

**DIFFERENTIATED COMPETENCY PROFILES
FOR LEAD ENTREPRENEURS IN
DIFFERENT BUSINESS CONTEXTS**

by

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SUMMARY

DIFFERENTIATED COMPETENCY PROFILES FOR LEAD ENTREPRENEURS IN DIFFERENT BUSINESS CONTEXTS

**KEY WORDS: ENTREPRENEUR, ENTREPRENEURIAL COMPETENCIES, HJA,
PROFILES, ENTREPRENEURSHIP, BUSINESS INDUSTRIES**

Entrepreneurs are perceived to have a significant effect on a country's economy by the establishment of new ventures that provide not only products to customers, but also job opportunities in various industries. Therefore entrepreneurs and entrepreneurship have become a critical solution to the low economic growth, high level of poverty and the high level of unemployment in South Africa. However there is a significant shortage of entrepreneurs in South Africa – in particular high-growth start-up entrepreneurs. Various researchers and authors highlight similar (but not identical) entrepreneurial variables and processes, as well as the interactions of these variables and processes with the various competency profiles of the lead entrepreneur. The Timmons model and the Wickham model emphasise an integrated, holistic and appropriate fit and balance between the various entrepreneurial variables (including the situation-specific entrepreneurial competencies or differentiated competency profiles for lead entrepreneurs).

Chapter two discusses the current entrepreneur and entrepreneurship related issues such as the definitions and concepts regarding entrepreneurship, the entrepreneurial process, certain relevant myths, the entrepreneur and the entrepreneurial competencies; and especially that there does not exist only one profile of entrepreneurial competencies that fits all types of industries. All this emphasised the need for differentiated competency profiles to enable the particular optimal entrepreneurial mix for different business contexts such as the specific type of business industry.

The third chapter reports on the research methodology and the results of the data gathered in the survey research process. The internationally validated and user-friendly Human Job Analyses (HJA) questionnaire from Thomas International™ was used to collect the entrepreneurial competency data cluster into the four well known competency clusters Dominance, Influence, Steadiness and Compliance – also known as DISC. The HJA was conducted in certain pre-selected business industries

to collect this exploratory study's research data. The sample characteristics and related descriptive statistics were analysed and briefly discussed. Although the most descriptive statistics indicated interesting results, the most important statistics are the median related statistics, because of the *unlikelihood* of these samples being normally distributed. Because of the sample limitations, only non-parametric tests applied. The Kruskal-Wallis Rank Test and the Wilcoxon Rank Sum Test were therefore used for the inferential statistical analyses. Due to the similarity in results that both test statistics had with each other, the Wilcoxon was not repeated for the analyses of the individual entrepreneurial competencies.

Certain entrepreneurial competency clusters, as well as certain individual entrepreneurial competencies, showed no significant differences in their median rankings; others that do, have significant differences in their median rankings, which compare with the literature study's sources that emphasise that there is not one entrepreneurial profile that fits all.

The most important conclusions that could be drawn within the context of the abovementioned limitations includes that the Dominance cluster of entrepreneurial competencies showed *no* statistical significant difference across the different business industry samples. From that may be concluded that the particular three industry samples (Real Estate, Accommodation and Restaurant) all regarded more or less equally important to very important for lead entrepreneurs in the particular three industries. On the other hand a significant difference in importance was found across the different business industries for the other three entrepreneurial competency clusters. The most important conclusion that can be drawn from that is again that there is no one entrepreneurial profile that fit all lead entrepreneur across different types of business industries. It can thus be concluded, at least regarding this study's industry samples, that there may be a part of the entrepreneurial competency profile that is similar for all three industries surveyed, but that a significant part of the entrepreneurial profile (three of the four competency clusters in this study's case) has a statistically significant different entrepreneurial competency profile.

These conclusions support the researcher's initial reason for this exploratory study and should be followed up with further research projects using representative random samples.

OPSOMMING

GEDIFFERENSIEERDE BEVOEGDHEIDSPROFIELE VIR LEIER-ENTREPRENEURS IN VERSKILLENDE BESIGHEIDSKONTEKSTE

SLEUTELWOORDE: ENTREPRENEUR, ENTREPRENEURIESE BEVOEGDHEDE, HJA, PROFIELE, ENTREPRENEURSKAP, BESIGHEIDS INDUSTRIE

Entrepreneurs word beskou as instrumenteel in 'n land se ekonomie ten opsigte van die skep van nuwe ondernemings wat nie alleen produkte aan klante verskaf nie, maar ook werkseleenthede in verskeie industrieë. Derhalwe het entrepreneurs en entrepreneurskap 'n kritiese oplossing vir Suid-Afrika se lae ekonomiese groei, hoë voorkoms van armoede en hoë vlak van werkloosheid geword. Ten spyte hiervan is daar 'n betekenisvolle tekort aan entrepreneurs in Suid-Afrika – en in besonder van sogenaamde hoë-groei nuwe-onderneming entrepreneurs. Verskeie navorsers en outeurs beklemtoon soortgelyke entrepreneuriese veranderlikes en -prosesse, asook die interaksies van daardie veranderlikes en prosesse met die verskeie bevoegdheidsprofile van die leier-entrepreneur. Beide Timmons se model en dié van Wickham beklemtoon 'n geïntegreerde, holistiese, beste passing en balans tussen die verskeie entrepreneuriese veranderlikes (insluitend situasie-spesifieke entrepreneuriese bevoegdhele of gedifferensieerde bevoegdheidsprofile vir leier-entrepreneurs).

Die hedendaagse entrepreneur en verwante kwessies word in hoofstuk twee bespreek, insluitend definisies en konsepte rakende entrepreneurskap, die entrepreneuriese proses, sekere relevante mites, die entrepreneur en entrepreneuriese bevoegdhele; en in besonder dat daar nie slegs een profiel van entrepreneuriese bevoegdhele bestaan wat alle tipes industrieë pas nie. Al die bogenoemde beklemtoon die behoefte aan gedifferensieerde bevoegdheidsprofile om die optimale entrepreneuriese mengsel vir verskillende besigheidskontekste te vind vir elke spesifieke tipe industrie.

Die derde hoofstuk lewer verslag oor die navorsingsmetodologie en die resultate van die data wat deur die studie-opname ingesamel is. Die internasionaal erkende en gebruiksvriendelike "Human Job Analyses"(HJA)-vraelys van Thomas International™ is gebruik om data oor entrepreneuriese bevoegdhele in te samel in terme van die

vier welbekende bevoegdheidskategorieë, naamlik Dominansie (“Dominance”), Invloed (“Influence”), Bestendigheid (“Steadiness”) en Voldoening (“Compliance”) – oftewel “DISC”. Die HJA is in sekere vooraf-geselekteerde industrieë afgeneem om data vir hierdie loodsstudie in te samel. Die steekproef se eienskappe en verwante beskrywende statistieke is ontleed en kortliks bespreek. Ten spyte daarvan dat die beskrywende statistieke interessante resultate opgelewer het, is die belangrikste beskrywende statistiek van hierdie studie die mediaan en mediaanverwante statistieke, omdat hierdie gerieflikheidssteekproewe klein steekproefgroottes het en waarskynlik nie-normale verspreidings het. Vanweë die beperkings van hierdie steekproefpopulasie kon slegs nie-parametriese toetse toegepas word. Die Kruskal-Wallis Rangorde-toets en die Wilcoxon Rangorde-somtoets is dus gebruik vir die inferensiële statistiese analises. As gevolg van die groot ooreenkoms tussen die resultate van beide tipe nie-parametriese toetse, is die Wilcoxon Rangorde-somtoets nie herhaal met die statistiese ontleding van die individuele entrepreneuriese bevoegdhede nie.

Sekere entrepreneuriese bevoegdheidsgroeperings, asook sekere individuele entrepreneuriese bevoegdhede, het statisties geen betekenisvolle verskille opgelewer nie. Ander het weer statisties betekenisvolle verskille opgelewer. Dit vergelyk met die literatuur wat beklemtoon dat daar geen enkele entrepreneuriese profiel bestaan wat vir alle situasies geld nie.

Die belangrikste gevolgtrekkings wat gemaak is binne die konteks van die beperkings van hierdie studies, sluit in dat die “Dominansie”-groepering van entrepreneurs bevoegdhede geen statisties betekenisvolle verskille ten opsigte van die verskillende industrieë se steekproefpopulasies opgelewer het nie. Gebaseer hierop, is voorts afgelei dat die drie betrokke industrieë se steekproefpopulasies (Eiendomswese, Hotelbedryf en Restaurantwese) almal ongeveer eweveel waarde heg (van belangrik tot baie belangrik) aan “Dominansie”-bevoegdhede vir leier-entrepreneurs in die betrokke industrieë. Daarenteen is statisties betekenisvolle verskille in belangrikheid by al drie betrokke besigheid industrieë gevind vir al drie die ander entrepreneuriese bevoegdheid groeperinge. Die belangrikste gevolgtrekking is sekerlik dat daar nie slegs een entrepreneuriese profiel bestaan wat vir alle leier-entrepreneurs regoor verskillende tipes industrieë geld nie. Derhalwe blyk dit minstens ten opsigte van hierdie steekproefpopulasies dat die navorser se rede vir die verkennende studie ondersteun word.

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CHAPTER 1:

INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

The Global Entrepreneurship Monitor's (GEM) South African Report 2006 states that:

“South Africa is a developing country with high rates of unemployment, low levels of formal and higher education, ..., corporate restructuring and government policies and regulations enforcing the restructuring of larger organisations. The country, therefore, has an urgent need for entrepreneurs ... to act as a tool to combat unemployment and crime and to stimulate the economy as a whole.”

(Maas & Herrington, 2006:43)

Entrepreneurship is regarded as playing a vital role in the survival and growth of any emerging economy. In general, entrepreneurs are perceived to have a significant effect on a country's economy by the establishment of new ventures that provide not only products to customers, but also job opportunities in various industries. Therefore, entrepreneurs and entrepreneurship have become a critical solution to the low economic growth, high incidence of poverty and high level of unemployment in South Africa (Barnes, 2005:3-4; Hall, Woodsmall, M., Woodsmall, W., Johnson & Franchini, 2004:1; Nieuwenhuizen, 2003:3-4; Nieman & Bennet, 2002:57; Van Der Merwe, 2003:27-28).

However, there is a significant shortage of entrepreneurs in South Africa, as indicated on the Department of Labour's Scarce Skills List for 2004-2009 (DoL, 2005:56-57).

According to the GEM 2007 Executive Report, only 8% of all start-ups (nascent and new ventures) expect to create 20 or more jobs and only 3% of all start-ups expect to create 50 or more jobs (Bosma, Jones, Autio & Levie, 2008:25). New and nascent entrepreneurs who expect to employ at least 20 people in five years' time are known as **high-growth start-up entrepreneurs** or **HGSUs** (Hall *et al.*, 2004:1), and their entrepreneurial activity is known as **high-growth expectation early-stage entrepreneurial activity** or **HEA** (Bosma *et al.*, 2008:25-26).

