73743	3.326036	16.1676	2.6872164	14.46648	2.79910838	14.78771	2.511523

Organisation Units	N	F1: Active Initiative		F2: Reflective Observation		F3: Cognitive Reasoning Tendency		F4: Pragmatic Execution	
		Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev
Agencies	167	8.586826	3.204375	16.18563	2.9219212	14.68862	2.93073491	14.93413	2.439973
Core Depts	268	8.708955	3.265584	15.8694	2.6986119	14.32836	2.66416395	14.76493	2.511539

Management Level	Organisational Unit	N	F1: Active Initiative		F2: Reflective Observation		F3: Cognitive Reasoning Tendency		F4: Pragmatic Execution	
			Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev
1-3	Agency	28	8.857143	2.811541	14.178571	3.868712 _c	14.2142857	3.107424	15.17857	2.510033
1-3	Core Dept	49	8.00000	2.76134	15.734694	2.430496 _b _c	14.6122449	2.38761	14.93878	2.276768
4-5	Agency	139	8.532374	3.284355	16.589928	2.521826 _a	14.7841727	2.896181	14.88489	2.431911
4-5	Core Dept	219	8.86758	3.353185	15.899543	2.759296 _b	14.2648402	2.723192	14.72603	2.564366

Legend: 1-3 = Senior managerial level; 4-5 = Operational management level
Note: Means with different superscripts differ significantly at the 5% level

6.5.2 Progressive Action Propensity (Hypotheses H14o to H19o)

a) Active initiative (Hypotheses H14o to H16o)

As indicated in table 22, no significant differences between staff at different managerial levels and in agencies or core departments could be identified and there is also no interaction between managerial levels and organisational units. ***The following alternative hypotheses are thus rejected in favour of the null hypotheses: H14a, H15a, H16a.***

b) Pragmatic execution (Hypotheses H17o to H19o)

As indicated in table 22, no significant differences between staff at different managerial levels and in agencies and core departments could be identified and there is also no interaction between managerial levels and organisational units. ***The following alternative hypotheses are thus rejected in favour of the null hypotheses: H17a, H18a, H19a.***

6.5.3 Cognitive Analytical Propensity (Hypotheses H20o to H25o)

a) Reflective observation (Hypotheses H20o to H22o)

As indicated in table 22, significant differences were identified in the mean scores of staff at different managerial levels. However, since interaction occurs between managerial level and organisational units ($P=0.0074$), only the interaction effect is discussed. In table 24, means with different superscripts in the column for reflective observation indicate significant differences at the 5% level.

As indicated in table 24 above, RO means for senior managerial staff (i.e. levels 1-3) in agencies differ significantly from operational management staff (i.e. levels 4-5) in agencies as well as core departments. In addition, operational management staff (i.e. levels 4-5) in agencies differ significantly from both senior (i.e. levels 1-3) and operational managerial staff (i.e. levels 4-5) in core departments at a 5% level of probability.

The results lead to the conclusion that the effect on RO levels of staff is modified (qualified) by organisational units (i.e. agency/core department) and/or managerial level (i.e. senior/operational level).

In accordance with the findings, ***the following alternative hypotheses are thus accepted in contrast to the null hypotheses:-***

H20a: Cognitive analytical propensity levels as reflected by reflective observation of senior and operational management staff in the metropolitan local government organisation are significantly different.

H21a: Cognitive analytical propensity levels as reflected by reflective observation of staff in different units i.e. municipal entities (agencies) and core departments of the metropolitan local government organisation, are significantly different.

H22a: Cognitive analytical propensity levels as reflected by reflective observation of staff in different units i.e. municipal entities (agencies) and core departments, and on senior and operational management levels in the metropolitan local government organisation are significantly different.

b) Cognitive Reasoning Tendency (Hypotheses H23o to H25o)

As indicated in table 22, no significant differences between staff at different managerial levels and in different metropolitan agencies and core departments could be identified and there is also no interaction between managerial levels and organisational units. ***The following alternative hypotheses are thus rejected in favour of the null hypotheses: H23a, H24a, H25a.***

6.6 Association and correlation between individual and organisational variables (Pearson Correlation Coefficient)

The Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) was used to reveal the magnitude and direction of relationships between individual and organisational variables. As indicated in paragraph 5.7.6.3, a relationship refers to the

correlation between two variables. The nature or pattern of a relationship is of further importance. Firstly, no relationship may exist. Secondly, a positive relationship may exist. In a positive relationship, high values on one variable are associated with high values on the other and low values on one are associated with low values on the other. On the other hand, a negative relationship implies that high values on one variable are associated with low values on the other. This is also sometimes termed an inverse relationship (Muchinsky *et al.*, 1998:26-27).

In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H26o, H27o, H28o, H29o, H30o, H31o, H32o, H33o, H34o, H35o, H36o, H37o, H38o, H39o, H40o, H41o, H42o, H43o, H44o, H45o, H46o, H47o, H48o, H49o, H50o, H51o, H52o, H53o, H54o, H55o, H56o, H57o, H58o, and H59o. (Only the null hypotheses are mentioned.) Detailed statistical results are reflected in Appendix B and results are discussed in the subsequent paragraphs.

6.6.1 Correlation between progressive action propensity, entrepreneurial performance, organisational characteristics and key business dimensions

The magnitude and direction of relationships between AI and PE at different managerial levels and in different organisational units were determined in relation to organisational variables, namely overall performance, entrepreneurial intensity, organisational characteristics and key business dimensions. In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H26o, H27o, H28o, H29o, H30o, H31o, H32o, H33o, H34o, H35o, H36o, H37o, H38o and H39o. (Only the null hypotheses are mentioned.) The results obtained are reflected in Appendix B, which is attached.

The following significant relationships ($p \leq 0.05$) ($r \geq 0.2$) were identified: -

- Active initiative of ***all senior managerial staff*** (Levels 1-3)/number of new methods, processes or systems *identified* (V123) ($r = 0.24334$)
- Active initiative of ***all senior managerial staff*** (Levels 1-3)/number of new methods, processes or systems *implemented* (V124) ($r = 0.24164$).

The alternative hypotheses H26a (a-h), H27a (a-f), H28a (a-h), H29a, H30a, H31a, H32a, H33 (a-h), H34 (a-h), H35 (a-h), H36a, H37a, H38a and H39a have thus been rejected in favour of the null hypotheses, while the following alternative hypotheses have been accepted:-

H27a: There are significant correlations between progressive action propensity levels as reflected by active initiative of managerial staff on senior or operational management levels with:

g) The number of new methods, operational processes or systems identified by municipal entities (agencies) and core departments of the metropolitan local government organisation, and

h) The number of new methods, operational processes or systems successfully implemented by municipal entities (agencies) and core departments of the metropolitan local government organisation.

The accepted alternative hypotheses as mentioned above indicate that there is a weak positive relationship between the AI of senior managerial staff (Levels 1-3) and the number of new methods, processes or systems identified and implemented by core departments and agencies ($r = 0.24$).

6.6.2 Correlation between cognitive analytical propensity, entrepreneurial performance, organisational characteristics and key business dimensions

The magnitude and direction of relationships between RO and CRT at different managerial levels and in different organisational units were determined in relation to organisational variables, namely overall performance, entrepreneurial intensity, organisational characteristics and key business dimensions. In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H40o, H41o, H42o, H43o, H44o, H45o, H46o, H47o, H48o, H49o, H50o, H51o, H52o and H53o. (Only the null hypotheses are mentioned.) The results obtained are reflected in Appendix B, which is attached.

The following significant relationships ($p \leq 0.05$) ($r \geq 0.2$) were identified:

Table 25: Significant relationships between sub-scales and entrepreneurial intensity variables: core departments and agencies combined

Sample	Sub-scale	Variable	r
All operational managerial staff (Levels 4-5)	RO	Number of new venture opportunities identified	-0.21554
All managerial staff	RO	Number of new methods processes or systems <i>identified</i>	-0.21807
All managerial staff	RO	Number of new methods processes or systems <i>implemented</i>	-0.21873
All senior managerial staff (Levels 1-3)	RO	Number of new methods processes or systems <i>identified</i>	-0.4210
All senior managerial staff (Levels 1-3)	RO	Number of new methods processes or systems <i>implemented</i>	-0.4225
All senior managerial staff (Levels 1-3)	CRT	Number of new methods processes or systems <i>identified</i>	-0.3086
All senior managerial staff (Levels 1-3)	CRT	Number of new methods processes or systems <i>implemented</i>	-0.3045

Table 26: Significant relationships between sub-scales and entrepreneurial intensity variables: - Municipal agencies

Sample	Sub scale	Variable	r
All managerial staff	RO	Number of new venture opportunities identified	-0.22277
Operational managerial staff (Levels 4-5)	RO	Number of new venture opportunities identified	-0.22768
All managerial staff	RO	Number of new methods processes or systems <i>identified</i>	-0.32971
All managerial staff	RO	Number of new methods processes or systems <i>implemented</i>	-0.33016
Senior managerial staff (Levels 1-3)	RO	Number of new methods processes or systems <i>identified</i>	-0.51551

Sample	Sub scale	Variable	r
Senior managerial staff (Levels 1-3)	RO	Number of new methods processes or systems <i>implemented</i>	-0.51792
Senior managerial (Levels 1-3)	CRT	Number of new methods processes or systems <i>identified</i>	-0.4041
Senior managerial (Levels 1-3)	CRT	Number of new methods processes or systems <i>implemented</i>	-0.4007

Table 27: Significant relationships between sub-scales and entrepreneurial intensity variables: Core departments

Sample	Sub scale	Variable	r
Operational managerial staff (Levels 4-5)	RO	Number of new venture opportunities identified	-0.23943
Operational managerial staff (Levels 4-5)	RO	Number of new ventures <i>successfully established</i>	-0.20883
Operational managerial staff (Levels 4-5)	RO	Number of new products or services <i>successfully introduced</i>	-0.20441
Operational managerial staff (Levels 4-5)	RO	Number of existing products or services <i>identified</i> for revision	-0.20067
Operational managerial staff (Levels 4-5)	RO	Number of existing products or services <i>successfully revised</i>	-0.21663
Senior managerial staff (Levels 1-3)	CRT	Number of new methods processes or systems <i>identified</i>	-0.3499
Senior managerial staff	CRT	Number of new methods processes or systems <i>implemented</i>	-0.3706

The alternative hypotheses H40a (a-f), H41a (a-f), H42a (c) H43a, H44a, H45a, H46a, H47a, H48a (a-f), 49a (a-f) H50a, H51a, H52a and H53a have thus been rejected in favour of the null hypotheses, while the following alternative hypotheses have been accepted:-

H40a: There are significant correlations between cognitive analytical propensity levels as reflected by reflective observation of all managerial staff with:

g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation, and

h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

H41a: There are significant correlations between cognitive analytical propensity levels as reflected by *reflective observation of* managerial staff on senior or operational management levels with:

g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation, and

h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

H42a: There are significant correlations between cognitive analytical propensity levels as reflected by *reflective observation (RO)* of managerial staff in core departments or municipal entities (agencies) with:

a) The number of new ventures *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

b) The number of new ventures *successfully established* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

d) The number of new products/services *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;

- e) The number of existing products/service revisions *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - f) The number of existing products/service revisions *introduced* by municipal entities (agencies) and core departments of the metropolitan local government organisation;
 - g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H48a: There are significant correlations between cognitive analytical propensity levels as reflected by *cognitive reasoning tendency* of managerial staff on senior or operational management levels with:
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation, and
 - h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.
- H49a: There are significant correlations between cognitive analytical propensity levels as reflected by *cognitive reasoning tendency* of managerial staff in core departments or municipal entities (agencies) with:
- g) The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and

h) The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

It is important to note that all identified significant relationships between RO as well as CRT with entrepreneurial intensity variables, are negative. The accepted alternative hypotheses as mentioned above thus indicate that there are weak to moderate **negative** relationships between RO and CRT levels with entrepreneurial intensity variables of core departments and agencies.

6.6.3 Correlation between the perceived organisational characteristics and key business dimensions with overall performance and entrepreneurial intensity

The magnitude and direction of relationships between organisational characteristics and key business dimensions were determined in relation to overall performance and entrepreneurial intensity at different managerial levels and in different organisational units. In summary, the following hypotheses as described in paragraph 1.7 were evaluated: H54o, H55o, H56o, H57o, H58o and H59o. (Only the null hypotheses are mentioned.) The results obtained are reflected in Appendix B, which is attached.

The following significant relationships ($p \leq 0.05$) ($r \geq 0.2$) were identified:-

Table 28: Significant relationships - organisational characteristics with overall performance and entrepreneurial intensity

Sample	Sub-scale	Variable	r
Total sample	Organisational characteristics	Overall performance	0.30289
Agencies	Organisational characteristics	Overall performance	0.4222
Core departments	Organisational characteristics	Overall performance	0.22623
Agencies	Organisational characteristics	New products services successfully introduced	0.21984

Sample	Sub-scale	Variable	r
Core departments	Organisational characteristics	Existing products services identified for revision	0.24432
Core departments	Organisational characteristics	Existing products services successfully revised	0.24335

The alternative hypotheses H54a (a-h), H55a (a-i), H56a (a-d, g, h), H57a (a-i), H58 (a-c, e-h) and H59a (a-i) have thus been rejected in favour of the null hypotheses, while the following alternative hypotheses have been accepted:-

H54a: There are significant correlations between the perceived Organisational Characteristics of organisational units in the metropolitan local government organisation with

i) The overall perceived performance of organisation units of the metropolitan local government organisation.

H56a: There are significant correlations between the perceived organisational characteristics of core departments of the metropolitan local government organisation with:

e) The number of existing products/service revisions *identified* by organisational units of the metropolitan local government organisation;

f) The number of existing products/service revisions *introduced* by organisational units of the metropolitan local government organisation; and

i) The overall perceived performance of core departments of the metropolitan local government organisation.

H58a: There are significant correlations between the perceived organisational characteristics of municipal entities (agencies) of the metropolitan local government organisation with:

- d) The number of new products/services *introduced* by organisational units of the metropolitan local government organisation; and**
- i) The overall perceived performance of by municipal entities (agencies) of the metropolitan local government organisation.**

The accepted alternative hypotheses as mentioned above indicate that there are weak to moderate positive relationships between organisational characteristics and the perceived overall performance, as well as the number of existing products/services identified for revision and successfully introduced by core departments and agencies. No significant relationships were, however, identified for key business dimensions with the overall performance or entrepreneurial intensity of organisational units.

6.7 Summary and conclusion

The chapter describes the results obtained from the empirical study and the statistical analyses as described in Chapter 5 formed the basis of analysis. The results were presented in various tables and figures depicting demographic information in the first instance, followed by results obtained from inferential statistical analyses.

As described in paragraph 1.6.1, the objectives of the study were primarily to determine the nature of relationships between individual behavioural factors (knowledge creation dimension), organisation/institutional factors and entrepreneurial performance in different organisational units of the metropolitan local government organisation, and to make inferences about the identified relationships that can be applied in a local government context to improve entrepreneurial performance.

The measuring instrument consisted of two sections, namely Section A that measured learning styles (behavioural patterns), which is based on the Honey and Momford (1992:89-91) LSQ, and Section B that assessed the perceived entrepreneurial performance as well as organisational characteristics and key business dimensions (dimensions of firm-level entrepreneurial orientation) and is based on the EPI of Morris and Kurakto (2002:291-294).

The findings of previous studies that confirmed the validity, consistency and reliability of the EPI (Section B of measuring instrument) were accepted and no further confirmation in this regard was done. However, in the case of the LSQ (Section A of the measuring instrument) criticism and alternative viewpoints on the factor structure were noted and a principal component analysis on the *four sub-scales* as apposed to the scores on the individual items was therefore done to evaluate construct consistency, validity and reliability and to test the homogeneity of the underlying constructs. The Carmines' Theta coefficient as an alternative measure that accounts for multidimensionality indicated moderate reliability and internal consistency. However, although the results of the principal component analysis suggested an alternative possible factor structure, the present study retained the four sub-scales for all remaining analyses in view of the dominant view in literature that four sub-scales are the best fit.

The t-test for independent samples and the two-way ANOVA test were executed to evaluate the differences in the means of organisational variables and behavioural dimensions of managerial staff in different organisational units respectively. In addition, the Pearson Correlation Coefficient (Pearson's product moment correlation coefficient) was used to reveal the magnitude and direction of relationships between individual and organisational variables.

No significant variances with respect to entrepreneurial intensity and overall performance could be identified at a 5% level of probability between core departments and agencies of the metropolitan local government organisation. The following variances at a 10% level of probability have been noted but cannot be accepted owing to the stringent measures of significance adopted for the research:-

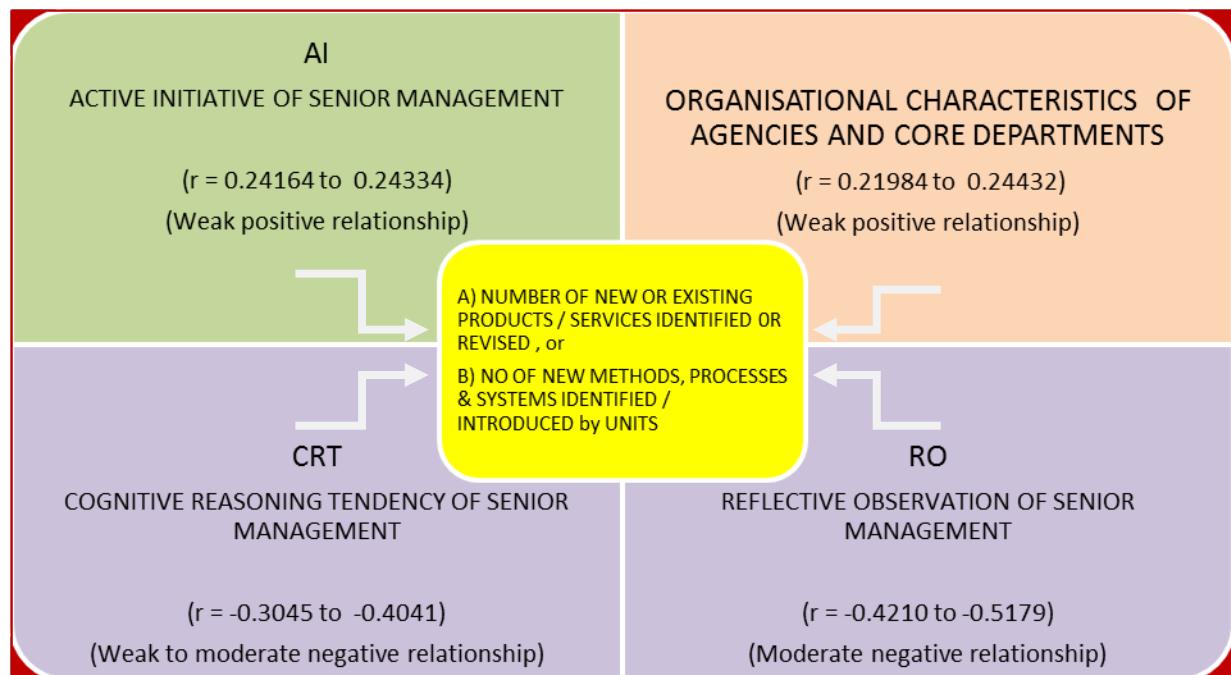
- The number of new methods, operational processes or systems *identified* by municipal entities (agencies) and core departments of the metropolitan local government organisation; and

- The number of new methods, operational processes or systems *successfully implemented* by municipal entities (agencies) and core departments of the metropolitan local government organisation.

In addition, significant variances between core departments and agencies at a 5% level of probability have been identified for key business dimensions and for RO levels of senior and operational management staff (i.e. levels 1-3 and 4-5).

In summary, the most prominent significant relationships that were identified in core departments and agencies are depicted in figure 29 below.

Figure 29: Most prominent significant relationships identified



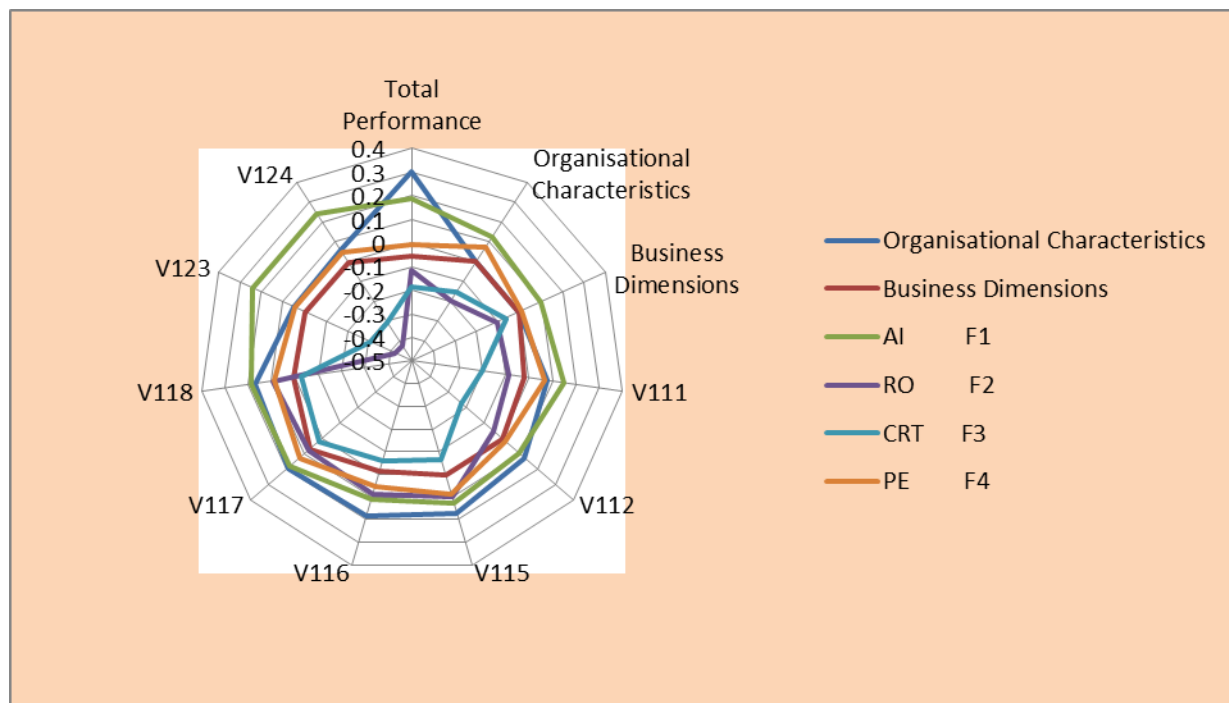
As depicted in figure 29 above, it should be noted that variables related to CAP, namely CRT and RO, indicated **negative relationships** with the applicable entrepreneurial intensity variables, whereas A) and organisational characteristics indicated weak positive relationships.

As indicated in paragraph 6.6.3, organisational characteristics further portrayed weak to moderate positive relationships with the overall performance of both core departments and

agencies, while no significant relationship could be identified between key business dimensions and the performance or entrepreneurial intensity of organisational units.

The overall correlations of senior management staff learning styles (Levels 1-3) (behavioural dimension) with the perceived organisational characteristics, key business dimensions, overall performance and entrepreneurial intensity of organisational units are further depicted in figure 30 below.

Figure 30: Correlations of senior management staff learning styles (levels 1-3) (knowledge creation dimension) with the perceived organisational characteristics, key business dimensions, overall performance and entrepreneurial intensity of organisational units

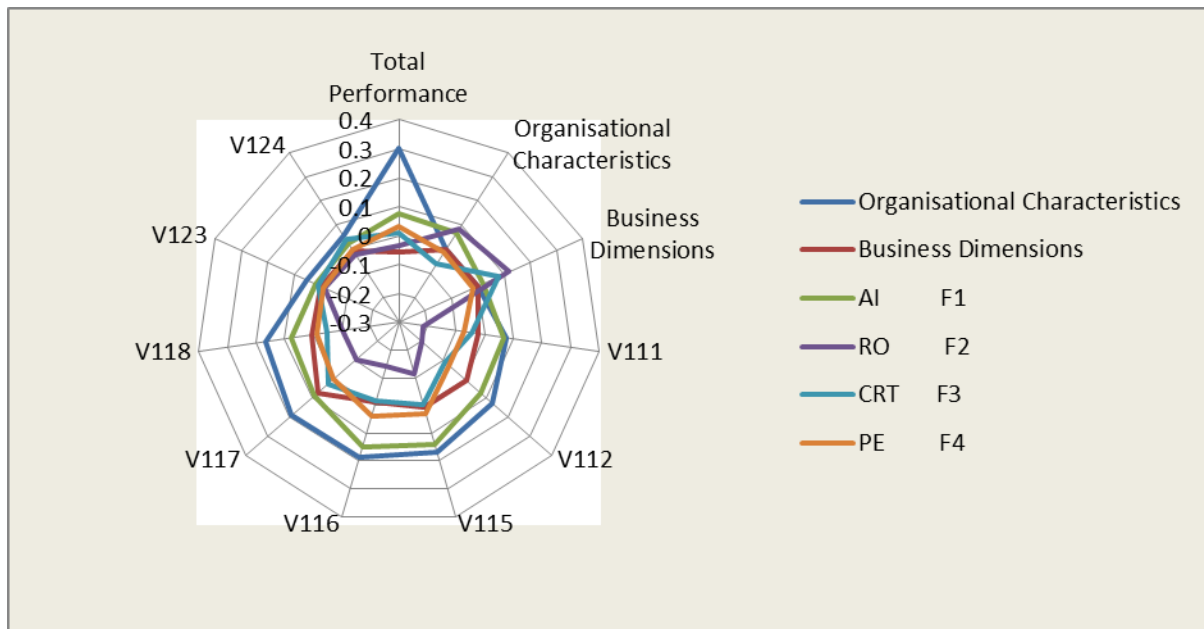


Legend			
V111	New ventures identified	V123	New methods/processes/systems identified
V112	New ventures introduced	V124	New methods/processes/systems introduced
V115	New products/services identified	AI	Active initiative
V116	New products/services introduced	RO	Reflective observation
V117	Existing products/services identified for revision	CRT	Cognitive reasoning tendency
V118	Existing products/services revised	PE	Pragmatic execution

As indicated in figure 30, it should be noted that AI levels of senior management staff reflect the **highest positive correlations** with the majority of variables except for total performance, new ventures introduced (V112), new products/services identified (V115) and new products/services introduced (V116). In contrast, RO and CRT levels resulted in the highest **negative** correlations with all variables except for new products/services identified (V115), new products/services introduced (V116) and existing products/services identified (V117).

The overall correlations of operational management staff's learning styles (levels 4-5) (knowledge creation dimension) with the perceived organisational characteristics, key business dimensions, overall performance and entrepreneurial intensity of organisational units are further depicted in figure 31 below,

Figure 31: Correlations of operational management staff's learning styles (levels 4-5) (knowledge creation dimension) with the perceived organisational characteristics, key business dimensions, overall performance and entrepreneurial intensity of organisational units



Legend			
V111	New ventures identified	V123	New methods/processes/systems identified

Legend			
V112	New ventures introduced	V124	New methods/processes/systems introduced
V115	New products/services identified	AI	Active initiative
V116	New products/services introduced	RO	Reflective observation
V117	Existing products/services identified for revision	CRT	Cognitive reasoning tendency
V118	Existing products/services revised	PE	Pragmatic execution

In contrast to the results obtained for senior managerial staff, organisational characteristics reflect the **highest positive correlations** with the majority of variables, with the exception of key business dimensions, as indicated in figure 31. Active initiative levels of operational management staff (levels 4-5), however, reflect the second highest correlations with the majority of variables, while RO and CRT levels also resulted in the highest **negative** correlations with the majority of variables, similar to the results obtained for senior managerial staff.

In the next chapter (Chapter 7) the research objectives, stipulated hypotheses and findings of the applicable literature review, as well as results obtained from the empirical study, are reviewed and summarised. The limitations and contribution of the study are further described and final conclusions and specific recommendations are subsequently made.

CHAPTER 7: SUMMARY, CONCLUSION AND RECOMMENDATIONS

There is nothing strange about the idea that a kind of knowing is inherent in intelligent action (Schon, 1983: 68)

7.1 Introduction

Chapter 7 summarises the findings of the applicable literature review; reviews the research objectives, questions, stipulated hypotheses and results obtained from the empirical study and draws conclusions. The contribution and limitations of the study are further described and final recommendations are subsequently made.