High-income countries typically have a relative higher prevalence of HEA than middle and low income countries. It is no surprise that HEA in South Africa is prevalent in only slightly more than 5% of all South African start-up ventures. Our HEA's current contribution to creating new jobs in South Africa is thus far from satisfying the demand for new jobs.

In addition, the GEM South African Report 2006 emphasizes that there is only a limited amount of usable literature (*accurate and meaningful information*) available regarding the entrepreneurial sector in the South African context and only a limited amount of research has been empirically tested in the South African context (Maas & Herrington, 2006:43-44).

This emphasizes the scarcity of South African HGSUs, as well as the urgent need for empirical research on entrepreneurs, even more so regarding HGSU entrepreneurs, in the South African context.

Various entrepreneurship researchers and authors (Ferreira, 2002:16; Kuratko & Hodgetts, 2004:42-43; Timmons & Spinelli, 2004:56-64; Wickham, 2004:133-139) highlight similar, *but not identical*, dimensions of entrepreneurial variables. In particular, the *interaction* between these entrepreneurial variables, as well as their interactions with, *and their implications for*, the various competency profiles of the lead entrepreneur (and his/her entrepreneurial team) are investigated. Timmons and Spinelli (2007:88-96) have coined the term **Lead Entrepreneur** to refer to entrepreneurial team leaders, and this refers mostly to the originator of the venture. For the purposes of this study, the term **Lead Entrepreneur** will have a much wider interpretation, which would usually include the managing director, chief executive officer, general manager, owner-manager, business-unit manager or similar roles, including that of manager, new-business director/manager, strategic management director/champion, organisation renewal/development/change director/manager, operational manager and/or other executive board members.

Timmons and Spinelli (2004:56-62) and Wickham (2004:134) unequivocally emphasize the importance of having the most appropriate lead entrepreneur and entrepreneurial team composition, which would facilitate the particular venture's optimal opportunity, organisation, resources and entrepreneurial team dynamics to enable the particular optimal entrepreneurial mix.

1.2 PROBLEM STATEMENT (THE RESEARCH PROBLEM)

“Many books and articles have presented checklists of characteristics of the successful entrepreneur. These lists were neither validated nor complete; they were based on case studies and on research findings among achievement-oriented people. Today we realise that a standard entrepreneurial profile is hard to compile. The environment, the venture itself, and the entrepreneur have interactive effects, which result in many different types of profiles. Contemporary studies ... will, in future, provide more accurate insights into the various profiles of successful entrepreneurs.”

(Kuratko & Hodgetts, 2004:32)

The research need therefore exists for identifying differentiated competency profiles of successful entrepreneurs to maximise entrepreneurial success in different industries. These profiles need to enable the particular optimal entrepreneurial mix for different business contexts (such as the specific type of business industry, e.g. restaurant industry vs. accommodation industry) that would maximise entrepreneurial success in the particular industry. *(This is similar to typical job profiles for the same type of position in different work contexts.)*

The **research problem** is therefore the need to determine if there are different competency profiles present for successful entrepreneurs in different business contexts such as different business industries (e.g. restaurant industry vs. accommodation industry) and to identify possible industry specific trends that might maximise entrepreneurial success.

1.3 THE RESEARCH QUESTIONS TO BE ADDRESSED

- 1.3.1 What are some of the most relevant variables of entrepreneurial competencies that need to be differentiated, and in which dimensions can these variables be clustered?
- 1.3.2 Based upon the results of the previous question, the research question to be addressed is: what is the particular lead entrepreneurs' competency profile that is associated with the particular business context? In the case of this

study, the question is therefore: what is the business industry specific trends regarding the competency profile of the lead entrepreneur?

1.4 THE GOALS OF THIS STUDY

1.4.1 *General Aim*

The general aim of this study is to explore the possibility of differentiated entrepreneurial competency profiles for different business contexts (*such as the specific type of business industry*) – as a **brief exploratory study**.

1.4.2 *Specific Goals*

1.4.2.1 Use an existing validated questionnaire to achieve the abovementioned specific research goals and general research aim.

1.4.2.3 Based upon the results of the previous specific research goal, determine if there are differentiable competency profiles for lead entrepreneurs associated with the particular business contexts (such as a specific business industry).

1.5 RESEARCH METHODOLOGY (WHICH TECHNIQUES WILL BE USED)

1.5.1 *The Scope of the Study*

This study is a **brief exploratory study**.

1.5.2 *The Research Design*

Due to various practical reasons, as well as the scope of this research project, a **brief exploratory study** seems to be more appropriate at the mini-dissertation level in order to explore the particular constructs by using the HJA questionnaire as the survey research instrument.

Due to the exploratory nature of this **brief exploratory study**, hypotheses will not be formulated. The focus is mainly to identify differentiated competency profiles for lead entrepreneurs that would enable the optimal entrepreneurial mix in different business contexts in a particular industry (such as the restaurant industry).

Various generic entrepreneurial competency profiles (*sets of entrepreneurial competencies*) have been identified by means of numerous literature studies (Ferreira, 2002:16; Kuratko & Hodgetts, 2004:42-43; Timmons & Spinelli, 2004:56-64; Wickham, 2004:133-139), but very few properly validated psychometric instruments could be identified by the researcher. One example is the HJA (Human Job Analysis) job profiling questionnaire that could be used for profiling entrepreneurial **and** non-entrepreneurial positions, which has been extensively validated – internationally and in South Africa. Another example is the Entrepreneurial Potential Report (EPR) generated from the Saville Consulting Wave™ Professional Styles questionnaire and powered by EntreCode® – *a model of how successful entrepreneurs create and lead high value businesses, often starting with virtually nothing* (Saville Consulting Incorporated, 2006:3), *aiming to identify and nurture HGSUs* (Hall *et al.*, 2004:1).

This research project will mainly be a survey. The first stage will be collecting data via an e-mail survey, using the validated job profiling questionnaire of Thomas International™, known as the HJA (Human Job Analysis) questionnaire. Should this strategy fail to elicit an adequate response, it would be supplemented with traditional face-to-face data collection.

Respondents' responses are treated as confidential.

Due to the difficulties in attaining access to data related to entrepreneurship, the convenience sampling method will be used, which is often the case with pilot studies. The convenience sampling method will therefore be used in the case of **both** data collection strategies mentioned above. (The HJA will be discussed in chapter 3.)

A few data-analysis and statistical techniques are implied and will be discussed in chapter three. Inferential statistics will be utilised for the results generated from the HJA questionnaires. Due to the convenient nature of the data sampling strategies, the assumptions of a normal distribution cannot be made and therefore non-parametric statistics are implied and would include the Kruskal-Wallis one-way ANOVA and/or the Wilcoxon Rank Sum Test.

Due to the nature of this study and exploratory studies in general, multiple limitations may be relevant and will be discussed in later chapters.

1.6 CHAPTER DELINEATION

The layout of the rest of the chapters of this mini-dissertation is as follows:

1.6.1 Chapter 1 – Introduction and overview – introduces the intended research project and gives an overview regarding the problem statement (research problem), the research questions asked, the general aim and specific goals of this study, a brief overview of the intended research methodology and a brief chapter delineation of this research report.

1.6.2 Chapter 2 – Literature Review on Entrepreneurial Competencies – reports on the literature overview of entrepreneurial competencies, profiling entrepreneurial competencies and the development of differentiated competency profiles for lead entrepreneurs.

1.6.3 Chapter 3 – Research Methodology & Results – discuss the goals and aims, the research design, the sample, the measuring instruments, the research procedure and the statistical analysis of this exploratory study. Chapter 3 will then also report on the results of this exploratory study regarding the roles of lead entrepreneurs and the differentiated competency profiles for lead entrepreneurs. Lastly these results are then briefly discussed.

1.6.4 Chapter 4 – Conclusions & Recommendations – Conclusions are drawn and recommendations made based on the research results reported and discussed in chapter 3 regarding differentiated competency profiles for lead entrepreneurs associated with each particular business context that would enable the particular optimal entrepreneurial mix for different business industries.

1.7 CHAPTER SUMMARY

Chapter 1 briefly described the research problem, the research questions, the goals of this study (general aim and specific goals), the research methodology (the scope of the study and the research design) and chapter delineation.

Chapter 2 focuses on the literature overview of entrepreneurial competencies, profiling entrepreneurial competencies and the exploring of differentiated competency profiles for lead entrepreneurs in different contexts, for example in different types of business industries.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will discuss the literature regarding the definition of entrepreneurship; discuss myths regarding entrepreneurship and/or entrepreneurs; define and discuss entrepreneurs in general; define and briefly discuss high-growth start-up entrepreneurs (HGSUs); and briefly entrepreneurial competencies (*with specific reference to HGSUs competencies as identified, developed and validated by EntreCode®*).

2.2 ENTREPRENEURSHIP

2.2.1 Defining Entrepreneurship and the Entrepreneurial Process

Timmons and Spinelli (2007:79) define entrepreneurship as “a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach, and leadership balanced”. It results in the creation, enhancement, realisation and renewal of value for all participants and stakeholders, not only for the owners. Central to the entrepreneurship process is the creation and/or recognition of opportunities, followed by the will and initiative to seize these opportunities. This requires from the entrepreneur a willingness to take very calculated risks (both personal and financial) in order to constantly shift the odds of success, balancing the risk with the potential reward.

“Today, entrepreneurship has evolved beyond the classic start-up notion to include companies and organisations of all types, in all stages. Thus, entrepreneurship can occur – and fail to occur – in firms that are old and new; small and large; fast and slow growing; in the private, non-profit, and public sectors; in all geographic points; and in all stages of a nation’s development, regardless of politics.”

(Timmons & Spinelli, 2007:79)

Central to understanding entrepreneurship as a process is the Timmons Model of the Entrepreneurial Process (Timmons & Spinelli, 2007:88-96) which accounts for substantially greater success pattern among higher potential ventures. The shape, size and depth of the opportunity determine the shape, size and depth of both the resources and the entrepreneurial team. The leader of the entrepreneurial has been coined by Timmons and Spinelli (2007:88-96) as the **Lead Entrepreneur** and refers mostly to the originator of the venture, but for the purposes of this study the **Lead Entrepreneur** will have a much wider interpretation that would usually include the business' managing director, chief executive officer, general manager, owner-manager, business-unit manager or similar roles such as: manager, new-business director/manager, strategic management director/champion, organisation renewal/development/change director/manager, operational manager and/or other executive board members.

The central themes or driving forces (Timmons & Spinelli, 2007:88-96) that dominate this highly dynamic entrepreneurial process are that the entrepreneurial process is:

- Opportunity driven
- Driven by a lead entrepreneur and an entrepreneurial team
- Resource parsimonious and creative
- Depends on fit and balance among opportunity, team and resources
- Sustainable, integrated and holistic

The dynamics of the driving forces (central themes) of the entrepreneurial process and their interactions and interdependencies are highlighted by EXHIBIT 3.5 in Timmons and Spinelli (2007:89), as illustrated in figure 2.1 on the next page.