7.2 Research objectives and questions

As stated in paragraph 1.6.1, the objectives of the research were as follows:

- a) To determine knowledge creation dimensions (individual behaviour) that relate to entrepreneurial performance;
- b) To determine organisational/institutional factors that relate to entrepreneurial performance in a local government context;
- c) To determine the nature of relationships that exist between knowledge creation dimensions (learning styles) at different managerial levels, organisation/institutional factors and entrepreneurial performance in different organisational units of a metropolitan local government organisation (South Africa); and
- d) To make inferences about the identified relationships that can be applied in a local government context to improve entrepreneurial performance.

In accordance with the objectives mentioned, the following key research questions were addressed:-

- a) What are the key knowledge creation dimensions (individual behaviour) related to entrepreneurial performance?
- b) What are the organisational/institutional factors that relate to entrepreneurial performance in a local government context?
- c) Is the perceived entrepreneurial performance of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- d) Are the perceived organisational characteristics and key business dimensions of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?
- e) Are factors related to key knowledge creation dimensions (learning styles) of managerial staff in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation and at different managerial levels significantly different?
- f) Are there significant relationships between the perceived entrepreneurial performance, organisational characteristics, key business dimensions and learning styles (knowledge creation dimension) of managerial staff at different managerial levels and in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation?

7.3 Overview of literature study

7.3.1 Entrepreneurship theory

In summary, constructs and related concepts of entrepreneurship as addressed in various academic publications that were reviewed in Chapters 2 to 4 are intertwined, overlapping in

various instances, and there is clearly no agreement about the domain, perspectives, dimensions and dynamics of the field. Although definitions vary and the research fields cover a broad range of disciplines, the primary role of the entrepreneur within the entrepreneurial process and applicable environment in which he/she functions is acknowledged consistently. The relevant environment in which entrepreneurship is practised is further regarded as a key factor that affects entrepreneurial performance, which should be considered as a moderating variable and in this regard cognisance was taken of several viewpoints indicating that entrepreneurship is evident in a range of circumstances and environments that include “not-for-profit” organisations, the public sector and local government.

No generic definition of entrepreneurship could be identified that can consistently be applied universally while accommodating different dimensions, perspectives, dynamics and applicable contexts within an agreed generic framework of reference and scope. The following definitions related to different dimensions have, however, been accepted as the most appropriate definitions of the entrepreneurship domain that can serve as a solid basis for further refinement:

- The simplified definition of Chell (2000:63), whereby entrepreneurship is regarded as a process in which the owner-manager’s actions are contextually embedded;
- The model for entrepreneurship education mentioned by Pretorius *et al.* (2005:416) whereby entrepreneurial performance is regarded as a function of motivation as well as entrepreneurial and business skills; and
- The Sharma and Chrisman (1999) definition of CE as cited by Kuratko *et al.* (2005:701), that defines CE as the process whereby an individual or a group of individuals, in association with an existing organisation, creates a new organisation or instigates renewal or innovation within that organisation.

The definitions mentioned above have similar inherent dimensions that acknowledge the prominence of entrepreneurial behaviour, as well as business and management skills, which

provide a generally appropriate basis for further refinement. These definitions can accommodate further aligned sub-divisions in terms of:-

- perspectives such as value/venture/prosperity/organisation creation as well as organisation renewal;
- different dimensions such as industry knowledge, EP (individual behaviour), management and business competencies;
- process/system/methodologies and dynamics; and
- different contexts such as individuals, groups of individuals, small business, private corporate institutions, as well as public and social institutions.

With reference to the dynamics and methodology of entrepreneurship, conflicting views with respect to the relationships between entrepreneurship and strategic management have been noted that require clarification, as addressed in paragraph 7.3.3. In some instances authors justify the integration of the relevant concepts, while authors such as Hjorth (2003) and Mintzberg (1994) criticise strategic management concepts and propose that a more tactical approach be accepted to accommodate a more action-orientated nature that is regarded as an inherent characteristic of entrepreneurship. The need for autonomy, flexibility, speed and experimentation is further highlighted, which is regarded as being in conflict with bureaucratic and strategic management approaches; instead specific behaviours are required that not only identify opportunities but rather create opportunities for innovation by allowing space for active initiative.

As addressed in paragraph 7.3.2, the rational, linear methodology of the entrepreneurship process has wide support but an alternative view, which argues for a cyclic/spiral motion that facilitates interaction with the applicable environment, knowledge creation/conversion, intuition and entrepreneurial competence, is also finding strong support. The 'spiral' concept is regarded as of specific significance in terms of knowledge creation dynamics, since it provides an explanation of the manner in which 'cognitive' and 'active' propensities of behaviour interact with the relevant environment to create new knowledge.

7.3.2 What are the key knowledge creation dimensions (individual behaviour) that are related to entrepreneurial performance? (Research questions - Paragraphs 1.6.2 and 7.2)

Since research into entrepreneurial personality types and personal characteristics did not render much success, the recent trend has been to focus more on the behavioural dimension and entrepreneurial activities, which are related to the first question of the research as mentioned above.

The question was explored in Chapters 2 and 3, that reviewed entrepreneurship theory, entrepreneurial competencies, cognition, behaviour and knowledge creation dimensions, which are of a generic nature and regarded as being applicable to different contexts.

A variety of viewpoints and research results have been noted in literature that highlight an extensive range of factors that determine, influence and affect knowledge creation dimensions and entrepreneurial competencies. Strong support has been identified for the prominent role of practical experience and AI that facilitates knowledge creation/conversion at an individual as well as organisational level.

Cognitive behaviour and different thinking styles also feature prominent in a variety of arguments for creative thinking as a key aspect of entrepreneurial competence, creativity and innovation. However, it has lately been argued that human action is the primary outcome-based factor related to the creation of opportunities and successful entrepreneurship (Alvarez & Barney, 2007:28). The finding of Allison *et al.* (2000:31) that there is no difference between the cognitive styles of successful entrepreneurs and senior managers and the related proposition of Alvarez and Barney (2007:19) that entrepreneurs and non-entrepreneurs may be virtually indistinguishable in terms of their cognitive characteristics, is regarded as of particular importance. The findings/viewpoints of the authors strengthen the argument for a more prominent emphasis on outcome-based behaviour and action orientation.

As indicated in paragraph 7.3.1., the entrepreneurship education and training model mentioned by Pretorius *et al.* (2005:416) whereby entrepreneurial performance is regarded as a function of motivation and of entrepreneurial and business skills, has been accepted as a solid basis for further refinement.

In addition, various authors view entrepreneurship as a dynamic process defined by multiple actors, which is situated in a specific context. As also referred to in paragraph 7.3.1, the concept of a 'spiral' as originally defined by Nonaka and Takeuchi (1995:57-61) as the basis of knowledge creation, and subsequently introduced in the entrepreneurship field by both Ropo and Hunt (1995:106) and Shepherd *et al.* (2010:60), is further specifically noted. The 'spiral' concept and 'knowledge creation' dynamics (behavioural dimension) of entrepreneurship are based on similar antecedents defined in the 'creation theory of entrepreneurship' and share baseline premises, which argue that entrepreneurial behaviour actually 'shapes' change and creates opportunities for exploitation and innovation by means of continuously recursive and progressive actions that facilitate knowledge creation. In the light of these arguments the 'spiral' concept as an alternative view related to the dynamics and methodology of the knowledge creation dimension of entrepreneurship has been accepted.

Agreement further exist on the prominent impact of the relevant environment, which includes the organisation and the industry in which entrepreneurship is practised, such as the local government environment in which the research was conducted.

7.3.3 What are the organisation/institutional factors that relate to entrepreneurial performance in a local government context? (Research questions - Paragraphs 1.6.2 and 7.2)

Chapter 4 explored literature related to the above-mentioned question.

In general, there is agreement on the need for entrepreneurship in public sector institutions, which include local government, while it is further highlighted that the basic steps in the entrepreneurial process should be no different in the public sector context.

However, the applicable environment differs from the private sector and it is argued that unique circumstances such as political tendencies and bureaucratic systems will have a prominent impact on innovation, creativity and entrepreneurship in general.

Although alternative arguments have been noted, strong support could be identified for the view that an organisation does not exist on its own and that it should be regarded as a collection of individuals that determine the nature of organisational behaviour.

Prominent arguments to analyse entrepreneurship in terms of a 'firm-level' perspective have also been identified. Such a perspective is currently primarily dominated by a strong preference for the EO concept as originally proposed by Covin and Slevin (1991). This firm-level perspective on CE, however, seems to completely ignore original generic fundamental premises related to entrepreneurial behaviour and cognition or to equate 'organisation culture' (firm-level entrepreneurial orientation) with 'individual behavioural' characteristics, which is not supported. Alternative viewpoints, however, argue against the evaluation of entrepreneurial variables in terms of the organisation as the unit of analysis (Hjorth, 2003; Kuratko *et al.*, 2005; Stevenson & Jarillo, 1990; Wiklund, 1998) and calls are made for analyses on various levels that include individual and middle managers, which are all regarded as having a prominent impact on the overall culture and performance of an organisation. In this regard the concept of an entrepreneurial spiral, as also referred to in paragraphs 7.3.1 and 7.3.2, has again been noted. This suggests a means by which individual-level heuristics might become embedded in the organisational culture in the form of routines, and reciprocally indicate how organisational routines that promote entrepreneurial action may become adopted at the individual level as heuristics. The concept of an entrepreneurial spiral is therefore also regarded as applicable to the organisational level as an explanation for how both individual heuristics and organisational routines may be informed by each other and evolve over time, as originally highlighted by Shepherd *et al.* (2010:73,74). This approach necessitates the acknowledgement and accommodation of basic generic entrepreneurial behavioural dimensions as addressed in Chapters 2 and 3 in order to accommodate analyses at both the organisational and individual levels within an organisation.

As mentioned in paragraph 7.3.1, different viewpoints regarding the relationship of entrepreneurship and strategic management have also been identified in Chapter 4, relating to the dynamics and methodology of entrepreneurship. The proposed distinction in objectives, namely 'creation' and 'performance', does not adequately capture the essence of the differences and it is therefore not regarded as correct to state that the objective of strategic management is essentially performance. Strategic management is regarded as a methodology to achieve any objective, which may or may not include entrepreneurship. Entrepreneurship, on the other hand, has predefined implicit objectives of creation and renewal, with an inherent methodology of its own. It is, however, agreed that both disciplines can greatly benefit by sharing and integrating methodologies. In addition, it is essential to acknowledge that the methodology of entrepreneurship is not particularly well defined and clear, as in the case of strategic management, which is regarded as a major point of concern. The need for autonomy, flexibility, speed and experimentation to promote entrepreneurship is further highlighted, which is regarded as being in conflict with bureaucratic and strategic management approaches, which require specific behaviours not only to identify opportunities but rather to create opportunities for innovation by allowing space for a propensity of AI.

Consensus on the measurement of entrepreneurial performance could not be found. Morris *et al.* (2008) propose that entrepreneurial performance should be assessed by evaluating EO and intensity, while Wiklund (1998) states that different approaches can be followed that measure venture growth or financial performance. In addition, a wide variety of other measurement instruments are available in the general management field, which have not yet been considered or accepted in the entrepreneurial research domain. It is further regarded as essential that the relationship between entrepreneurial performance and overall organisational performance be entrenched in order to portray the practical value of entrepreneurship, especially in public and local government institutions.

In summary, it is concluded that a proper evaluation of entrepreneurship in an institutional context, including local government, should thus accommodate overall organisational performance, the level of entrepreneurial performance with specific reference to the

intensity of entrepreneurship, organisational characteristics of the relevant organisational units, as well as entrepreneurial behaviour at the individual level that facilitates knowledge creation at different levels of management in the organisation.

7.4 Empirical research results

In summary, the following findings have been obtained in terms of the research questions related to the empirical study, as referred to in paragraph 1.6.1 and paragraph 7.2 above:-

- a) Is the perceived entrepreneurial performance of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?

No. No significant variances at a 5% level of probability have been identified.

It has, however, been noted that significant variances at a 10% level of probability exist for the number of new methods, operational processes or systems identified and implemented. In this regard municipal agencies recorded higher numbers for the applicable variables. However, in terms of the stringent measures of significance adopted for the research this finding cannot be accepted as significant. In addition, no significant differences in the overall performance of core departments and municipal agencies have been identified.

- b) Are the perceived organisational characteristics and key business dimensions of different organisational units (core departments and independent municipal entities) (agencies) in the metropolitan local government organisation significantly different?

Yes. Significant variances at a 5% level of probability have been identified for key business dimensions of core departments and independent municipal entities (agencies). In this regard municipal agencies rated key business dimensions significantly higher than core departments, which indicates that the managerial staff

regards agencies as being less bureaucratic in terms of resource management practices.

- c) Are factors related to key knowledge creation dimensions (learning styles) of managerial staff in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation and at different managerial levels significantly different?

Yes. Significant variances have been identified for RO levels of senior and operational management staff (i.e. levels 1-3 and 4-5) in core departments and independent municipal entities (agencies). RO means for senior managerial staff (i.e. levels 1-3) in agencies differ significantly from those of operational management staff (i.e. levels 4-5) in agencies and core departments. In addition, RO means for operational management staff (i.e. levels 4-5) in agencies differ significantly from those of both senior managerial staff (i.e. levels 1-3) and operational managerial staff (i.e. levels 4-5) in core departments at a 5% level of probability. The results lead to the conclusion that the effect on RO levels of staff is modified (qualified) by organisational units (i.e. agency/core department) and/or managerial level (i.e. senior/operational level), since interaction between the variables occurred. In this regard it should be noted that senior management staff (levels 1-3) in agencies recorded the lowest levels of RO while operational management staff (levels 4-5) in agencies recorded the highest.

- d) Are there significant relationships between the perceived entrepreneurial performance, organisational characteristics and key business dimensions as well as learning styles (knowledge creation dimension) of managerial staff at different managerial levels and in different organisational units (core departments and independent municipal entities) (agencies) of the metropolitan local government organisation?

Yes. In summary, the following prominent significant relationships were identified:-

- All variables related to **CAP, namely CRT and RO**, indicated weak to moderate **negative** relationships with entrepreneurial intensity variables;
- RO and CRT levels of senior management staff resulted in the highest negative correlations with all variables except for new products/services identified (V115), new products/services introduced (V116) and existing products/services identified (V117);
- As indicated in paragraph 7.4 (c) above, results obtained for RO levels lead to the conclusion that the effect on RO levels of staff is modified (qualified) by organisational units (i.e. agency/core department) and/or managerial level (i.e. senior/operational level), since interaction between the variables has been identified;
- **Organisational characteristics** portrayed weak to **moderate positive relationships** with the overall performance of both core departments and agencies, while no significant relationship could be identified between key business dimensions and the performance or entrepreneurial intensity of organisational units;
- With reference to operational management staff (levels 4-5), organisational characteristics reflect the highest positive correlations with the majority of variables with the exception of key business dimensions;
- **AI** levels of senior management staff reflect **weak positive correlations** with the number of new methods, operational processes or systems identified and introduced by organisational units of the local government organisation;
- **AI** levels of senior management staff reflect the **highest positive correlations** with the majority of variables accept for total performance, new ventures introduced (V112), new products/services identified (V115) and new products/services introduced (V116); and
- AI levels of operational management staff (levels 4-5) reflect the second highest correlations with the majority of variables, while **RO and CRT** levels also resulted in the highest **negative** correlations with the majority of variables, similar to the results obtained for senior managerial staff.

It is further important to note that senior management staff (levels 1-3) in agencies recorded the highest levels for AI and the lowest levels for RO.

7.5 Research conclusions

In summary, the following primary observations can thus be highlighted from the results obtained:-

- a) Municipal agencies and core departments recorded similar levels of entrepreneurial intensity and overall performance. This finding was unexpected and surprising, since it was anticipated that the extensive transformation programme which had been implemented and had resulted in the establishment of independent municipal agencies in the organisation would reflect positive tendencies in terms of entrepreneurial and overall performance.
- b) Municipal agencies rated key business dimension levels significantly higher than core departments, which indicate that managerial staff regarded agencies as being less bureaucratic in terms of resource management practices.
- c) Significant variances have been identified for RO levels of senior and operational management staff (i.e. levels 1-3 and 4-5) in core departments and independent municipal entities (agencies) and the results leads to the conclusion that the effect on RO levels of staff is modified (qualified) by organisational units (i.e. agency/core department) and/or managerial level (i.e. senior/operational level), since interaction between the variables occurred. In addition, it should be noted that senior management staff (levels 1-3) in agencies recorded the lowest levels of RO while operational management staff (levels 4-5) in agencies recorded the highest.
- d) **RO and CRT** levels of managerial staff indicated significant **weak to moderate negative correlations** with entrepreneurial intensity variables of organisational units.
- e) **RO and CRT** levels of senior management staff resulted in the **highest negative correlations** with all variables except for new products/services identified (V115), new products/services introduced (V116) and existing products/services identified (V117). These findings and those mentioned in paragraph 7.4 (c) above were not expected and

cast serious doubt on current recruitment as well as training and development practices in local government that focus primarily on cognitive-related criteria and interventions.

- f) **AI levels** of senior management staff (levels 1-3) indicated **significant weak positive correlations** with entrepreneurial intensity variables of organisational units.
- g) AI levels of senior management staff reflect the **highest positive correlations** with the majority of variables except for total performance, new ventures introduced (V112), new products/services identified (V115) and new products/services introduced (V116). It should further be noted that senior management staff (levels 1-3) in agencies recorded the **highest levels for AI** and the **lowest levels for RO**. This finding, together with that reported in paragraph 7.5 (f) above, confirms various views as identified and described in the literature review that emphasise the importance of active behaviour/intuition and experimentation that facilitate knowledge creation.
- h) The findings reflected for PE levels in terms of the LSQ as a variable of PAP could not be accepted, since cross-loadings occurred between sub-scales, which indicates that the sub-scale does not discriminate sufficiently between 'cognitive' and 'active' dimensions,
- i) **Organisational characteristics** portrayed weak to **moderate positive relationships** with the overall performance of both core departments and agencies, which indicates that firm-level EO (entrepreneurial leadership styles) relates positively to organisational performance. No significant relationships could, however, be identified between key business dimensions as a measure of bureaucratic resource management practices and the performance or entrepreneurial intensity of organisational units.
- j) With reference to operational management staff (levels 4-5), **organisational characteristics** reflect the **highest positive correlations** with the majority of variables with the exception of key business dimensions. This finding seems to suggest that an organisations' EO (firm-level) (culture) (leadership styles of senior management) has a more prominent impact on lower-level staff and moderates behaviour at that level. Arguments to the contrary, as identified in the literature review, which propose

organisational culture to be predominantly affected by middle managements' behaviour, therefore seem to be unfounded.

In terms of the findings obtained, it can be deduced or concluded that:-

- The extensive transformation programme that was implemented in the local government organisation and that resulted in the establishment of independent municipal agencies did not have a significant positive effect on the entrepreneurial and overall performance, which is unexpected and surprising. This unexpected result seems to indicate that the adjustment of structures, operating practices and corporatisation alone are not sufficient to improve entrepreneurial and overall performance and that the primary distinguishing factor might in effect be related to the behaviour, entrepreneurial leadership and competencies of managerial staff.
- **Cognitive analytical propensity** of management staff as reflected by RO and CRT levels has a **negative correlation** with entrepreneurial performance. This surprising finding casts serious doubt on current recruitment as well as training and development practices that emphasise cognitive analytical criteria predominantly and that are widely applied in general and specifically in local government.
- **Progressive action propensity**, as reflected by the AI levels of senior management staff, has a **positive correlation** with entrepreneurial performance. The results confirm baseline premises contained in the 'creation theory' of entrepreneurship and strengthen arguments for 'action learning' and entrepreneurial leadership development in the field of entrepreneurship in contrast to cognitive-related learning and development programmes.
- The surprising findings with respect to the negative relationship between CAP and entrepreneurial performance as mentioned above, and the related finding that AI levels portray a positive relationship, might also imply that cognitive and action dimensions of knowledge creation should not be interpreted separately on their own. The **difference** in these propensity levels might constitute the primary reason for variances in entrepreneurial performance related to each dimension. In terms of such reasoning it is implied that **equal or similar propensity levels on both dimensions** as

an indicator of EP are required to promote entrepreneurial performance best and that the actual levels portrayed on each separate dimension are of less importance. In this regard it is of interest to note that the difference between RO and AI levels is least for senior managers (levels 1-3) in municipal entities (agencies), as reflected in figure 28 (paragraph 6.5.1). This proposition should, however, be confirmed through additional research.

- Organisational characteristics of organisational units (firm-level organisational culture) (entrepreneurial leadership) have a moderating effect on the behaviour (learning styles) of middle management staff and on the overall performance as well as entrepreneurial performance of organisational units. With reference to operational management staff (levels 4-5), organisational characteristics reflect the highest positive correlations with the majority of variables with the exception of key business dimensions. This finding seems to suggest that an organisations' EO (firm-level) (culture) (leadership styles of senior management) has a more prominent impact on lower-level staff and moderates behaviour at that level. Arguments to the contrary, as identified in the literature review, which propose organisational culture to be predominantly affected by middle managements' behaviour, therefore seem to be unfounded.
- Municipal agencies in the local government organisation portray fewer bureaucratic resource management practices (key business dimensions) than core departments, which are mainly established through official structures, policies, procedures and standard practices (hard issues). The findings regarding variances between core departments and municipal agencies can, however, not be explained substantively, since no significant correlations with the other variables as investigated could be determined. The fact that no correlation could be determined might indicate that these variables are of less significance to entrepreneurial and overall performance of organisational units and that the key distinction rather lies in the behaviour, entrepreneurial leadership and competencies of managerial staff. This proposition seems to be supported by the fact that no significant variance could be identified in the entrepreneurial or overall performance of agencies and core departments of the

local government organisation. This proposition should be confirmed in further empirical research.

7.6 Contribution to science

The research study is unique in the sense that it analyses entrepreneurial variables and related performance in a local government context in South Africa in terms of two units of analysis, namely individual-level behaviour on different managerial levels, as well as organisational characteristics and business dimensions at the institutional level (firm level), in two different categories of local government organisations, namely traditional core departments and independent municipal entities (agencies). The study is the first in South Africa and in local government that analyses two different units of analysis simultaneously in two different municipal types of organisation.

In accordance with the research problem, questions, results and conclusions stated in paragraphs 1.3, 1.6, 7.2, 7.4 and 7.5 respectively, the study contributes specifically to the science of entrepreneurship as well as public management in a local government context, in the following manner:

- a) The study provide empirical results obtained from the EPI and LSQ measuring instruments that indicate negative correlations between cognitive analytical propensity (CAP) levels of managerial staff and the entrepreneurial performance of an organisation and positive correlations between progressive action propensity (PAP) as indicated by active initiative (AI) levels and the entrepreneurial performance of an organisation. These findings are of specific significance for the entrepreneurship field of study since it provide evidence that confirms the baseline premises as contained in the 'creation theory' of entrepreneurship and strengthen arguments for 'action learning' and entrepreneurial leadership development in the field of entrepreneurship in contrast to cognitive-related learning and development programmes.
- b) The study further contributes to the development of the concept of 'active behaviour/initiative' as key determinants of entrepreneurial knowledge creation and

competence that support recent trends in entrepreneurship research by providing a proposed alternative model (SHAPE model) for the knowledge creation (behavioural) methodology of entrepreneurship, in contrast to the currently accepted linear process model of entrepreneurship that is supported by the research findings.

The model explains nonlinear relationships and recursive feedback loops that facilitate knowledge creation in particular. It further provides a solid basis for the integration of individual and organisational level variables in an organisational context and explains the collective and interactive nature of organisational culture (firm-level EO), which is affected by individual behaviour on senior management levels. In addition, it provides an alternative to the methodology of strategic management that accommodates speed, flexibility and environmental intelligence more appropriately in support of entrepreneurship.

- c) The study confirms in addition that Organisational characteristics of organisational units (firm-level organisational culture) (entrepreneurial leadership) have a moderating effect on the behaviour (learning styles) of middle management staff and on the overall performance as well as entrepreneurial performance of organisational units. This finding is of specific importance since it highlights the importance of entrepreneurial leadership at senior management level in contrast to contrary arguments that suggest organisational culture to be predominantly affected by middle managements' behaviour instead.
- d) With reference to alternative management models in local government the study provides empirical evidence that bureaucratic resource management practices (key business dimensions) which are mainly established through official structures, policies, procedures and standard practices (hard issues) do not correlate significantly with entrepreneurial performance. The findings suggest that these variables are of less significance to entrepreneurial and overall performance of organisational units and that the key distinction rather lies in the behaviour, entrepreneurial leadership and

competencies of managerial staff as confirmed by the findings on managerial behaviour. This finding is of critical importance for local government since local government organisations in South Africa place extensive emphasis on the introduction of alternative management models while behavioural competencies of managerial staff are regarded as of less importance.

7.7 Limitations of study

The primary limitations of the study are as follows:-

- a) The availability of applicable measurement instruments that accommodate the key objectives and scope of the research sufficiently. A limited number of measurement instruments are available that measure different dimensions at a specific level of analysis, i.e. either on an organisational (firm level) or at an individual behavioural level. No suitable practical instrument could be identified that sufficiently accommodated the scope of the research at both levels simultaneously while maintaining a proper distinction in the relevant dimensions and levels of analysis. The most appropriate instrument identified and used to measure specifically the active and cognitive dimensions of the behavioural propensities of individual managerial staff in the context of knowledge creation in the work environment, namely the Honey and Momford LSQ, has attracted extensive debate on the nature of its factor structure, although it has been widely used internationally. In addition, criticism is expressed on instruments such as the EPI, Corporate Entrepreneurship Climate Instrument and EO concept that is directed at firm-level analysis, since it is argued that firm-level characteristics and individual behaviour/leadership styles are confused in some instances. In these circumstances a combination of the Honey and Momford LSQ and the EPI had to be applied.
- b) The availability of reliable and quantifiable data on entrepreneurial intensity and entrepreneurial performance in a local government context and at the organisation where the research was conducted specifically. Entrepreneurial performance data are not recorded separately from general performance data in any of the organisational

units of the local government organisation where the research was conducted, with the result that the researcher had to rely on the perceptions of managerial staff. In addition, entrepreneurial intensity indicators, such as new ventures and products identified as assessed in terms of the EPI, are unfamiliar concepts in the local government context and do not adequately capture the nature of local government services in all instances. This observation might have had an impact on the interpretation of questions and the results obtained.

- c) Exclusion of political office bearers and members of the boards of municipal entities (agencies) to accommodate the effect of political dynamics in the research. The scientific measurement of political variables that have an impact on the local government sector from both national and local levels and in different types of organisational units, i.e. core departments and municipal agencies, in addition to staff behaviour, organisational characteristics and entrepreneurial performance, proved to be extremely cumbersome and impractical to accommodate in one study and had to be excluded.