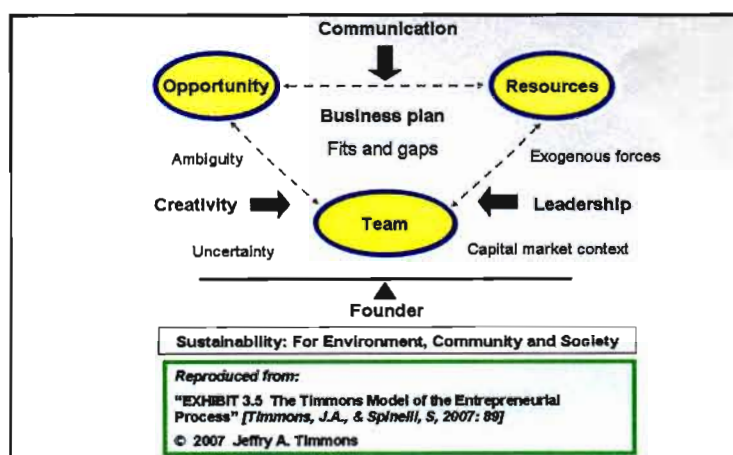


Figure 2.1: The Timmons Model of the Entrepreneurial Process

Another model of the entrepreneurial process is Wickham's model, which appears to be very similar to that of Timmons, but includes a fourth variable: the organisation (Wickham, 2004:133-139). Wickham's model also includes the process of learning through successes and/or failures, as illustrated in figure 2.2 below:

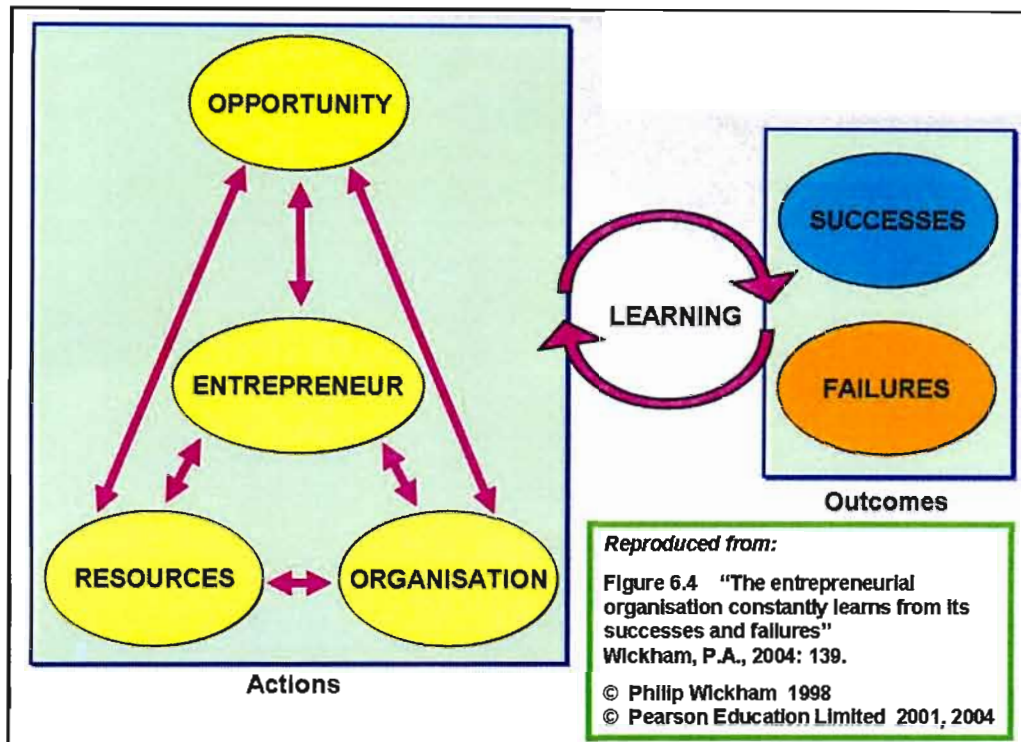


Figure 2.2: The Entrepreneurial Process in Learning Organisations

Kuratko and Hodgetts (2004:30) developed a more comprehensive and integrated definition of entrepreneurship:

"Entrepreneurship is a dynamic process of vision, change and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks – in terms of time, equity or career; the ability to formulate an effective venture team; the creative skill to marshal the needed resources; the fundamental skill of building a solid business plan; and, finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion."

The researcher's view regarding the definition of entrepreneurship is a combination of the above definitions. Based on this combination entrepreneurship can therefore be defined as follows:

- An energetic and passionate way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach, and leadership balanced towards creation and implementation of new business ideas and creative solutions.
- It results in the creation, enhancement, realisation and renewal of value for all participants and stakeholders, not only for the owners.
- Central to the entrepreneurship process is the dynamic process of vision, change, creation and/or recognition of opportunities, followed by the will and initiative to seize and successfully developing these opportunities.
- A willingness to take calculated risks (personal and financial) regarding time, equity and career in order to constantly shift the odds of success, balancing the risk with the potential reward.
- Entrepreneurship includes companies and organisations of all types, in all stages of the business life cycle.
- Central to understanding entrepreneurship as a process is the interrelationships between the business venture's opportunity, the resources need, the organisation of the business venture and the entrepreneurial team.
- The shape, size and depth of the opportunity determine the nature, shape, size and depth of the resources, the organisational structure and the entrepreneurial team.
- Successful exploitation of the business opportunity and the successful growth and development of the business venture as organisation is facilitated by dynamic leadership of the Lead Entrepreneur and the rest of the entrepreneurial team.
- The importance of the best fit and/or ideal entrepreneurial mix regarding the entrepreneurial team composition and more so the appropriate fit between the opportunity, the team, the resources and the organisation in order to creatively marshal the resources optimally to ensure sustainable competitive advantage.

2.2.2 Myths of Entrepreneurship and Entrepreneurs

Entrepreneurship is a very young science and as such the study thereof is still emerging. Therefore myths that have developed over years and that reflect limited knowledge and research in this field will prevail until it is dispelled with contemporary research findings (Kuratko & Hodgetts, 2004:30; Morris & Kuratko, 2002:24;

Timmons & Spinelli, 2007:18-20). A few of the best known myths can be summarised as follows:

2.2.2.1 ***Entrepreneurs are born, not made.*** Although there are certain specific entrepreneurial traits or competencies people may have an inherited predisposition for, research has shown that these entrepreneurial traits or competencies can also be learned or trained.

2.2.2.2 ***Entrepreneurs are extreme risk takers (gamblers).*** Taking risks is a major element in the entrepreneurial process. Successful entrepreneurs work hard through planning and preparation to minimise risk and therefore take very careful, calculated risks.

2.2.2.3 ***Entrepreneurs are doers, not thinkers.*** Successful entrepreneurs tend towards both action and thinking. They can be very methodical as can be demonstrated by clear and complete business plans.

2.2.2.4 ***Entrepreneurs want the whole show to themselves.*** Higher potential entrepreneurs are known for building a team, an organisation, etc., while in contrast owning and running the whole show effectively puts a ceiling on growth and undermine the lead entrepreneur's ability to influence other people to the benefit of the business.

2.2.2.5 ***Entrepreneurs must fit the profile.*** A standard entrepreneurial profile is difficult to compile. The business environment, the venture itself, and the entrepreneur all interact, resulting in different types of entrepreneurial competency profiles with certain generic similarities in all profiles, but certain environment and/or venture specific differences. Therefore there are different kinds of entrepreneurs. This myth is of particular interest for the researcher and it is directly linked to the general aim and specific goals of this research project.

2.2.2.6 ***Entrepreneurs are their own bosses and completely independent.*** Although entrepreneurs have the freedom to make, and the freedom how and when to make their decisions and to take calculated risks, these entrepreneurs are accountable for all their decisions and actions and are dependent on other people.

2.2.2.7 *All that entrepreneurs need, is luck.* Prepared entrepreneurs are better equipped to deal with situations and turn them into successes. What often appears to be luck is actually preparation, determination, desire, knowledge and innovativeness.

Myths regarding entrepreneurship can influence peoples' perceptions regarding entrepreneurial competencies and can therefore negatively impact (if not addressed) any process to profile entrepreneurial competencies. Although many more well known myths can be listed here, the researcher is of the opinion that the myths clarified above includes the most important myths that may impact the profiling of entrepreneurial competencies. In particular the myth of one profile fits all ("*Entrepreneurs must fit the profile*") as discussed in §2.2.2.5 above, is directly related to the purpose of this research project.

2.3 'ENTREPRENEUR' DEFINED IN GENERAL

2.3.1 Introduction

Kuratko and Hodgetts (2004:28) define the **entrepreneur** as the one who organises, manages and assumes the risk of the business; who is an innovator or developer who recognizes and seizes; converts those opportunities into workable and marketable ideas; adds value through time, effort, money, or skills; assumes the risks of the competitive marketplace to implement these ideas; realizes the rewards from these efforts; and is the aggressive catalyst for change in the world of business. According to Kuratko and Hodgetts, the entrepreneur is thus an independent thinker who dares to be different in the background of common events, and is mainly characterised by personal initiative, the ability to consolidate resources, management skills, a desire for autonomy, and risk taking. In addition the entrepreneur is characterised by aggressiveness, competitiveness, goal-directed behaviour, confidence, opportunistic behaviour, intuitiveness, reality-based actions, the ability to learn from mistakes and the ability to employ human relations skills.

Entrepreneurs are defined by Nieuwenhuizen (2003:21-22) as people who identify opportunities in the market, have the will to take risks, gather and apply resources appropriately to make profit, they establish and grow their business to make profits, to create value for themselves and society and to create and innovate in various ways.

Burns (2005:8) defines entrepreneurs as follows:

“... Entrepreneurs are defined by their actions, not by the size of organisation they happen to work within.” Any manager can be entrepreneurial. The manager of a small firm may not be an entrepreneur – an important distinction that is often missed in the literature. Equally entrepreneurs can exist within large firms, even ones that they did not set up themselves, and how large firms encourage and deal with this is an important issue for them.”

Entrepreneurs can be described in terms of their characteristics and defined by their actions. **Therefore entrepreneurs are often defined in terms of their entrepreneurial competencies which will be discussed in section 2.4 of this chapter.** *An integrated definition of entrepreneurship will thus be reviewed at the end of section 2.4 which discusses entrepreneurial competencies.*

One of the major differentiating factors of entrepreneurs is the degree of innovation they practice (Barnes, 2005:6; Timmons & Spinelli, 2007:79).