7.8 Recommendations

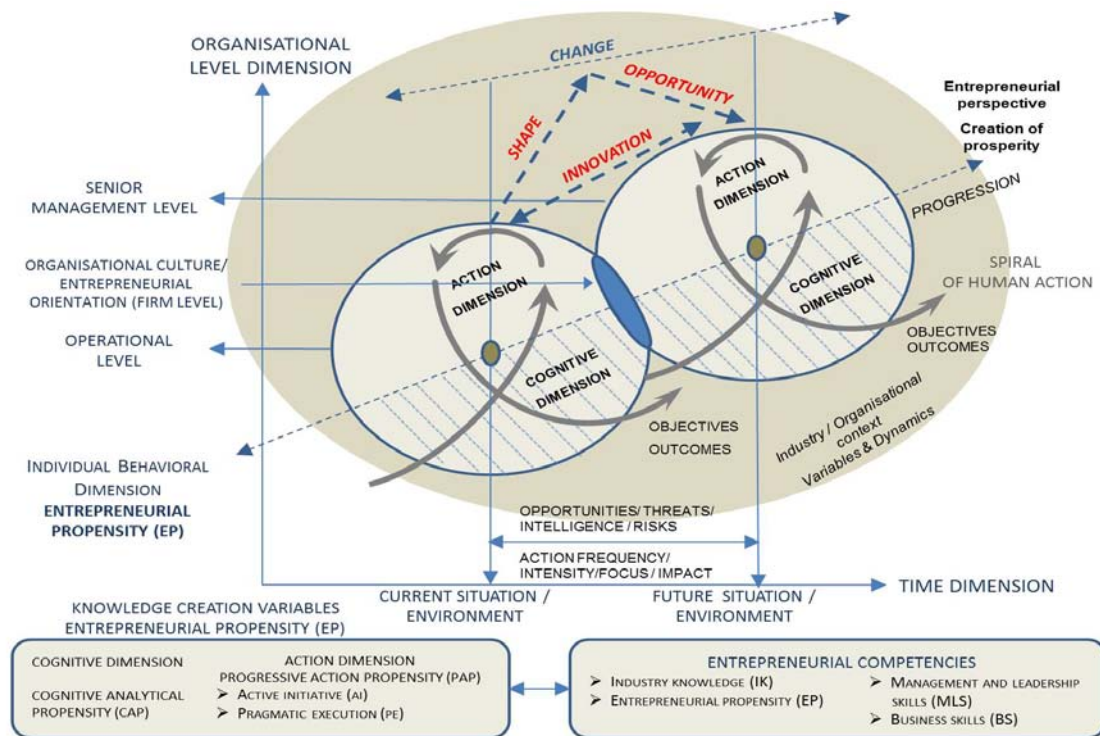
7.8.1 Entrepreneurship theory

In accordance with the results obtained in the study the following proposals with respect to entrepreneurship theory is recommended:

- a) Knowledge creation and behavioural dynamics of entrepreneurship (EP)

The following model, labelled SHAPE, that explains knowledge creation dynamics in terms of the 'spiral' concept in support of the '*creation theory of entrepreneurship*' as depicted in figure 32 below, is proposed:

Figure 32: Spiral of Human Action for Progressive Entrepreneurship



Based on: Alvarez and Barney (2007); Frese (2009); Nonaka and Takeuchi (1995); Ropo and Hunt (1995); Shepherd *et al.* (2010).

The SHAPE model accommodates the critical additional dimension of time, inherent knowledge creation and learning dimensions, which are not always necessarily linear, ever-changing environments and the nature and results of continuous, recursive deliberate action, defined as *EP* that shapes change for opportunity recognition, identification, creation and innovation as primary antecedents of entrepreneurial performance, as originally described by Shepherd *et al.* (2010:73, 74).

The model further explains nonlinear relationships and recursive feedback loops that have recently characterised process research and frameworks specifically and supports the critical dimension of EP (behaviour) (AI) that facilitates knowledge creation in particular, as emphasised by a variety of authors, such as Schon (1983), Gartner (1989), Wiklund (1998), Hitt *et al.* (2002), Mathews (2008), Mitchell *et al.* (2007), Mitchelmore and Rowley (2010), as well as the 'creation theory of

entrepreneurship’, mentioned by Alvarez and Barney (2007:26-28) and the ‘*action theory perspective*’ of entrepreneurship highlighted by Frese (2009:433). It further provides a solid basis for the integration of individual and organisational level variables as a function of reciprocal relationships between the two levels, as originally indicated by Shepherd *et al.* (2010), and suggests a means by which individual-level heuristics might become embedded in the organisational culture in the form of routines, and reciprocally indicates how organisational routines that promote *entrepreneurial action* may become adopted at the individual level as heuristics, which explains the virtuous process that is reinforced by positive organisational and individual capabilities and interaction across time that feeds on itself, generating a continuous stream of *entrepreneurial actions* consistent with those encouraged by the environment (Shepherd *et al.*, 2010:73,74). The collective and interactive nature of organisational culture (firm-level entrepreneurial orientation), which is affected by individual behaviour on senior management levels, is accordingly highlighted and placed into proper perspective. In addition, it provides an alternative to the methodology of strategic management that accommodates speed, flexibility and environmental intelligence more appropriately.

b) Entrepreneurial performance assessment

It is proposed that entrepreneurial competence criteria be incorporated in generic performance assessment models that are widely acknowledged and applied, such as the ‘balanced scorecard’ and ‘business excellence’ models, in order to entrench the value of EP and competence within the broader scope of organisational/institutional performance.

7.8.2 Entrepreneurship in local government

The following proposals with respect to local government in general, as informed by the research conclusions addressed in paragraph 7.5, are recommended:

a) Corporatisation and revision of operating models

The following findings inform the recommendations:-

- No significant differences exist in the entrepreneurial performance or overall performance of core departments and independent agencies of the local government organisation investigated.
- Organisation characteristics (Entrepreneurial culture) have a positive correlation with the overall performance of organisation units.
- Key business dimensions (Resource management practices) in municipal agencies indicate fewer bureaucratic levels than traditional core departments.
- Active initiative levels of senior management staff have a positive correlation with entrepreneurial performance.
- Cognitive analytical propensity levels of managerial staff have a negative correlation with entrepreneurial performance that is moderated by organisational units and managerial levels.

It is thus recommended that the following options regarding corporatisation and the revision of operating models be applied, subject to the placement of primary emphasis on recruitment, as well as training and development, of managerial staff that prioritises entrepreneurial competence and propensity as key variables related to entrepreneurial performance:-

- Corporatisation of municipal services or the creation of SOEs as introduced at the local government organisation investigated for services that allow for the generation of revenue with the potential to be self-sustainable in order to lessen the burden on the local tax base, to create independence and flexibility and to reduce bureaucracy.
- Decentralisation of services (which has been proven to decrease bureaucracy), especially in large metropolitan councils, subject to proper delegations of authority and mechanisms to ensure accountability in order to stimulate independence.
- Revision of operating policies and procedures in order to lessen bureaucracy and promote flexibility. This recommendation should, however, be introduced with caution, be limited to specific levels of seniority and be accompanied with revised

alternative mechanisms to retain efficient control and accountability, such as the strengthening of separate audit and risk management capacities.

b) Recruitment, entrepreneurial leadership and skills development

In view of the findings that AI has a positive correlation with entrepreneurial performance and CAP a negative correlation that is moderated by organisational units and managerial levels, the following is recommended:-

- Adjustment of recruitment criteria and methods to include assessment centre procedures for senior staff instead of methods that rely predominantly on interviews as a method of selection in order to assess entrepreneurial competencies as specific criteria;
- Implementation of 'action learning programmes' that facilitate interaction with the service delivery environment of local government and that emphasise experimentation and networking, in contrast to formal training programmes that are predominantly of a cognitive nature, in local government; and
- Implementation of independent coaching and mentoring programmes for senior managers with representation from the private sector and academic sectors;
- Formal introduction of entrepreneurial leadership development programmes for senior management in local government that are directed at the development of EP that emphasises AI, networking and creativity competencies.

c) Strategic management and budgeting methodology

With reference to the findings that organisational characteristics and AI levels of senior managerial staff indicated positive correlations with the overall performance as well as entrepreneurial performance of organisational units, while key business dimensions (Resource management practices) in municipal agencies indicated fewer bureaucratic practices, it is regarded as essential that flexibility and space for initiative be created in methodologies applied. Current practices are of a highly bureaucratic nature, separate planning from implementation and are deeply entrenched and integrated at local, provincial and national levels. In the short to medium term any

major generic adjustment should therefore be regarded as impractical for short-term implementation. The following options could, however, be considered:-

- Changing methodologies from focusing on inputs and activity-based planning and budgeting procedures to desired outcome-based dispensations that can effectively be quantified and monitored;
- The creation of special ‘innovation funds’ with separate and distinct expenditure control and performance management dispensations that allow for quick access and flexibility in utilisation;
- Incorporating ‘innovation criteria’ for the prioritisation of funding allocations in the normal strategic planning and budgeting processes; and
- Limiting escalation of normal funding that relies on the local tax base for specific services with the potential of generating revenue and enforcing requirements for revenue generation instead.

d) Performance management and incentives

In view of the findings that AI of senior management staff has a positive correlation with entrepreneurial performance, specific requirements and incentives for exceptional initiative that promoted entrepreneurship, innovation and general performance should be incorporated in current performance management and rewarding dispensations.

7.8.3 Future research

The following proposals for future research are recommended:-

- Entrepreneurship research in an organisational/institutional context should accommodate analyses at both the organisational and individual behavioural levels (especially senior management levels), since these levels of analysis are not regarded as synonymous and are easily misinterpreted.
- Care should be taken when applying measurement instruments in an organisational context to ensure that variables that have been identified and assessed discriminate

sufficiently between universal organisational and individual behavioural factors, especially those related to senior management levels.

- Care should be taken when conducting research in an organisational/institutional context not to disregard the basic premises on which entrepreneurial behaviour are based in favour of universal organisational-level factors since these factors both have prominent implications that are distinctly different in nature.
- Entrepreneurial research conducted in a local government context should seriously consider the inclusion of political representatives, since political dimensions are regarded as having an extensive impact on the nature of local government dispensations and operating mechanisms.
- It is recommended that the sub-scales of the Honey and Momford LSQ be revised, since the relevant sub-scales do not in all instances discriminate adequately between all factors identified with specific reference to the PE sub-scale.
- The organisation characteristics dimension of the EPI should be revised, since it relates strongly to individual behavioural leadership styles of senior management that are not regarded as a universal organisational-level unit of analysis.
- Further research should be done into the nature of relationships between ‘cognitive’ and ‘active’ dimensions of entrepreneurial knowledge creation/EP to determine whether the **difference in the propensity levels** of the two dimensions relate more appropriately to entrepreneurial performance instead of the actual propensity levels of each dimension.
- Further research should be conducted to refine PE as a variable related to the ‘active dimension’ of EP (behaviour) in addition to AI, with specific emphasis on maintaining focus, energy and determination to achieve long-term objectives over a period of time, as well as the intensity, frequency and impact levels of actions undertaken.
- Further research should be conducted to refine variables related to the ‘cognitive dimension’ of EP (behaviour) that distinguishes more appropriately between ‘cognitive analytical’ variables with reference to the ability to identify associations/relationships and draw conclusions that direct further action.

7.9 Summary

The research conducted was aimed at the determination of specific factors, behaviour, learning styles, practices, processes or systems that facilitate knowledge creation and enhance the potential of entrepreneurial success in public institutions and local government specifically. In this regard, different organisational units at the local government organisation investigated, namely traditional core departments and independent municipal agencies were analysed, and the entrepreneurial performance of each organisational unit was determined to draw comparisons.

The establishment of independent municipal agencies to provide local government services enables active initiative of senior management and lessens bureaucratic practices that provide scope for entrepreneurship to the benefit of communities that should be promoted, subject to the prioritisation of recruitment, as well as training and development practices for management staff that emphasise EP and competence as key criteria.

The findings indicate further that organisational characteristics and AI levels of especially senior management have a positive correlation with entrepreneurial performance and surprisingly also indicated that the CAP levels of managerial staff have a negative correlation with entrepreneurial performance. This finding has serious and extensive implications for the nature of recruitment, as well as training and development practices to promote entrepreneurship in general and in local government specifically, which should be taken into account in future.

The research was very successful in achieving its original objectives and it is sincerely hoped that the results will contribute to the improvement of local government practices in South Africa and the promotion and development of entrepreneurship locally as well as internationally.

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APPENDIX A: MEASUREMENT INSTRUMENT

INTRODUCTION

The City of Johannesburg and its Municipal Owned Entities (MOEs) is engaging in an assessment of the Organization's Entrepreneurial Culture, Performance and behavioural patterns of managerial and operational staff.

The purpose of the initiative is to assess the level of Corporate Entrepreneurship in the City and determine factors that either create blockages or enhance entrepreneurial performance in the City. The assessment consists of two (2) Sections which are as follows:

- Section A:** ***Behavioural patterns (Learning Styles) of individuals***
Section B: ***Entrepreneurial Performance of the Organization / Department***

Who will be assessed: *The initial phase includes specific selected departments and Municipal Owned entities, where-after the further roll-out to other department / entities will be considered, depending on the outcome of the initial phase. Any staff member who is interested is welcome and may participate in the assessment, if so desired. All senior and operational managers from the selected departments / entities are however specifically approached to participate on a voluntary basis.*

Why should I participate: *The City wishes to develop an Entrepreneurial Culture and therefore need information on factors that enhances innovation and entrepreneurial behaviour. By participating, you will contribute to the City's objectives and will assist in developing a World Class African City on which all employees and stakeholders can be proud.*

Are my answers / opinions confidential: *Yes – all responses will remain strictly confidential. The disclosure of your name is further optional and need not to be provided.*

Are there any right on wrong answers: **No –there are no right or wrong answers. The assessment is not intended to measure your skills or capabilities – but rather certain behavioural patterns and perceptions. Please be as honest and objective as possible. Answers should be based on actual experiences, facts, true and honest feelings / perceptions.**

Duration: ***There is no time limit to the completion of the questionnaires. Normally the assessment should however not take more than an hour.***

Voluntary Consent: ***Participation in the assessment is voluntary and participants are required to indicate their consent in the applicable space provided.***

Biographical Information: *Limited biographical information will be required from each participant to determine tendencies in occupational levels, literacy and educational levels as well as gender classifications.*

INSTRUCTIONS

1. All information should be completed in black pen – print style
2. Complete the Biographical Information as required on page 2 of this Introduction document. Note the participant number is pre-allocated for administrative purposes
3. Further instructions for completion are provided at the beginning of **each section** of the questionnaire



Please answer each question by circling an appropriate number in a shaded box or by writing your answer in the shaded space provided

Participant reference number: (Pre-allocated for official use)

V1

 1

Biographical Information

Voluntary information

A. Surname: Initials:

B. Contact number:

Required information

C. Department / Municipal Owned Entity (MOE):

V2

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 7

D. Division / Branch:

V3

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 10

E. Designation:

V4

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 13

F. Managerial level:

(Please note the **City Manager** is regarded as **Level 1** in the City of Johannesburg while **Executive Directors of core departments & Managing Directors of Municipal Owned Entities (MOEs)** are regarded as **Level 2** for the purpose of this assessment) (Please **circle only one** answer)

Executive Directors / Managing Directors – Level 2	1
Directors / Executive Managers – Level 3	2
Deputy Directors / General Managers – Level 4	3
Assistant Directors / Managers – Level 5	4
Operational Managers / Supervisors / Senior Officers etc. – Level 6	5

V5

--

 15

G. Gender:

Male	1
Female	2

V6

--

 16

H. Age (in completed years):

V7

--	--

 17

I. Highest Qualification:

--

V8

--	--

 19

J. Number of completed years work experience:

--

V9

--	--

 21

K. Number of completed years working for the City Council or its Municipal Owned Entities (MOEs):

--

V10

--	--

 23

L. Consent:

I have read and understand the information provided above	1
I hereby give my consent to participate in this study on a voluntary basis	2

V11

--	--

 25

V12

--	--

 26

Please continue with Section A

SECTION A: INDIVIDUAL BEHAVIOURAL PATTERNS **(LEARNING STYLE ASSESSMENT)**

Overview

This Section of the assessment is designed to determine your preferred learning style(s). Over the years people develop preferred learning routines ("habits") that help them identify opportunities, which enable them to benefit more from some experiences than others. Since people are generally unaware of this, the questionnaire will help to pin-point current learning preferences.

Instructions

There is no time limit to the completion of this section of the questionnaire. It should however take approximately 10-15 minutes. The accuracy of the results depends on how honest you are. There are no right or wrong answers.

If you **agree** more than you disagree with a statement **draw a circle around a "1" in a shaded box**

If you **disagree** more than you agree **draw a circle around a "0" in a shaded box**

Please be sure to **circle** either a **"1"** or a **"0"** in a shaded box for your answer to each statement. Please make sure that **only one option is circled** for each answer

	Statement	Disagree	Agree		
1.	I have strong beliefs about what is right and wrong, good and bad.	0	1	V13	<input type="text"/> 27
2.	I often act without considering the possible consequences.	0	1	V14	<input type="text"/> 28
3.	I tend to solve problems using a step-by-step approach	0	1	V15	<input type="text"/> 29
4.	I believe that formal procedures and policies restrict people	0	1	V16	<input type="text"/> 30
5.	I have a reputation for saying what I think, simply and directly	0	1	V17	<input type="text"/> 31
6.	I often find that actions based on feelings are as sound as those based on careful thought and analysis	0	1	V18	<input type="text"/> 32
7.	I like the sort of work where I have time for thorough preparation and implementation	0	1	V19	<input type="text"/> 33
8.	I regularly question people about their basic assumptions	0	1	V20	<input type="text"/> 34
9.	What matters most is whether something works in practice	0	1	V21	<input type="text"/> 35
10.	I actively seek out new experiences	0	1	V22	<input type="text"/> 36
11.	When I hear about a new idea or approach I immediately start working out how to apply it in practice	0	1	V23	<input type="text"/> 37
12.	I am keen on self-discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc	0	1	V24	<input type="text"/> 38
13.	I take pride in doing a thorough job	0	1	V25	<input type="text"/> 39
14.	I get on best with logical, analytical people and less well with spontaneous, "irrational" people	0	1	V26	<input type="text"/> 40
15.	I take care over the interpretation of data available to me and avoid jumping to conclusions	0	1	V27	<input type="text"/> 41

SECTION A: (cont.) **INDIVIDUAL BEHAVIOURAL PATTERNS**
(LEARNING STYLE ASSESSMENT)

If you **agree** more than you disagree with a statement **draw a circle around a "1" in a shaded box**

If you **disagree** more than you agree **draw a circle around a "0" in a shaded box**

Please be sure to **circle** either a **"1"** or a **"0"** in a shaded box for your answer to each statement. Please make sure that **only one option is circled** for each answer

	Statement	Disagree	Agree			
16.	I like to reach a decision carefully after weighing up many alternatives	0	1	V28	<input type="checkbox"/>	42
17.	I am attracted more to novel, unusual ideas than to practical ones	0	1	V29	<input type="checkbox"/>	43
18.	I do not like disorganized things and prefer to fit things into a coherent pattern	0	1	V30	<input type="checkbox"/>	44
19.	I accept and stick to laid down procedures and policies as long as I regard them as an efficient way of getting the job done	0	1	V31	<input type="checkbox"/>	45
20.	I like to relate my actions to a general principle	0	1	V32	<input type="checkbox"/>	46
21.	In discussions I like to get straight to the point	0	1	V33	<input type="checkbox"/>	47
22.	I tend to have distant, rather than formal relationships with people at work	0	1	V34	<input type="checkbox"/>	48
23.	I thrive on the challenge of tackling something new and different	0	1	V35	<input type="checkbox"/>	49
24.	I enjoy fun-loving, spontaneous people	0	1	V36	<input type="checkbox"/>	50
25.	I pay meticulous attention to detail before coming to a conclusion	0	1	V37	<input type="checkbox"/>	51
26.	I find it difficult to produce ideas on impulse	0	1	V38	<input type="checkbox"/>	52
27.	I believe in coming to the point immediately	0	1	V39	<input type="checkbox"/>	53
28.	I am careful not to jump to conclusions too quickly	0	1	V40	<input type="checkbox"/>	54
29.	I prefer to have as many sources of information available as possible - the more data to mull over the better	0	1	V41	<input type="checkbox"/>	55
30.	Flippant people who do not take things seriously enough usually irritate me	0	1	V42	<input type="checkbox"/>	56
31.	I listen to other people's points of view before putting my own forward	0	1	V43	<input type="checkbox"/>	57
32.	I tend to be open about how I am feeling	0	1	V44	<input type="checkbox"/>	58
33.	In discussions I enjoy watching the maneuverings of the other participants	0	1	V45	<input type="checkbox"/>	59
34.	I prefer to respond to events on a spontaneous, flexible basis rather than plan things out in advance	0	1	V46	<input type="checkbox"/>	60
35.	I tend to be attracted to techniques such as network analysis, flow charts, branching programmes, contingency planning, etc	0	1	V47	<input type="checkbox"/>	61
36.	It worries me if I have to rush out a piece of work to meet a tight deadline	0	1	V48	<input type="checkbox"/>	62
37.	I tend to judge people's ideas on their practical merits	0	1	V49	<input type="checkbox"/>	63
38.	Quiet, thoughtful people tend to make me feel uneasy	0	1	V50	<input type="checkbox"/>	64
39.	I often get irritated by people who want to rush things	0	1	V51	<input type="checkbox"/>	65
40.	It is more important to enjoy the present moment than to think about the past or future	0	1	V52	<input type="checkbox"/>	66
41.	I think that decisions based on a thorough analysis of all the information are sounder than those based on intuition	0	1	V53	<input type="checkbox"/>	67
42.	I tend to be a perfectionist	0	1	V54	<input type="checkbox"/>	68
43.	In discussions I usually produce lots of spontaneous ideas	0	1	V55	<input type="checkbox"/>	69
44.	In meetings I put forward practical realistic ideas	0	1	V56	<input type="checkbox"/>	70

SECTION A: (cont.) **INDIVIDUAL BEHAVIOURAL PATTERNS**
(LEARNING STYLE ASSESSMENT)

If you **agree** more than you disagree with a statement **draw a circle around a "1" in a shaded box**

If you **disagree** more than you agree **draw a circle around a "0" in a shaded box**

Please be sure to **circle** either a **"1"** or a **"0"** in a shaded box for your answer to each statement. Please make sure that **only one option is circled** for each answer

	Statement	Disagree	Agree			
45.	More often than not, rules are there to be broken	0	1	V57	<input type="checkbox"/>	71
46.	I prefer to stand back from a situation and consider all the perspectives	0	1	V58	<input type="checkbox"/>	72
47.	I can often see inconsistencies and weaknesses in other people's arguments	0	1	V59	<input type="checkbox"/>	73
48.	On balance I talk more than I listen	0	1	V60	<input type="checkbox"/>	74
49.	I can often see better, more practical ways to get things done	0	1	V61	<input type="checkbox"/>	75
50.	I think written reports should be short and to the point	0	1	V62	<input type="checkbox"/>	76
51.	I believe that rational, logical thinking should win the day	0	1	V63	<input type="checkbox"/>	77
52.	I tend to discuss specific things with people rather than engaging in social discussion	0	1	V64	<input type="checkbox"/>	78
53.	I like people who approach things realistically rather than theoretically	0	1	V65	<input type="checkbox"/>	79
54.	In discussions I get impatient with irrelevances and digressions	0	1	V66	<input type="checkbox"/>	80
55.	If I have a report to write I tend to produce lots of drafts before settling on the final version	0	1	V67	<input type="checkbox"/>	81
56.	I am keen to try things out to see if they work in practice	0	1	V68	<input type="checkbox"/>	82
57.	I am keen to reach answers via a logical approach	0	1	V69	<input type="checkbox"/>	83
58.	I enjoy being the one that talks a lot	0	1	V70	<input type="checkbox"/>	84
59.	In discussions I often find I am the realist, keeping people to the point and avoiding wild speculations	0	1	V71	<input type="checkbox"/>	85
60.	I like to ponder many alternatives before making up my mind	0	1	V72	<input type="checkbox"/>	86
61.	In discussions with people I often find I am the most dispassionate and objective	0	1	V73	<input type="checkbox"/>	87
62.	In discussions I am more likely to adopt a "low profile" than to take the lead and do most of the talking	0	1	V74	<input type="checkbox"/>	88
63.	I like to be able to relate current actions to a longer-term bigger picture	0	1	V75	<input type="checkbox"/>	89
64.	When things go wrong I am happy to shrug it off and "put it down to experience"	0	1	V76	<input type="checkbox"/>	90
65.	I tend to reject wild, spontaneous ideas as being impractical	0	1	V77	<input type="checkbox"/>	91
66.	It is best to think carefully before taking action	0	1	V78	<input type="checkbox"/>	92
67.	On balance I do the listening rather than the talking	0	1	V79	<input type="checkbox"/>	93
68.	I tend to be tough on people who find it difficult to adopt a logical approach	0	1	V80	<input type="checkbox"/>	94
69.	Most times I believe the end justifies the means	0	1	V81	<input type="checkbox"/>	95
70.	I do not mind hurting people's feelings as long as the job gets done	0	1	V82	<input type="checkbox"/>	96
71.	I find the formality of having specific objectives and plans stifling	0	1	V83	<input type="checkbox"/>	97
72.	I am usually one of the people who puts life into a party	0	1	V84	<input type="checkbox"/>	98
73.	I do whatever is expedient to get the job done	0	1	V85	<input type="checkbox"/>	99
74.	I quickly get bored with methodical, detailed work	0	1	V86	<input type="checkbox"/>	100

SECTION A: (cont.) **INDIVIDUAL BEHAVIOURAL PATTERNS
(LEARNING STYLE ASSESSMENT)**

If you **agree** more than you disagree with a statement **draw a circle around a “1”** in a shaded box

If you **disagree** more than you agree **draw a circle around a “0”** in a shaded box

Please be sure to **circle** either a “1” or a “0” in a shaded box for your answer to each statement. Please make sure that **only one option is circled** for each answer

	Statement	Disagree	Agree		
75.	I am keen on exploring the basic assumptions, principles and theories underpinning things and events	0	1	V87	<input type="text"/> 101
76.	I am always interested to find out what people think	0	1	V88	<input type="text"/> 102
77.	I like meetings to be run on methodical lines, sticking to a laid down agenda, etc	0	1	V89	<input type="text"/> 103
78.	I steer clear of subjective or ambiguous topics	0	1	V90	<input type="text"/> 104
79.	I enjoy the drama and excitement of a crisis situation	0	1	V91	<input type="text"/> 105
80.	People often find me insensitive to their feelings	0	1	V92	<input type="text"/> 106

SECTION B: ENTREPRENEURIAL PERFORMANCE INDEX

Overview

This Section determines the degree and frequency of Entrepreneurial Performance in the organization / department and identifies the underlining dimensions of performance, innovativeness, risk taking and pro-activeness

Instructions

Please note the term “**Organization**” refers to a **Municipal Owned Entity (MOE)** as a whole while “**Department**” refers to the specific core department of the City as a whole. Reference to these terms does not refer to the City of Johannesburg as a whole or a Division or Branch of the specific Municipal Owned Entity or core Department. There is no time limit to the completion of this section of the questionnaire. It should however take approximately 15-20 minutes. The accuracy of the results depends on how honest you are. There are no right or wrong answers.

In this Section some **statements** are made to which you should indicate your agreement or disagreement. If you **agree more** than you disagree with a statement **draw a circle around a “5”** in a shaded box provided next to the statement. If you **disagree more** than you agree **draw a circle around a “1”** in a shaded box provided next to the statement.

In some instances **particular questions** are asked to which specific answers are required such as Values or Numbers. Provide the information in the spaces provided.



Be sure to mark / answer each item below by indicating a preferred number selection or providing the required information. In cases where you don't know or are unsure – make a calculated and realistic estimation

Section B Part 1: **Organisational Characteristics**

	Statement	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree		
	Our organization / department is characterised by:							
81.	A High rate of new product / service introductions compared to competitors (including new features and improvements)	1	2	3	4	5	V93	<input type="text"/> 107
82.	An emphasis on continuous improvement in methods of production and/or service delivery	1	2	3	4	5	V94	<input type="text"/> 108
83.	Risk-taking by key executives in seizing chancy growth opportunities	1	2	3	4	5	V95	<input type="text"/> 109
84.	A "live and let live" philosophy" in dealing with competitors	1	2	3	4	5	V96	<input type="text"/> 110
85.	Seeking of unusual, novel solutions by senior executives to problems via the use of "idea people", brainstorming, etc	1	2	3	4	5	V97	<input type="text"/> 111
86.	A top management philosophy that emphasizes proven products and services, and the avoidance of heavy new product development cost	1	2	3	4	5	V98	<input type="text"/> 112
87.	A charismatic leader at the top	1	2	3	4	5	V99	<input type="text"/> 113
	In our organization/ department's top-level, decision making is characterized by:							
88.	Cautious, pragmatic, step-at-a-time adjustments to problems	1	2	3	4	5	V100	<input type="text"/> 114
89.	Active search for big opportunities	1	2	3	4	5	V101	<input type="text"/> 115
90.	Rapid growth as the dominant goal	1	2	3	4	5	V102	<input type="text"/> 116
91.	Large, bold decisions despite uncertainties of the outcomes	1	2	3	4	5	V103	<input type="text"/> 117
92.	Compromise among the conflicting demands of owners, government, management, customers, employees, suppliers, etc	1	2	3	4	5	V104	<input type="text"/> 118
93.	Steady growth and stability as primary concern	1	2	3	4	5	V105	<input type="text"/> 119

Section B Part 2: **Organisational Performance** *continues on the next page ...*



Section B Part 2: Organisational Performance

	Question	Less than 50%	Between 50 – 74%	Between 75 – 99%	100%	More than 100%		
94.	How would you rate the client / customer satisfaction of your organisation / department (both internal or external)	1	2	3	4	5	V106	<input type="text"/> 120
95.	How would you rate your organisation's / department's effectiveness in delivering it's services	1	2	3	4	5	V107	<input type="text"/> 121
96.	How would you rate your organisation's / department's efficiency in delivering services	1	2	3	4	5	V108	<input type="text"/> 122
97.	What percentage (%) of your organization's / department's annual targets or objectives were achieved during the past two (2) years	1	2	3	4	5	V109	<input type="text"/> 123
98.	What percentage (%) of your organization's / department's annual budget was spend during the past two (2) years	1	2	3	4	5	V110	<input type="text"/> 124

Section B Part 3: New Venture Introductions

Note: **Ventures** refers to risky undertakings, actions or enterprises established that normally involves substantial capital investments.