Entrepreneurs (Barnes, 2005:9; Timmons & Spinelli, 2007:79) use innovation to exploit or create change and opportunity for the purpose of making profit by shifting economic resources from an area of lower productivity into an area of higher productivity and greater yield, accepting a high degree of risk and uncertainty in doing so.

In addition, the entrepreneur is recognised as a vital part of the process of economic wealth generation (Barnes, 2005:3-4; Hall *et al.*, 2004:1; Nieuwenhuizen, 2003:3-4; Nieman & Bennet, 2002:57; Van Der Merwe, 2003:27-28). The contribution small firms make to the economy of any country is increasing and their importance is fully recognised, but the focus is also on large organisations and on high growth firms. High-growth businesses are disproportionately important to national economies despite being few in number.

The ideal for this research would be to identify and target high-growth businesses as the target convenience sample to be researched. Practical limitations of this study make it unlikely to marshal enough data from exclusively high-growth businesses. However concerted efforts will still be made by the researcher to sample as many high-growth businesses as possible.

2.3.2 High-growth Start-up Entrepreneurs (HGSUs)

Nascent and new venture entrepreneurs that expect to create 20 or more jobs in the next five years time are known as **high-growth start-up entrepreneurs** or **HGSUs** (Hall *et al.*, 2004:1).

According to the GEM 2007 Executive Report HGSUs entrepreneurial activity is known as **high-growth expectation early-stage entrepreneurial activity** or **HEA** (Bosma *et al.*, 2008:25-26). Typically high-income countries have a relative higher prevalence of HEA than middle- and low income countries. It is no surprise that South Africa's HEA is prevalent in only slightly more than 5% of all South Africa's start-ups and thus the current contribution to creating new jobs in South Africa is still far below the demand for new jobs.

Although HEA represents only a small proportion of all entrepreneurial activity, it is responsible for the bulk of expected new jobs by cohorts of nascent entrepreneurs and baby business entrepreneurs. According to the GEM 2005 Report on High-Expectation Entrepreneurship (Autio, 2005:10), HGSUs are responsible for up to 80% of the jobs expected by all entrepreneurs and therefore its economic potential is significant.

However, there is a significant shortage of entrepreneurs (*including HGSUs*) in South Africa, as indicated by its listing on the Department of Labour's Scarce Skills List for 2004-2009 (DoL, 2005:56-57).

2.4 ENTREPRENEURIAL COMPETENCIES

2.4.1 Definition of Competency versus Competence

When studying competency(-ies) it is important to firstly distinguish it from competence(-s). Competency deals with underlying capabilities and the behaviours that people may need to do a particular job effectively. It is important to distinguish competency from competence. **Competence** encompasses the **task elements** that give rise to the outputs required from a job role. Thus, **competency** describes the **individual**; whereas **competence** describes the **task domain** (Ballantyne & Povah, 2004:29).

Various well-known formulations of entrepreneurial competencies will be addressed in the following sections, culminating in the discussion of the EntreCode®

entrepreneurial competency model as a *more expensive and time consuming* profiling model and the Dominance-Influence-Steadiness-Compliance competency model of Thomas International™, with a generic and **internationally validated** competency profiling method, ***the Human Job Analysis questionnaire***, as a *more cost effective and quicker way* to profile certain entrepreneurial competencies that are also reflected in EntreCode® and the other competency models discussed.

2.4.2 Six Dominant Themes of Entrepreneurial Competencies

Six themes of desirable and acquirable attitudes and behaviours are summarised by Timmons and Spinelli (2007:8):

2.4.2.1 Commitment and Determination

- Tenacious and decisive, able to commit/recommit quickly
- Intensely competitive in achieving goals
- Persistent in solving problems
- Willing to undertake personal sacrifice
- Immersed

2.4.2.2 Leadership

- Self-starter; high standards but not perfectionist
- Team builder and hero maker; inspires others
- Treats others as you want to be treated
- Shares the wealth with all the people who helped create it
- Honest and reliable; builds trust; practices fairness
- Not a lone wolf
- Superior learner and teacher; courage
- Patient and urgent

2.4.2.3 Opportunity Obsession

- Has intimate knowledge of customers' needs and wants
- Market driven
- Obsessed with value creation and enhancement

2.4.2.4 *Tolerance of Risk, Ambiguity and Uncertainty*

- Calculated risk-taker
- Risk minimiser
- Risk sharer
- Manages paradoxes and contradictions
- Tolerates uncertainty and lack of structure
- Tolerates stress and conflict
- Able to resolve problems and integrate solutions

2.4.2.5 *Creativity, Self-Reliance and Adaptability*

- Non-conventional, open-minded, lateral thinker
- Restless with status quo
- Able to adapt and change; creative problem solver
- Quick learner
- No fear of failure
- Able to conceptualise and “sweat details” (helicopter mind)

2.4.2.6 *Motivation to Excel*

- Goal and result orientated; high but realistic goals
- Drive to achieve and grow
- Low need for status and power
- Interpersonally supporting (versus competitive)
- Aware of weaknesses and strengths
- Has perspective and sense of humour

The abovementioned competencies, as far as the researcher could determine in freely available scientific literature, have not yet been utilised by Timmons or Spinelli to develop a **validated psychometric** questionnaire.

2.4.3 *Kuratko and Hodgetts' Entrepreneurial Competencies*

Kuratko and Hodgetts (2004:114-121) summarised what they regard as the most often cited entrepreneurial characteristics. This includes the following:

- Total commitment, determination, and perseverance
- Drive to achieve and grow

- Opportunity and goal orientation
- Taking initiative and personal responsibility
- Persistent problem solving
- Realism and a sense of humour
- Seeking and using feedback
- Internal locus of control
- Tolerance for ambiguity
- Calculated risk taking and risk seeking
- Low need for status and power
- Integrity and reliability
- Tolerance for failure
- High energy level
- Creativity and innovativeness
- Vision
- Self-confidence and optimism
- Independence
- Team building

The abovementioned competencies, as far as the researcher could determine in freely available scientific literature, have not yet been utilised by Kuratko or Hodgetts to develop a **validated psychometric** questionnaire.

2.4.4 Burns' Set of Entrepreneurial Competencies

Burns (2005:20) summarised diverse sources' lists of character traits. This includes the following:

- Opportunistic
- Innovative
- Self-confident
- Proactive and decisive with high energy
- Self-motivated (intrinsic motivation)
- Vision and flair
- Willingness to take greater risks and live with greater uncertainty
- Need for independence
- Need for achievement

- Internal locus of control
- Ability to live with uncertainty and take measured risks

These abovementioned competencies too, as far as the researcher could determine from freely available scientific literature, have not yet been utilised by Burns to develop a **validated psychometric** questionnaire.

2.4.5 Entrepreneurial Competencies from a Process Perspective

Man, Lau and Chan (1998:6) reviewed a number of studies in relevant literature and consequently summarised six competency areas as follows:

2.4.5.1 Opportunity Competencies

- Very central in process of entrepreneurship
- Two main elements: to spot and to develop the opportunities

2.4.5.2 Organising Competencies

- Ability to lead, control, monitor, organise and develop the external and internal resources to become the firm's capabilities.

2.4.5.3 Strategic Competencies

- Set vision and goals, and formulate strategies for whole firm
- Abilities and skills from a broader perspective

2.4.5.4 Social Competencies

- Successfully use contacts and connections;
- Communication abilities,
- Persuasive abilities and
- Relationship building abilities
- Internally within firm or externally with others

2.4.5.5 Commitment Competencies

- Required to sustain the entrepreneur's effort to the business
- Initiative or proactive orientation

2.4.5.6 Conceptual Competencies

- Cognitive and analytical thinking
- Learning ability
- Decision making and problem solving
- Sustaining temporal tension
- Innovating
- Coping with uncertainty and risk
- High level of conceptual activities
- Short-term perspective
- Resolving instant events
- Requiring intuitive responses

As yet, the abovementioned competencies also have not been utilised to develop a validated psychometric questionnaire.

2.4.6 Entrepreneurial Competency Model of EntreCode®

Prof. David Hall was commissioned to research the ways in which high-growth start-up entrepreneurs (HGSUs) found and build successful businesses. He led a multidisciplinary research team over a period of nearly twenty years in order to create fresh perspectives on understanding the entrepreneurial process and correlated their findings over a period of ten years in order to identify which factors reliably predict success – using these factors to develop into the EntreCode® which aims to help identify and nurture HGSUs. Successful HGSUs create valued businesses and thus the primary goal of EntreCode® is to differentiate HGSUs from people who are merely setting out to earn a living by self-employment (Hall *et al.*, 2004:1-2).

Six key EntreCode® factors form the basis of the Entrepreneurial Potential Report (EPR) generated from the Saville Consulting Wave™ Professional Styles questionnaire. The EPR was created in 2005 and is the first instrument that rigorously assesses entrepreneurial talent. It has been thoroughly validated since its inception, in partnership with Saville Consulting Wave™ (Saville, 2006:3).

The six core areas of the EntreCode® model as presented in the EPR are broken down into 21 aspects of entrepreneurial competencies and can be summarised as follows (Saville, 2006:11-18):

2.4.6.1 Getting in the Zone

- Achievement drive
- Compelling vision
- Energy
- Action orientated

2.4.6.2 Seeing Possibilities

- Big picture
- Options thinking
- Savvy

2.4.6.3 Creating Superior Opportunities

- Problem seeking
- Synthesis
- Problem solving
- Delighting customers (what they really want)

2.4.6.4 Staying in the Zone

- Focus
- Positive mindset
- Self-determining
- Persistence

2.4.6.5 Opening up to the World

- Expressing passion
- Purposeful networking
- Creating partnerships

2.4.6.6 Building Capacity

- Building up the team
- Experiential learning
- Staying on track

The EntreCode® model – and in particular the Entrepreneurial Potential Report (EPR) – was thoroughly validated during the validation of the Saville Consulting Wave™ Professional Styles questionnaire, using a standardised norm group of 1,153 participants (Saville, 2006:22-29). This model is also the best reflection of the researcher's definition of entrepreneurs. The researcher currently associates so closely with the EntreCode® model, that he cannot at this point in time suggest a better model for defining the entrepreneur.

However, mainly due to the researcher's financial and time constraints, it was not possible to secure EPR data. Therefore, a more cost-effective and less time consuming psychometric instrument had to be used that could profile at least certain of the respondents' important entrepreneurial competencies. For this purpose, the well known Human Job Analysis (HJA) questionnaire will be discussed in the next section.

2.4.7 Competency Model of Thomas International™ and the HJA

2.4.7.1 Introduction

The HJA (Human Job Analysis) questionnaire forms part of the Personal Profile Analysis (PPA) that has been internationally validated and used to assess thousands of individuals for entrepreneurial and non-entrepreneurial positions over the years.

The four competency clusters are referred to as Dominance (D), Influence (I), Steadiness (S) and Compliance (C) – often collectively referred to as DISC dimensions.

The reliability and validity of this tool have been researched extensively, and acceptable values were found over many years and improved as the PPA and the HJA were periodically updated over the past decades. The validation information will be discussed in chapter 3.

The DISC competency model of **Thomas International™** can be reviewed by means of the following summarised graphic slides obtained from the **Thomas International™** website as illustrated in Figure 2.3 hereafter.

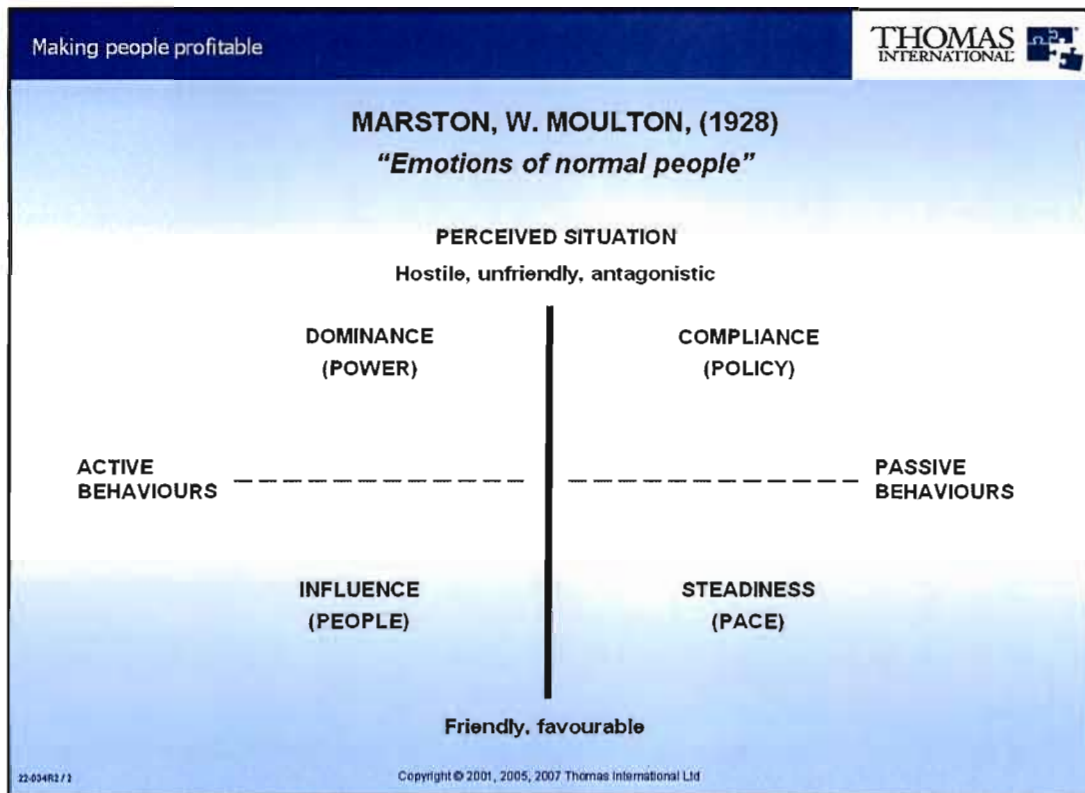


Figure 2.3: Thomas International's DISC Competency Model

The competencies of the four DISC dimensions are briefly summarised below in Figure 2.4.

Making people profitable **THOMAS INTERNATIONAL**

Values To The Organisation

High D	High I	High S	High C
<p>Drive to accomplish results in spite of opposition or antagonistic circumstances</p> <ul style="list-style-type: none"> • Getting results • Expediting action • Challenges self and others • Making decisions • Questioning the status quo 	<p>Influencing of people to act positively and favourably</p> <ul style="list-style-type: none"> • Motivating people to act • Generating enthusiasm • Cultivating relationships • Making favourable impressions • Radiating optimism 	<p>Steadiness in performing work to consistently produce in a predictable manner</p> <ul style="list-style-type: none"> • Developing specialist skills • Concentrating on the job at hand • Completing work thoroughly • Maintaining consistency • Persistence 	<p>Compliance with policy and standards to avoid error, conflict and danger</p> <ul style="list-style-type: none"> • Concentrating on detail • Enforcing quality and directives • Monitoring and controlling • Improving quality and standards • Fact finding and assessing risk

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Figure 2.4: The Value of the DISC Competency Model to the Organisation

A more detailed summary of these competencies are presented in the next subsections.

2.4.7.2 Dominance – Directing/Controlling

The DISC competencies that are grouped in the DOMINANCE dimensions (Thomas International, 1996:41) are listed below:

- Competitiveness
- Individualism and self-reliance
- Able to and expected to push hard for results
- Ability and will to make quick and often risky decisions
- Expected to be driving, demanding, directive and forceful
- Ability and will to make harsh and unpopular decisions
- Ability and will to act without referring to precedent
- Ingenuity to create new ideas
- Handling interruptions and changes
- Ability and will to deal with large-scale planning responsibilities
- Ability and will to overcome objections

2.4.7.3 Influence - Leading/ Persuading

The DISC competencies that are grouped in the INFLUENCE dimensions (ibid, 1996:41) are listed below:

- Ability and will to organise various types of people with confidence and enthusiasm
- Deals effectively, openly and positively with strangers
- Assured and fluent verbal skills
- Ability and will to solve human problems
- Ability and will to motivate, lead and persuade others successfully
- Positive and participative people interaction on a regular basis
- Confidently promoting self, products and organisation
- Facilitates open and regular communication and interaction

2.4.7.4 Steadiness - Administration/Service/Support

The DISC competencies that are grouped in the STEADINESS dimensions (ibid, 1996:41) are listed below:

- Ability to concentrate and follow through on projects one by one on a regular and repetitive basis
- Persistence in work routine
- Follows established work pattern
- Stays at one workstation or area
- Develops rhythm and co-ordination in procedures
- Has a deliberate, steady and patient approach
- Ambitions are satisfied at existing work level
- Prefers a function which is stable, predictable and unlikely to change on a regular basis.
- Specialisation rather than a generalist approach

2.4.7.5 Compliance - Technical/ Specialist/ Expertise

The DISC competencies that are grouped in the COMPLIANCE dimensions (ibid., 1996:42) are listed below:

- Ability and will to concentrate on detailed work
- Diplomatic and tactful
- Working directly under supervision with clearly-defined objectives, guidelines and parameters
- Operates a system to perfection
- Exercises caution in risk situations
- Makes commitments only after reflection
- Precision, accuracy and maintenance of strict tolerances and quality
- Complying with specific requirements
- High ability and will for documentation, reporting, and similar roles
- Logical, factual approach

The following *DOMINANCE* competencies of the HJA: *competitiveness, able to and expected to push hard for results, ability and will to make quick and often risky decisions, ability and will to make harsh and unpopular decisions, ability and will to act without referring to precedent, ingenuity to create new ideas, handling interruptions and changes, ability and will to deal with large-scale planning responsibilities and the ability and will to overcome objections*; all relate to one or more of the abovementioned entrepreneurial competency models discussed before the discussion of the DISC model.

Similarly, the following *INFLUENCE* competencies of the HJA also relate to the models previously discussed: *ability and will to organise various types of people with confidence and enthusiasm, deals effectively, openly and positively with strangers, assured and fluent verbal skills, ability and will to solve human problems, ability and will to motivate, lead and persuade others successfully, positive and participative people interaction on a regular basis, confidently promoting self, products and organisation and facilitates open and regular communication and interaction*. All relate to one or more of the abovementioned entrepreneurial competency models discussed before the discussion of the DISC model.

On the other hand, the entrepreneurial competencies of the models discussed in the previous subsections seem to have an **inverse relationship** with many of the *STEADINESS* competencies and some of the *COMPLIANCE* competencies of the DISC model. This inverse relationships seems to relate in particular to the following competencies: *regular and repetitive roles, persistence in work routine, follows established work pattern, a deliberate steady and patient approach, ambitions satisfied at existing work level, prefers a function which is stable, predictable and unlikely to change on a regular basis, specialisation rather than a generalist approach and working directly under supervision with clearly-defined objectives, guidelines and parameters*.

These similarities between the DISC model's competencies with the entrepreneurial competencies of the entrepreneurial competency models discussed in the previous sections of this chapter, as highlighted in the preceding paragraphs, are valuable for the use of the HJA for this exploratory research project's survey purposes.

2.5 CHAPTER SUMMARY

This chapter briefly discussed the literature regarding the definition of entrepreneurship, as well as the myths about entrepreneurship and entrepreneurs. It defined and briefly discussed entrepreneurs in general, high-growth start-up entrepreneurs (HGSUs) and entrepreneurial competencies *with specific reference to HGSUs competencies as identified, developed and validated by EntreCode®*. This was followed by discussion of the DISC competency model and the HJA questionnaire. The latter will form the basis of the empirical research that will be discussed in detail in the next chapter.

CHAPTER 3:

RESEARCH METHODOLOGY AND RESULTS

3.1 INTRODUCTION

Chapter two discussed the definitions and concepts regarding entrepreneurship, the entrepreneurial process, certain relevant myths, the entrepreneur and the entrepreneurial competencies; and especially that there does not exist only one profile of entrepreneurial competencies that fits all types of industries.

The need therefore exists for differentiated competency profiles to enable the particular optimal entrepreneurial mix for different business contexts (such as the specific type of business industry).

3.2 PROBLEM STATEMENT (THE RESEARCH PROBLEM)

“Many books and articles have presented checklists of characteristics of the successful entrepreneur. These lists were neither validated nor complete; they were based on case studies and on research findings among achievement-oriented people. Today we realise that a standard entrepreneurial profile is hard to compile. The environment, the venture itself, and the entrepreneur have interactive effects, which result in many different types of profiles. Contemporary studies ... will, in future, provide more accurate insights into the various profiles of successful entrepreneurs.”

(Kuratko & Hodgetts, 2004:32)

The research need therefore exists for identifying differentiated competency profiles of successful entrepreneurs to maximise entrepreneurial success in different industries. These profiles need to enable the particular optimal entrepreneurial mix for different business contexts (such as the specific type of business industry, e.g. restaurant industry vs. accommodation industry) that would maximise entrepreneurial success in the particular industry. *(This is similar to typical job profiles for the same type of position in different work contexts.)*

The **research problem** is therefore the need to determine if there are different competency profiles present for successful entrepreneurs in different business contexts such as different business industries (e.g. restaurant industry vs. accommodation industry) and if possible to identify possible industry specific trends that might maximise entrepreneurial success.

3.3 THE RESEARCH QUESTIONS TO BE ADDRESSED

- 3.3.1 What are some of the most relevant variables of entrepreneurial competencies that need to be differentiated, and in which dimensions can these variables be clustered?
- 3.3.2 Based upon the results of the previous question, the research question to be addressed is: what is the particular lead entrepreneurs' competency profile that is associated with the particular business context? In the case of this study, the question is therefore: what is the business industry specific trends regarding the competency profile of the lead entrepreneur?