99. How many **new venture opportunities** did your organisation / department **identify** in the past two years? (**Note : All new ventures identified, irrespective of whether it was finally successfully introduced**)

V111 125

100. How many **new ventures** did your organisation / department actually **successfully establish** in past two years? (**Note – only those successfully established**)

V112 128

	Question	Much Less	Less	Similar	More	Much More		
101.	How does the number of new ventures successfully established at your organization / department compare with those of your major competitors or organisations / departments similar to yours?	1	2	3	4	5	V113	<input type="text"/> 131



	Question	None did not exist	Few did not exist	50% did not exist	Several did not exist	All did not exist
		1	2	3	4	5
102.	To what degree did these new ventures established include ventures that did not previously existed in your service environment ("new to the environment")?					

V114 132

Section B Part 4: **New Product / Service Introductions**

103. How many potential **new products** or **services** did your organization / department **identify** during the past two years? (Note : All new products or services identified, irrespective of whether they were finally successfully introduced)

V115 133

104. How many **new products** or **services** did your organization / department **successfully introduce** during the past two years? (Note – only those **successfully introduced**)

V116 136

105. How many **existing products** or **services** did your organization / department **identify** for significant **revision** or **improvement** during the past two years? (Note : All **significant revisions / improvements of existing products** or **services** identified, irrespective of whether they were finally successfully introduced)

V117 139

106. How many **existing products** or **services** did your organization / department significantly **revise** or **improve successfully** during the past two years (Note – only those **successfully revised or improved**)

V118 142

	Question	Much Less	Less	Similar	More	Much More
		1	2	3	4	5
107.	How does the number of new products or service introductions that your organization / department have made compare with those of the competitors or organisations / departments similar to yours? ("new to the service environment")					

V119 145



	Question	Much Less	Less	Similar	More	Much More
108.	How does the number of significant improvements / revisions of existing products or services that your organization / department has made compare with those of the competitors or organisations / departments similar to yours?	1	2	3	4	5

V120 146

	Question	None did not exist	Few did not exist	50% did not exist	Several did not exist	All did not exist
109.	To what degree did these new product or service introductions include products or services that did not previously exist in your service environment ("new to the service environment")?	1	2	3	4	5
110.	To what degree did these improvements / revisions of existing products or services include products or services that did not previously exist in your service environment	1	2	3	4	5

V121 147

V122 148

Section B Part 5: **New System / Process Introduction**

111. Estimate the number of significant **new methods, operational processes or systems** your organization / department **identified** during the past two years (Examples of process innovations include: new systems for managing customer service or inventories, an improved process for collecting receivables or a major new distribution approach, etc) (**Note : All significant new methods, processes or systems identified, irrespective of whether it was finally successfully introduced**)

V123 149

112. Estimate the number of significant **new methods, operational processes or systems** your organization / department **successfully implemented** during the past two years (Examples of process innovations include: new systems for managing customer service or inventories, an improved process for collecting receivables or a major new distribution approach, etc) (**Note – only those successfully implemented**)

V124 152



	Question	Much Less	Less	Similar	More	Much More
113.	How does the number of significant new methods, operational processes or systems successfully implemented by your organization / department compare with those implemented by competitors or organisations / departments similar to yours?	1	2	3	4	5

V125 155

	Question	None did not exist	Few did not exist	50% did not exist	Several did not exist	All did not exist
114.	To what degree did these new methods, operational processes or systems introduced include methods, processes or systems that did not previously exist in your service environment ("new to the service environment")?	1	2	3	4	5

V126 156

Section B Part 6: Key Business Behavioral Dimensions

The following questions relate to the approaches that underlie **the way your organisation or department conducts business**. Please circle a number in a shaded box that best represents the relative emphasis your organisation / department places on the two extremes of criteria given in the statement.. The **number "1"** indicates that **more** emphasis is placed on the **criteria listed on the left hand** while **number "5"** indicate **more** emphasis is placed on the **criteria listed on the right-hand side**

	Our organization's / department's current strategic orientation is:					
115.	Influenced primarily by the resources we currently control	1	2	3	4	5
						Influenced primarily by the perception of untapped opportunity

V127 157

	With regard to new opportunities, our organization / department tend to:					
116.	Commit fairly quickly, capitalize, and move to the next opportunity	1	2	3	4	5
						Approach with an evolutionary commitment that tends to be of long duration

V128 158



Section B Part 6: (cont.)

Key Business Behavioral Dimensions

The following questions relate to the approaches that underlie **the way your organisation or department conducts business**. Please circle a number in a shaded box that best represents the relative emphasis your organisation / department places on the two extremes of criteria given in the statement.. The **number "1"** indicates that **more** emphasis is placed on the **criteria listed on the left hand** while **number "5"** indicate **more** emphasis is placed on the **criteria listed on the right-hand side**

Our organization's / department's approach to investing resources in new opportunities tends to involve:									
117.	Multiple stages with minimal commitment at each stage	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	A single stage with complete commitment upon decision	V129 <input type="text"/> 159
1	2	3	4	5					
When managing or controlling resources, we tend to:									
118.	Episodic use, renting, leasing, contracting, and outsourcing of resources each stage	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Ownership, purchase, control and employ the resources we use	V130 <input type="text"/> 160
1	2	3	4	5					
Our organization's / department's management structure can be characterised as:									
119.	A flat structure with multiple informal networks	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	A Hierarchical structure with clearly defined authority and responsibility	V131 <input type="text"/> 161
1	2	3	4	5					
Our organization's / department's compensation and reward system is:									
120.	Value based and team based with unlimited earning potential for employees	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Resource based, driven by short-term performance data, with limited earning potential for employees	V132 <input type="text"/> 162
1	2	3	4	5					

THANK YOU FOR YOUR WILLINGNESS TO PARTICIPATE

APPENDIX B: CORRELATION BETWEEN INDIVIDUAL AND ORGANISATIONAL VARIABLES (PEARSON CORRELATION COEFFICIENT)

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0
Number of Observations

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations		Legend					Number of new products/services identified (V115)		Number of existing products/services service revisions identified (V117)		Number of new methods/processes/systems identified (V123)			
							Number of new products/services introduced (V116)		Number of existing products/services service revisions introduced (V118)		Number of new methods/processes/systems successfully implemented (V124)			
		Overall Sample Results					Management Levels 1-3				Management Levels 4-5			
	Organisational Characteristics	Business Dimensions	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4
TOTAL SAMPLE														
Total Performance	0.30289	-0.0553	0.08436	-0.05876	-0.01625	0.02862	0.18736	-0.11533	-0.18627	-0.00856	0.07594	-0.03284	0.01107	0.03055
	<.0001	0.2497	0.0788	0.2213	0.7354	0.5517	0.1028	0.3179	0.1048	0.9411	0.1516	0.5356	0.8347	0.5645
Organisational Characteristics	435	435	435	435	435	435	77	77	77	77	358	358	358	358
	NA	NA	0.06973	0.00985	-0.07572	0.0078	0.12471	-0.1952	-0.15115	0.07172	0.06788	0.08478	-0.06046	-0.01105
Business Dimensions			0.1465	0.8377	0.1148	0.8711	0.2799	0.0889	0.1895	0.5354	0.2001	0.1093	0.2539	0.835
	NA	NA	435	435	435	435	77	77	77	77	358	358	358	358
V111			0.02222	0.059	0.05725	-0.00673	0.09634	-0.10298	-0.06454	0.00781	0.01996	0.12067	0.07917	-0.01583
			0.644	0.2194	0.2335	0.8887	0.4046	0.3728	0.5771	0.9463	0.7066	0.0224	0.1349	0.7653
V112	0.07754	-0.02156	0.08233	-0.19375	-0.07775	-0.04035	0.14616	-0.08777	-0.20203	0.06711	0.06857	-0.21554	-0.04705	-0.07011
	0.1678	0.7018	0.143	0.0005	0.1667	0.4734	0.2453	0.4869	0.1065	0.5953	0.2773	0.0006	0.4562	0.2666
V115	318	318	318	318	318	318	65	65	65	65	253	253	253	253
	0.12696	0.00758	0.07616	-0.16628	-0.11763	-0.04414	0.09847	-0.04289	-0.22597	0.02171	0.07301	-0.19581	-0.08914	-0.06961
V116	0.0223	0.892	0.1714	0.0027	0.0343	0.4285	0.4279	0.7304	0.066	0.8616	0.2435	0.0016	0.1542	0.2662
	324	324	324	324	324	324	67	67	67	67	257	257	257	257
V117	0.16973	0.0051	0.12652	-0.06205	-0.01834	0.04851	0.12764	0.09911	-0.06486	0.09009	0.13834	-0.11189	-0.00182	0.0273
	0.0013	0.9233	0.0166	0.2416	0.7295	0.3601	0.2853	0.4075	0.5883	0.4517	0.0193	0.0588	0.9755	0.6457
V118	358	358	358	358	358	358	72	72	72	72	286	286	286	286
	0.18471	-0.01308	0.13782	-0.08966	-0.02573	0.04305	0.11156	0.08949	-0.06046	0.05489	0.14875	-0.14382	-0.01546	0.03714
V119	0.0004	0.8025	0.0081	0.0859	0.6227	0.4103	0.3508	0.4547	0.6139	0.647	0.0104	0.0133	0.7911	0.5244
	368	368	368	368	368	368	72	72	72	72	296	296	296	296
V120	0.19132	0.07178	0.10015	-0.06459	0.02419	0.03612	0.18171	0.0801	0.02125	0.12816	0.08581	-0.10265	0.02455	-0.00232
	0.0003	0.1736	0.0573	0.2209	0.6468	0.4939	0.1294	0.5067	0.8604	0.2868	0.145	0.081	0.6772	0.9687
V121	361	361	361	361	361	361	71	71	71	71	290	290	290	290
	0.16884	0.00585	0.09346	-0.0698	-0.04408	0.01072	0.18724	0.09537	-0.02527	0.08962	0.07877	-0.10257	-0.04921	-0.01036
V122	0.0013	0.9117	0.0757	0.1851	0.4031	0.839	0.1179	0.4289	0.8343	0.4573	0.1802	0.0807	0.403	0.8602
	362	362	362	362	362	362	71	71	71	71	291	291	291	291
V123	0.05202	-0.00163	0.08857	-0.21807	-0.12018	0.01744	0.24334	-0.42101	-0.30861	0.04375	0.01556	-0.01659	0.00959	-0.01226
	0.3055	0.9744	0.0806	<.0001	0.0176	0.7313	0.0367	0.0002	0.0075	0.7113	0.7829	0.7689	0.8651	0.8281
V124	390	390	390	390	390	390	74	74	74	74	316	316	316	316
	0.05757	-0.00396	0.09029	-0.21873	-0.11231	0.0208	0.24164	-0.42248	-0.30445	0.04641	0.02415	-0.02082	0.03926	-0.00303
V125	0.2549	0.9376	0.0738	<.0001	0.026	0.681	0.0381	0.0002	0.0084	0.6945	0.6674	0.711	0.4847	0.957
	393	393	393	393	393	393	74	74	74	74	319	319	319	319