3.4 THE GOALS OF THIS STUDY

3.4.1 *General Aim*

The general aim of this study is to explore the possibility of differentiated entrepreneurial competency profiles for different business contexts (*such as the specific type of business industry*) – as a **brief exploratory study**. Different types of business industries were chosen by the researcher as the particular type of business contexts to explore for differentiated profiles. Originally seven different business industries were targeted, but only four of them (accommodation, architecture, real estate agencies and restaurant industries) produced research data. Building contractors, optometrists and pharmacists did not produce any data at all.

3.4.2 *Specific Goals*

- 3.4.2.1 Based on the literature study, the researcher identified some of the most relevant variables of entrepreneurial competencies and used an existing internationally validated competency model's categorisation into four (4) competency clusters. For practical reasons only some of the most pertinent entrepreneurial competencies were targeted – mainly those competencies already clustered in the INFLUENCE and DOMINANCE clusters of the

HJA (Human Job Analysis). Because some of the competencies of the STEADINESS and COMPLIANCE clusters seemed to have a weak to an inverse relationship with entrepreneurial competencies, the researcher also explored respondents' perceptions regarding the latter two clusters' competencies. Collectively these four clusters are known as DISC competency clusters.

- 3.4.4.2 Use an existing validated questionnaire to achieve the abovementioned specific research goals and general research aim. The researcher used the HJA (Human Job Analysis) that will be further discussed in paragraph 3.5.2 below.
- 3.4.4.3 Based upon the results of the previous specific research goal, determine if there are differentiable competency profiles for lead entrepreneurs associated with the particular business contexts – in particular different types of business industries.

3.5 RESEARCH METHODOLOGY (WHICH TECHNIQUES WILL BE USED)

3.5.1 The Scope of the Study

This study is a **brief exploratory study**.

3.5.2 The Research Design

Due to the exploratory nature of this **brief pilot study**, hypotheses were not formulated. The focus was mainly to identify differentiated competency profiles for lead entrepreneurs that would enable the optimal entrepreneurial mix in different business contexts in a particular industry.

This research project was mainly a survey type research.

The first stage included collecting data via an e-mail survey strategy using the validated job profiling questionnaire of Thomas International™ known as the HJA (Human Job Analysis) questionnaire. This strategy failed to elicit an adequate number of respondents and therefore was supplemented by traditional face-to-face data collection. Out of approximately 2,500 e-mails sent out “cold” (without prior knowledge of the survey research), only 5 “cold” reply e-mails were received.

3.5.3 The Sampling Method

Due to the difficulties in attaining access to entrepreneurship related data and the costs of collecting data, the convenience sampling method was used in **both** data collection strategies mentioned above. According to the literature (Struwig & Stead, 2001:115; Wisniewski, 2002:235), the convenience sampling method is extensively used by researchers, because it is low in costs, no other data could be collected, the researcher had to use whatever sample happened to be available and because the researcher did not need a list of the target population. However, these authors also highlight that convenience samples endanger the estimates of variability and bias, and warn against generalisation beyond the particular sample.

3.5.4 The Measuring Instruments

The HJA (Human Job Analysis) questionnaire was used as survey instrument to collect data from certain lead entrepreneurs regarding their ratings of the ideal entrepreneurial competency profile needed for their business venture in their particular industry in terms of the DISC competencies of the HJA.

Thomas International™'s HJA forms part of the Personal Profile Analysis (PPA) system which has been validated extensively on an international level on various occasions (British Psychology Society, 2006; Irvine, 2003:9-10,15-16; Thomas International™, 1996:30-43). The latest audit by the British Psychological Society's Psychological Testing Centre was in 2003 (see their certificate in appendix A). The HJA presently consists of 24 statements, presented randomly and falls in 4 clusters of 6 statements with each cluster representing competencies likely to be needed in different amounts by any one job. It can be used for profiling **entrepreneurial and non-entrepreneurial** positions and takes 5-10 minutes to complete. It is concise with only 24 short questions and each question has additional clarifying detail included to facilitate better understanding of the particular question. The HJA is therefore a user-friendly and familiar rating scale (typical 5 point Likert ordinal scale) type inventory.

3.5.5 The Research Procedure

E-mail addresses of approximately 500 real estate agencies, 480 optometrist practices, 400 restaurants, 380 architects, 300 guesthouses, 240 building contractors and 220 pharmacies in South Africa were drawn conveniently from open source websites, as well as industry associations' databases.

When the e-mail strategy proved dismally unsuccessful, hardcopies of the e-mail survey material were used for face-to-face surveying of 25 restaurant's lead entrepreneurs, 3 guesthouses' lead entrepreneurs and 3 real estate agencies' lead entrepreneurs.

Significant effort was made to ensure that the respondents that completed the HJA was in fact either the owner or the owner-manager. Only five (5) of the respondents were not the owner or the owner-manager. These five respondents were the general manager of the particular five different business ventures.

Only business ventures that existed for more than twelve months were included in the sampling process to ensure using successful lead entrepreneurs.

3.6 RESEARCH RESULTS AND STATISTICAL ANALYSES

3.6.1 Introduction

A few data-analysis and statistical techniques were implied which were limited to non-parametric analyses (Levine, Stephan, Krehbiel & Berenson, 2005:483-493). The non-parametric techniques were applied because of the convenient nature of the data sampling strategies, the small number of candidates surveyed and the fact that the sample distribution is unlikely to be a normal distribution.

Inferential statistics were therefore generated by means of the Kruskal-Wallis Rank Test (ibid.:490-493) and the Wilcoxon Rank Sum Test (ibid.:483-489) from the data collected by means of the HJA questionnaires. In the process the statistical software package known as PHStat2 version 2.5 was used. This software is a recent version of Prentice Hall's supplemental add-in program for Microsoft Excel (ibid.:xx).

The results in terms of the descriptive statistic analyses and the inferential statistical analyses thereof will be discussed in the next sections.

3.6.2 Descriptive Statistics

3.6.2.1 Sample sizes

Despite 2,500 e-mails sent out to the various lead entrepreneurs from seven different business industries and the face-to-face data collection strategy thereafter, 46

respondents' data could be secured spread over four of the initial seven different business industry types as can be seen in figure 3.1.

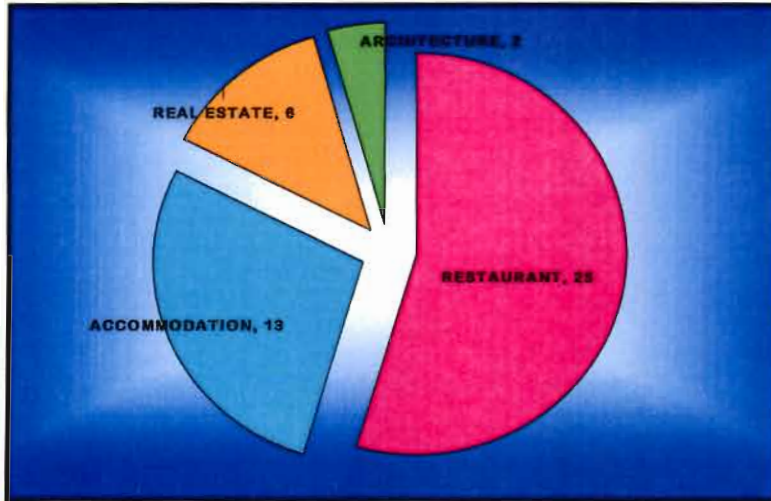


Figure 3.1: Sample Distribution according to type of business industry

Due to the fact that only two respondents were from the architecture industry, there was no value in including the architecture sample in the rest of the descriptive statistics and also no value in including it in the inferential statistics' analyses of the four DISC competency clusters.

3.6.2.2 Averages of Entrepreneurial Competency Clusters in Industry Samples

As seen in table 3.1, all three industry types in this study had entrepreneurial cluster averages higher than 4.00. The Compliancy cluster which has a weak relationship (maybe nearer to an inverse relationship) to entrepreneurial competencies also showed, relative the other three competency clusters, the lowest average ratings.

In the light of the inferential statistical analyses (see 3.6.4-3.6.6) there seems to be no significant difference regarding the Dominance entrepreneurial competency cluster and therefore not surprising that these average values are nearer to each other than the case with the other three competency clusters that showed to be statistically significant different within the same competency clusters across the different types of industry samples.

Because of the limitations of the samples in this study inferences cannot safely be made using the mean values. Inferences will therefore be made based on the median values and the non-parametric statistical analyses thereof instead of the mean values.

Table 3.1: Averages of entrepreneurial competency clusters in industry type samples

<i>Industry Averages</i>	Dominance	Influence	Steadiness	Compliance
1. Restaurant	4.47	4.27	4.19	3.36
2. Accommodation	4.33	3.77	3.45	2.74
3. Real Estate Agency	4.11	4.33	3.94	3.19
ALL Three Samples	4.30	4.12	3.86	3.10

3.6.2.3 Averages of Entrepreneurial Competencies in Industry Type Samples

The complete distribution of individual entrepreneurial competencies of all four competency clusters across the Real Estate Agency industry sample, the Accommodation (Guesthouse lead entrepreneurs) industry sample and the Restaurant industry sample is illustrated in figure 3.2.

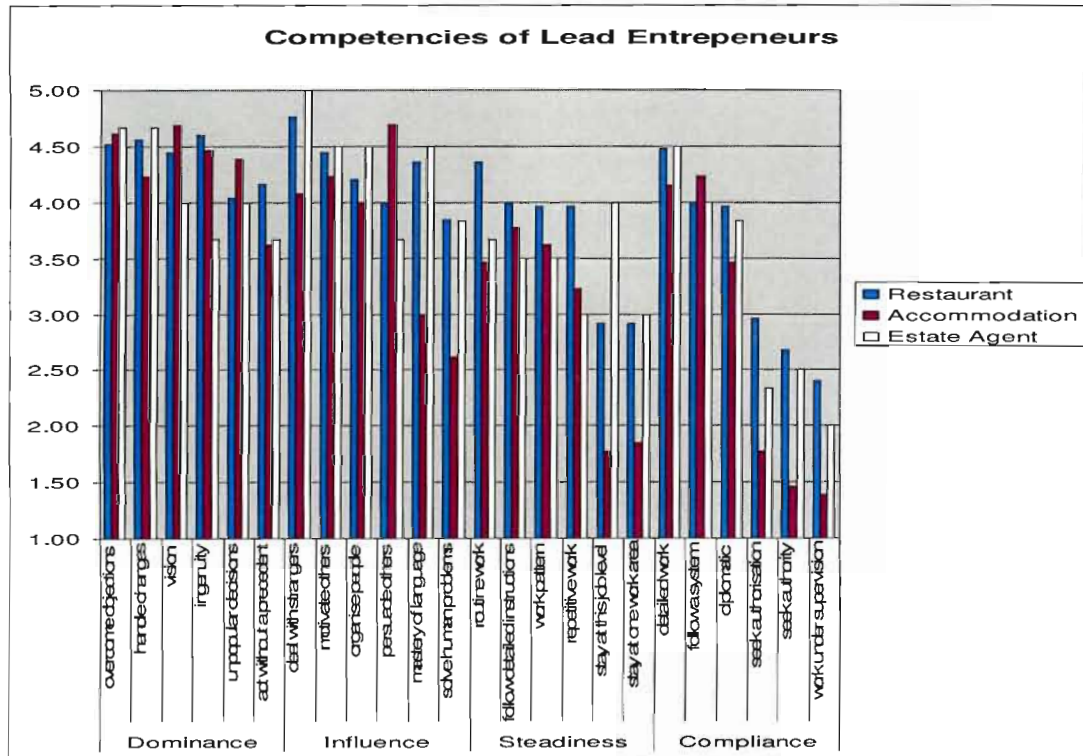


Figure 3.2: Averages of individual entrepreneurial competencies in industry type samples

The only entrepreneurial competency that was consistently given the maximum rating by all the industry sample's respondents is the ***Ability to Deal with Strangers*** as rated by all of the Real Estate industry sample's respondents. This should be viewed very cautiously because the sample size in this case is only six (6) respondents.