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0
Number of Observations

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations		Legend Number of new ventures Identified (V111)				Number of new products/services identified (V115)		Number of existing products/services service revisions identified (V117)			Number of new methods/processes/systems identified (V123)				
		Number of new ventures implemented (V112)				Number of new products/services introduced (V116)		Number of existing products/services service revisions introduced (V118)			Number of new methods/processes/systems successfully implemented (V124)				
		Overall Sample Results						Management Levels 1-3				Management Levels 4-5			
	Organisational Characteristics	Business Dimensions	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4	
Agencies															
Total Performance	0.4222	-0.08396	0.09931	-0.09048	-0.05537	0.05006	0.281	-0.18792	-0.19463	0.01702	0.06636	-0.00347	-0.01571	0.04801	
	<.0001	0.2807	0.2016	0.2449	0.4773	0.5205	0.1475	0.3383	0.321	0.9315	0.4377	0.9677	0.8543	0.5747	
	167	167	167	167	167	167	28	28	28	28	139	139	139	139	
Organisational Characteristics	NA	NA	0.16952	-0.04137	-0.10947	0.01719	0.1721	-0.24587	-0.13317	0.0407	0.16542	0.05689	-0.09651	0.00692	
			0.0285	0.5955	0.1591	0.8254	0.3812	0.2072	0.4993	0.8371	0.0516	0.5059	0.2584	0.9355	
			167	167	167	167	28	28	28	28	139	139	139	139	
Business Dimensions	NA	NA	0.09613	0.07121	0.11127	0.03882	0.14951	-0.03435	-0.12436	-0.25797	0.08274	0.16116	0.1745	0.09546	
			0.2165	0.3605	0.1523	0.6184	0.4476	0.8622	0.5284	0.185	0.3329	0.0581	0.0399	0.2636	
			167	167	167	167	28	28	28	28	139	139	139	139	
V111	-0.0058	-0.09475	0.06857	-0.22277	-0.11458	-0.10063	0.30354	-0.36083	-0.25847	-0.01069	0.05027	-0.22768	-0.10438	-0.11103	
	0.9484	0.2893	0.4437	0.0118	0.1996	0.2603	0.1697	0.099	0.2455	0.9623	0.6105	0.0195	0.2893	0.2595	
	127	127	127	127	127	127	22	22	22	22	105	105	105	105	
V112	0.1142	-0.03132	0.03437	-0.19441	-0.16216	-0.05216	0.27361	-0.29337	-0.23973	0.04089	0.00948	-0.18849	-0.1566	-0.06615	
	0.1958	0.7236	0.6979	0.0267	0.0653	0.5556	0.1958	0.1641	0.2592	0.8495	0.9232	0.053	0.1089	0.5005	
	130	130	130	130	130	130	24	24	24	24	106	106	106	106	
V115	0.19628	0.04604	0.1827	0.01532	0.08997	0.08534	0.17214	0.09179	-0.04142	0.00752	0.18679	-0.02141	0.11825	0.10395	
	0.021	0.5918	0.032	0.8584	0.294	0.3196	0.3906	0.6488	0.8375	0.9703	0.0496	0.8235	0.2164	0.2776	
	138	138	138	138	138	138	27	27	27	27	111	111	111	111	
V116	0.21984	0.03793	0.1794	0.03296	0.08439	0.137	0.21009	0.01386	-0.08891	0.03151	0.17781	0.02029	0.12055	0.16223	
	0.0086	0.654	0.0327	0.697	0.318	0.104	0.2929	0.9453	0.6592	0.876	0.0573	0.8296	0.1994	0.0832	
	142	142	142	142	142	142	27	27	27	27	115	115	115	115	
V117	0.07591	0.08078	0.03792	0.02904	0.10245	-0.0126	0.20666	-0.07611	-0.05193	-0.00544	0.01263	0.04894	0.13368	-0.01178	
	0.3833	0.3535	0.6636	0.7391	0.2388	0.8851	0.3111	0.7117	0.8011	0.979	0.8968	0.615	0.1678	0.9037	
	134	134	134	134	134	134	26	26	26	26	108	108	108	108	
V118	0.10013	-0.07779	0.06723	-0.0275	-0.05918	-0.03271	0.15976	-0.13873	-0.04254	-0.07594	0.06784	-0.04191	-0.06684	-0.02733	
	0.2479	0.3698	0.4385	0.7516	0.4953	0.7064	0.4356	0.4991	0.8365	0.7123	0.4834	0.6653	0.4898	0.7778	
	135	135	135	135	135	135	26	26	26	26	109	109	109	109	
V123	0.06914	-0.03665	0.1364	-0.32971	-0.18187	0.02552	0.34748	-0.51551	-0.40414	0.06204	0.00674	-0.04162	-0.0128	-0.02817	
	0.3974	0.6539	0.0938	<.0001	0.0249	0.755	0.0757	0.0059	0.0366	0.7585	0.9406	0.6449	0.8874	0.7551	
	152	152	152	152	152	152	27	27	27	27	125	125	125	125	
V124	0.07362	-0.03452	0.14418	-0.33016	-0.17252	0.0334	0.35047	-0.51792	-0.40068	0.06605	0.03658	-0.05292	0.02614	0.00044	
	0.3626	0.6698	0.0735	<.0001	0.0318	0.6799	0.0731	0.0057	0.0383	0.7434	0.6818	0.553	0.7696	0.9961	
	155	155	155	155	155	155	27	27	27	27	128	128	128	128	

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0
Number of Observations

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations		Legend				Number of new products/services identified (V115)		Number of existing products/services service revisions identified (V117)		Number of new methods/processes/systems identified (V123)					
		Number of new ventures Identified (V111)				Number of new products/services introduced (V116)		Number of existing products/services service revisions introduced (V118)		Number of new methods/processes/systems successfully implemented (V124)					
		Overall Sample Results						Management Levels 1-3				Management Levels 4-5			
		Organisational Characteristics	Business Dimensions	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4	AI F1	RO F2	CRT F3	PE F4
Core Departments															
Total Performance		0.22623	-0.04207	0.07481	-0.03608	0.01243	0.01368	0.07798	0.06185	-0.1586	-0.04721	0.0813	-0.04838	0.03301	0.02025
		0.0002	0.4928	0.2222	0.5565	0.8394	0.8236	0.5943	0.6729	0.2764	0.7474	0.2308	0.4763	0.627	0.7657
		268	268	268	268	268	268	49	49	49	49	219	219	219	219
Organisational Characteristics		NA	NA	0.01298	0.04065	-0.05663	0.00145	0.1062	-0.19122	-0.16881	0.08654	0.0095	0.09744	-0.04028	-0.02301
				0.8325	0.5076	0.3557	0.9812	0.4677	0.1881	0.2463	0.5543	0.8889	0.1507	0.5533	0.7349
				268	268	268	268	49	49	49	49	219	219	219	219
Business Dimensions		NA	NA	-0.01174	0.04465	0.01795	-0.03466	0.05946	-0.16471	-0.01584	0.1792	-0.00154	0.08233	0.01327	-0.07497
				0.8483	0.4667	0.7698	0.5722	0.6849	0.2581	0.914	0.2179	0.982	0.225	0.8452	0.2693
				268	268	268	268	49	49	49	49	219	219	219	219
V111		0.14935	0.02217	0.0952	-0.17386	-0.05141	0.00781	0.13188	-0.03787	-0.2111	0.0883	0.09769	-0.23943	0.00252	-0.03543
		0.0392	0.7608	0.1902	0.0162	0.48	0.9146	0.3992	0.8095	0.1742	0.5734	0.2375	0.0034	0.9758	0.669
		191	191	191	191	191	191	43	43	43	43	148	148	148	148
V112		0.13446	0.0372	0.10403	-0.14494	-0.08506	-0.03805	0.08343	-0.00271	-0.25015	0.02131	0.12998	-0.20883	-0.03166	-0.07382
		0.0616	0.6065	0.1489	0.0438	0.2383	0.5984	0.5948	0.9862	0.1057	0.8921	0.1117	0.0101	0.6995	0.3677
		194	194	194	194	194	194	43	43	43	43	151	151	151	151
V115		0.16133	-0.00653	0.10438	-0.10034	-0.06753	0.03414	0.16538	0.06106	-0.09933	0.13228	0.11448	-0.16715	-0.07849	-0.01682
		0.0166	0.9233	0.1227	0.1379	0.3187	0.6145	0.2776	0.6903	0.5162	0.3864	0.1314	0.027	0.3018	0.8251
		220	220	220	220	220	220	45	45	45	45	175	175	175	175
V116		0.18016	-0.01971	0.12962	-0.14055	-0.06332	0.01461	0.12884	0.08267	-0.07569	0.07438	0.14251	-0.20441	-0.06754	-0.008
		0.0066	0.7682	0.0516	0.0347	0.3433	0.8271	0.399	0.5893	0.6212	0.6272	0.0556	0.0058	0.3663	0.9148
		226	226	226	226	226	226	45	45	45	45	181	181	181	181
V117		0.24432	0.06529	0.13131	-0.11491	-0.01664	0.05623	0.22828	0.10707	0.04308	0.19423	0.13654	-0.20067	-0.05401	-0.00238
		0.0002	0.3274	0.0482	0.0841	0.8031	0.3991	0.1315	0.4839	0.7787	0.2011	0.0661	0.0066	0.469	0.9746
		227	227	227	227	227	227	45	45	45	45	182	182	182	182
V118		0.24335	0.0657	0.12552	-0.12006	-0.03537	0.04805	0.25951	0.13689	-0.03134	0.15701	0.11635	-0.21663	-0.05209	0.00095
		0.0002	0.3244	0.059	0.071	0.596	0.4713	0.0852	0.3699	0.8381	0.303	0.1178	0.0033	0.4849	0.9898
		227	227	227	227	227	227	45	45	45	45	182	182	182	182
V123		0.11871	0.0333	0.0856	-0.06955	-0.08789	0.01369	0.18711	-0.03959	-0.34989	-0.00571	0.08667	-0.08013	-0.00163	0.01877
		0.0675	0.6093	0.1882	0.2852	0.1766	0.8335	0.2079	0.7916	0.0159	0.9696	0.2332	0.2705	0.9821	0.7966
		238	238	238	238	238	238	47	47	47	47	191	191	191	191
V124		0.17387	0.00217	0.05586	-0.05978	-0.07101	-0.0105	0.16239	-0.05699	-0.37064	-0.00075	0.05058	-0.05666	0.02801	-0.02247
		0.0072	0.9734	0.3909	0.3585	0.2752	0.872	0.2755	0.7036	0.0103	0.996	0.4871	0.4362	0.7005	0.7576
		238	238	238	238	238	238	47	47	47	47	191	191	191	191

APPENDIX C: OVERVIEW OF METROPOLITAN LOCAL GOVERNMENT ORGANISATION

OVERVIEW OF METROPOLITAN LOCAL GOVERNMENT ORGANISATION

The metropolitan local government organisation where the research was conducted is one of the most powerful economic centres on the African continent and one of six metropolitan municipalities in South Africa. According to statistics released by the city of Johannesburg (2008:11-79) it is the most densely populated and urbanised municipality in South Africa, with a population of 3 888 180 people in 1 165 014 households. The income profile of residents demonstrates that the city's population is very affluent compared to South Africa as a whole, although about 38% of the economically active population is unemployed. The capital expenditure of the city has increased from R3,4 billion in 2006/07 to R4,5 billion in 2007/08 and the operating expenditure from R14 billion to R17,2 billion.

During 2002 the metropolitan local government organisation embarked on a major transformation programme named Igoli 2002, to improve service delivery, rectify its financial situation as well as institutional problems, and adhere to the relevant legislative requirements (Allan, Gotz & Joseph, 2001:49).

In summary the Igoli 2002 programme was directed at the following:

- a) *“establishment of separate utilities for trading services such as electricity, water and sanitation as well as waste management;*
- b) *creation of agencies for specific services such as roads and storm water, as well as parks and cemeteries;*
- c) *privatization of certain assets such as metro gas, fresh produce market, land, housing, airports and stadiums;*
- d) *establishment of Section 21 companies for functions such as the zoo, civic theatre, farms, housing and property management;*
- e) *re-organization of the remaining core functions by splitting administrative responsibilities into one central and eleven (11) regional administrations, and*

f) *division of functions on the basis of allocating strategy and policy formulation functions (Client functions) to the central administration and operational implementation functions (Contractor functions), to the regional administrations and agencies (Client / contractor relationship)”.*

(Allan, Gotz & Joseph, 2001:49)

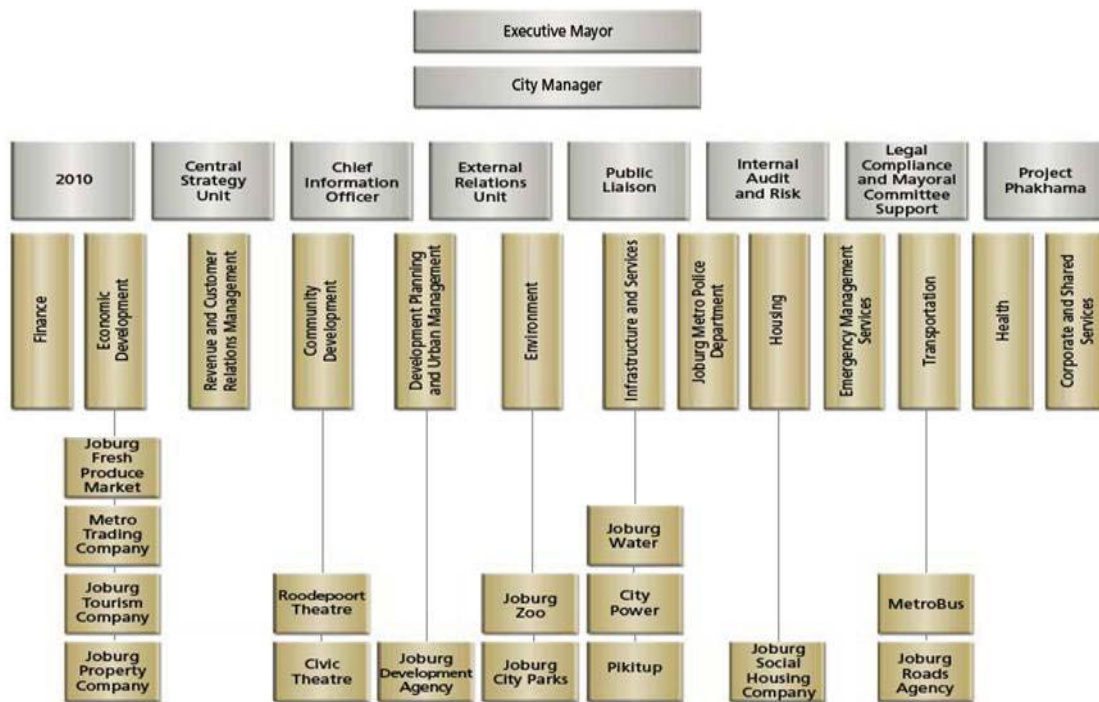
The city provides a wide range of services to the community, covering the following:-

- Development planning and urban management
- Economic development
- Community development
- Environment
- Infrastructure and services
- Housing
- Public safety
- Transport
- Health
- Special programmes such as the 2010 FIFA World Cup.

The overall governance structure of the city provides for a core administration with a total staff complement of 12 559 officials, as well as independent municipal entities (utilities and agencies) as separate companies. According to officials of the city of Johannesburg (2008:27), these entities are wholly owned by the city and have the primary objective to provide services that were originally provided by the Council. The utilities provide water and sanitation (Johannesburg Water), electricity (City Power) and waste management services (Pikit up). The agencies focus on roads and storm water (Johannesburg Roads Agency), parks and cemeteries (Johannesburg City Parks) and area-based economic development (Johannesburg Development Agency). The corporatised entities include the Johannesburg Zoo, Johannesburg Civic Theatre, Metrobus, Johannesburg Fresh Produce Market, Johannesburg Property Company, Metropolitan Trading Company, Johannesburg Tourism Company and Johannesburg Social Housing Company. These entities were created to deliver specialised services and to relate closely to their customers. The city maintains policy and implementation direction, while allowing for company boards and company management to

exercise relative autonomy in the execution of their fiduciary duties in terms of the Companies Act. The overall governance structure of the city is reflected in figure 33, below:

Figure 33: Metropolitan Local Government structure



Source: City of Johannesburg (2008: 48)