The Compliance cluster's individual competency ***Work Under Supervision*** was generally rated lowest and with the Accommodation industry sample rating this competency the lowest. This low rating for this competency is no surprise, because this competency is usually viewed as having a weak to inverse relationship with entrepreneurial competency.

A multitude of observations can be made about the results in figure 3.2, but they need also to be made cautiously because of the sample limitations of this study.

Some observations regarding the Influence clusters individual competencies' results will be highlighted for interest sake (see figures 3.3 and 3.4 for more detail).

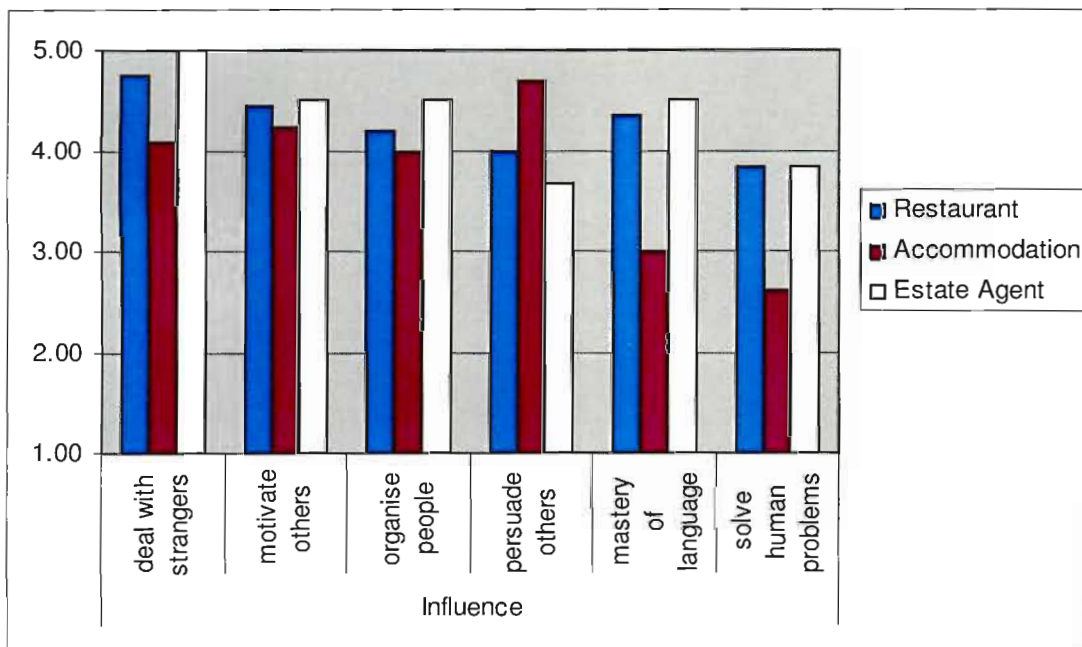


Figure 3.3: Influence Cluster – Part 1

In figure 3.3 the potential different competency trends regarding the three industry samples in this study are displayed per individual entrepreneurial competency in the Influence cluster. Based on this results it seems that all three industry samples has a average rating higher than 4.00 for the entrepreneurial competency ***To Motivate Others*** and that the industry average ratings for this competency are very similar.

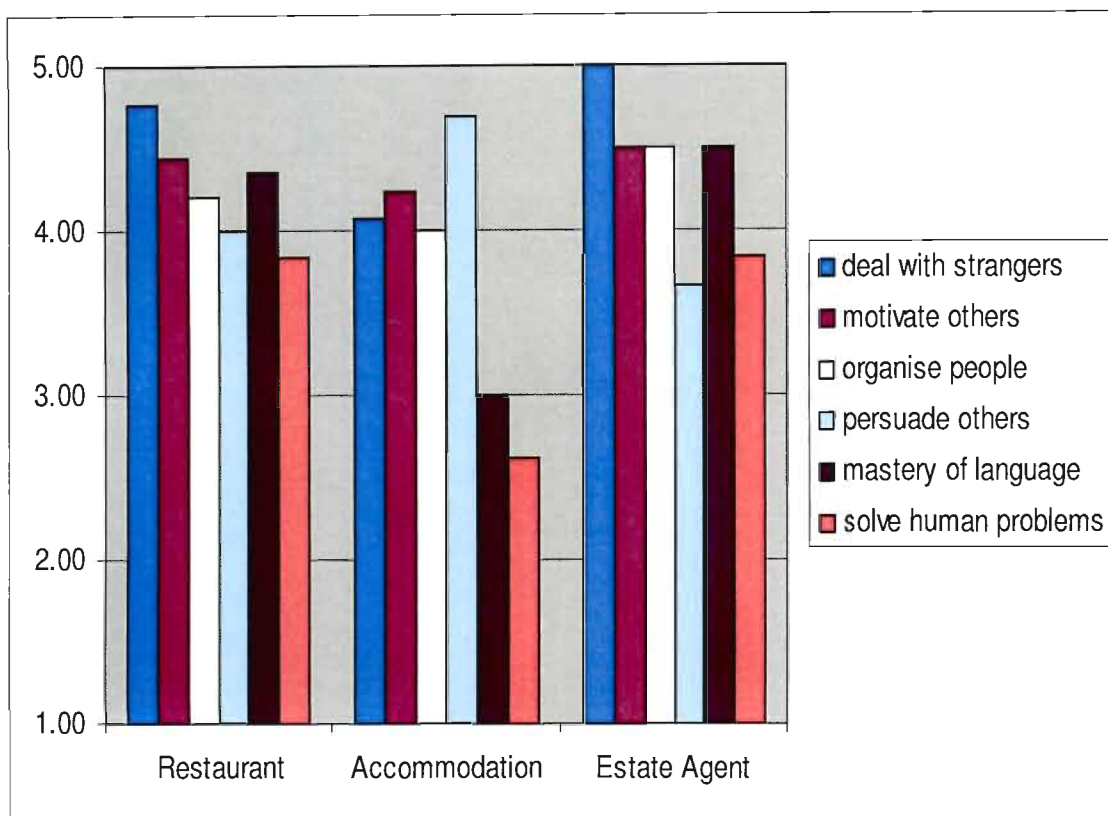


Figure 3.4: Influence Cluster – Part 2

The Restaurant industry sample seems to have all high to very high average ratings for all of the Influence cluster's individual competencies and these average ratings differ very little from each other (see figure 3.4). This may mean that the particular sample of restaurant lead entrepreneurs view all the entrepreneurial competencies very similar and view these competencies from high importance to very high importance.

The results in both figure 3.3 and figure 3.4 also need to be viewed in the context of the limitations of this study.

3.6.2.4 Standard Deviations of Entrepreneurial Competency Clusters in Industry Samples

Drawing from the standard deviation results in table 3.2 (overleaf) it seems that the entrepreneurial competency cluster's individual entrepreneurial competencies which deviates most, is the Restaurant industry sample's Steadiness competency cluster.

The entrepreneurial competencies which deviates least, seems to be the Real Estate industry sample's Influence competency cluster.

Table 3.2: Standard deviations of entrepreneurial competency clusters in industry samples

<i>Industry Samples' Standard Deviations</i>	Dominance	Influence	Steadiness	Compliance
Restaurant	0.53	0.47	0.74	0.72
Accommodation	0.23	0.31	0.36	0.32
Real Estate Agency	0.39	0.21	0.60	0.57
ALL Three Samples	0.45	0.46	0.70	0.66

The competency cluster that has the lowest overall cluster standard deviation is the Dominance cluster (0.45) which is not surprising in the light of the inferential statistic results.

The industry sample that has the lowest cross cluster average standard deviation seems to be the Accommodation sample.

The results in both table 3.1 and table 3.2 and their observations discussed here also need to be viewed in the context of the limitations of this study.

3.6.2.5 Median Values of Entrepreneurial Competencies in Industry Type Samples

Based on the results in table the Dominance entrepreneurial competency cluster seem to have the highest overall median value and the highest industry median for the Restaurant industry sample – see table 3.3.

Table 3.3: Medians of entrepreneurial competency clusters in industry samples

<i>Industry Medians</i>	Dominance	Influence	Steadiness	Compliance
1. Restaurant	4.50	4.17	4.33	0.75
2. Accommodation	4.33	3.50	3.67	0.72
3. Real Estate Agency	4.17	3.83	4.33	0.69
ALL Three Samples	4.33	3.83	4.11	0.72

The lowest average median values are all three present for the compliance cluster across all three industry samples. That is not surprising as most of the Compliance cluster of competencies seem to have weak to inverse relationship to entrepreneurial competency.

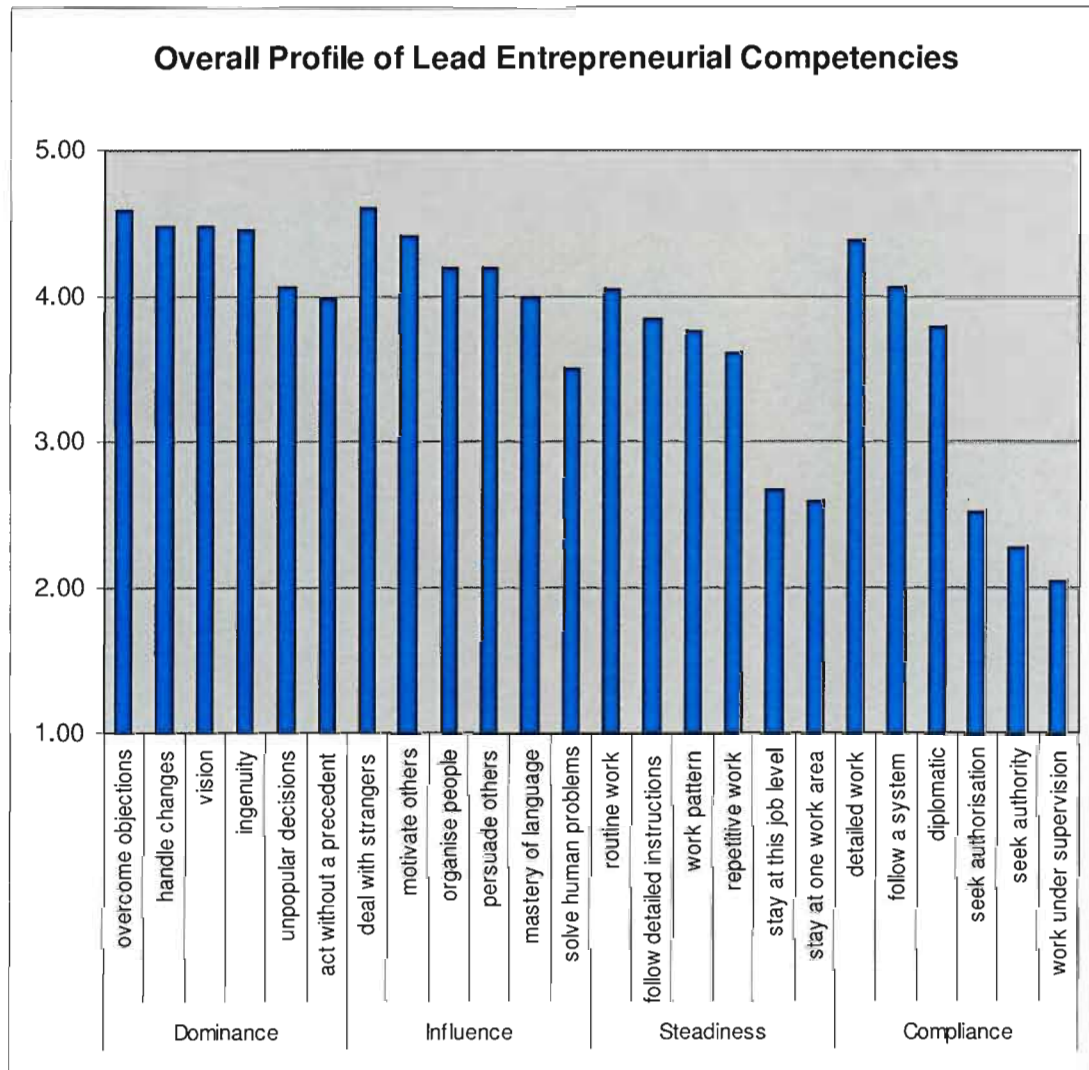


Figure 3.5: Overall Competency Profile of Lead Entrepreneurial Competencies

When the total sample of respondents ratings are used as a whole the overall entrepreneurial competency profile for the total sample of this study can be displayed as seen here above in figure 3.5.

Note the relatively low scores for two of the individual Steadiness competencies and three of the individual Compliance competencies. This can be expected because those items have a weak to inverse relationship with entrepreneurial competency.

3.6.3 Level of Significance for Statistical Analyses

In the light of the small sample sizes and the uncertainty regarding the normality of the sample distributions of this study, the researcher decided to use a more conservative level of significance. Therefore the researcher used $\alpha=0.01$ for this study’s statistical analyses instead of the more popular $\alpha=0.05$.

3.6.4 Kruskal-Wallis Rank Test Analyses of DISC Competency Clusters

This non-parametric statistical analysis was done with all four DISC competency clusters. Note that, based on the literature study, most of the competencies in the Influence and Dominance clusters are directly associated with entrepreneurial competencies, while most of the competencies in the Steadiness cluster and in particular the Compliance cluster seem to have a weaker relationship with entrepreneurial competencies.

The analyses of the individual DISC clusters are discussed in the following subsections below.

3.6.4.1 Dominance Analysis

The Kruskal-Wallis Rank Test results regarding the Dominance cluster is set out in table 3.4 below.

Table 3.4: Kruskal-Wallis Rank Test for Dominance Competency Cluster

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	22712.68	1	6	89.5	14.9166667
Sum of Sample Sizes	44	2	13	290	22.3076923
Number of Groups	3	3	25	610.5	24.42

Test Result	
H Test Statistic	2.652621
Critical Value	9.21034
p-Value	0.265455
Does not reject the null hypothesis	

*Level of Significance: 0.01

The results in table 3.4, **p-value of 0.265 > α -value of 0.01**, means that for these three business industries there seem to be ***no significant*** difference in the **Dominance** cluster's entrepreneurial competency profiles between the real estate sample, the guest house sample and the restaurant sample.

3.6.4.2 Influence Analysis

The results in table 3.5, **p-value of 0.003 < α -value of 0.01**, means that for these three business industries there seem to be a ***significant*** difference in the **Influence** cluster's entrepreneurial competency profiles between the real estate sample, the guest house sample and the restaurant sample. The Kruskal-Wallis Rank Test results regarding the Influence cluster is set out in table 3.5.

Table 3.5: Kruskal-Wallis Rank Test for Influence Competency Cluster

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	24146.73	1	6	171.5	28.5833333
Sum of Sample Sizes	44	2	13	162.5	12.5
Number of Groups	3	3	25	656	26.24

Test Result	
H Test Statistic	11.34383
Critical Value	9.21034
p-Value	0.003441
Rejects the null hypothesis	

*Level of Significance: 0.01

3.6.4.3 Steadiness Analysis

The Kruskal-Wallis Rank Test results regarding the Steadiness cluster is set out in table 3.6 on the next page.

Table 3.6: Kruskal-Wallis Rank Test for Steadiness Competency Cluster

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	24071.98	1	6	113.5	18.9166667
Sum of Sample Sizes	44	2	13	179	13.7692308
Number of Groups	3	3	25	697.5	27.9

Test Result	
H Test Statistic	10.89081
Critical Value	9.21034
p-Value	0.004316
Rejects the null hypothesis	

*Level of Significance: 0.01

The results in table 3.6, **p-value of 0.004 < α -value of 0.01**, means that for these three business industries there seem to be a **significant** difference in the **Steadiness** cluster's competency profiles between the real estate sample, the guest house sample and the restaurant sample.

3.6.4.4 Compliance Analysis

The Kruskal-Wallis Rank Test results regarding the Compliance cluster is set out in table 3.7 below.

Table 3.7: Kruskal-Wallis Rank Test for Compliance Cluster

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	24092.76	1	6	137.5	22.9166667
Sum of Sample Sizes	44	2	13	167	12.8461538
Number of Groups	3	3	25	685.5	27.42

Test Result	
H Test Statistic	11.01672
Critical Value	9.21034
p-Value	0.004053
Rejects the null hypothesis	

*Level of Significance: 0.01

The results in table 3.7, **p -value of 0.004 < α -value of 0.01**, means that for these three business industries there seem to be a **significant** difference in the **Compliance** cluster's competency profiles between the real estate sample, the guest house sample and the restaurant sample.

3.6.4.5 Summary of Kruskal-Wallis Rank Test Results

It seems that all three population samples used in this survey agree mostly on the Dominance cluster of entrepreneurial competencies, while they disagree significantly regarding the Influence cluster of entrepreneurial competencies.

All three samples also disagree significantly regarding the competency profiles of the Steadiness and Compliancy cluster.

Although the real estate agencies were included in the Kruskal-Wallis calculations, it was important for the researcher to do the Wilcoxon Rank Sum Test also because of the small sample size of real estate agency respondents. The Wilcoxon Rank Sum Test therefore used the data from the restaurant industry and the accommodation industry samples which will be discussed in the next section.

3.6.5 Wilcoxon Rank Sum Test Analyses of DISC Competency Clusters

Because of the small sample size of the real estate industry sample, the researcher decided to do the Wilcoxon Rank Sum Test statistical analyses of the entrepreneurial competency clusters of the two larger industry type samples (the restaurant and the accommodation samples). This was done to explore how the Wilcoxon p -values compare with the corresponding industry and competency clusters' Kruskal-Wallis p -values – in particular to explore if any significance changes occur.

The Wilcoxon Rank Sum Test statistical analyses were done with all four DISC competency clusters. The analyses of the individual DISC clusters are discussed in the following subsections below.

3.6.5.1 Dominance Analysis

The results in table 3.8, **p -value of 0.424 > α -value of 0.01**, means that for these two business industries there seem to be **no significant** difference in the **Dominance** cluster's entrepreneurial competency profiles between the Accommodation sample and the Restaurant sample. The Wilcoxon Rank Sum Test results regarding the Dominance cluster is set out in table 3.8 overleaf.

This **no-significant** difference result (p -value of 0.424) for the Dominance cluster compares well with the **no-significant** difference calculated by the Kruskal-Wallis Rank Test (p -value of 0.265).

Table 3.8: Wilcoxon Rank Sum Test for Dominance Cluster

Accommodation Industry Sample	
Sample Size	13
Sum of Ranks	227.5
Restaurant Industry Sample	
Sample Size	25
Sum of Ranks	513.5
Intermediate Calculations	
Total Sample Size n	38
T_1 Test Statistic	227.5
T_1 Mean	253.5
Standard Error of T_1	32.5
Z Test Statistic	-0.800000
Two-Tail Test	
Lower Critical Value	-2.57583
Upper Critical Value	2.575829
p-value	0.423711
Does not reject the null hypothesis	

*Level of Significance: 0.01

3.6.5.2 Influence Analysis

The results in table 3.9, **p -value of 0.003 < α -value of 0.01**, means that for these two business industries there seem to be a **significant** difference in the **Influence** cluster's competency across the accommodation industry sample and the restaurant industry sample.

This **no-significant** difference result (p -value of 0.003) for the Influence cluster compares very well with the **no-significant** difference calculated by the Kruskal-Wallis Rank Test (p -value of 0.003). The Wilcoxon Rank Sum Test results regarding the Influence cluster is set out in table 3.9 overleaf.

Table 3.9: Wilcoxon Rank Sum Test for Influence Cluster

<i>Accommodation Industry Sample</i>	
Sample Size	13
Sum of Ranks	156.5
<i>Restaurant Industry Sample</i>	
Sample Size	25
Sum of Ranks	584.5
Intermediate Calculations	
Total Sample Size n	38
T1 Test Statistic	156.5
T1 Mean	253.5
Standard Error of T1	32.5
Z Test Statistic	-2.984615
Two-Tail Test	
Lower Critical Value	-2.57583
Upper Critical Value	2.575829
p-value	0.002839
Rejects the null hypothesis	

*Level of Significance: 0.01

3.6.5.3 Steadiness Analysis

The results in table 3.10, **p-value of 0.002 < α -value of 0.01**, means that for these two business industries there seem to be a **significant** difference in the **Steadiness** cluster's competency variable across the accommodation industry sample and the restaurant industry sample.

This **significant** difference result (p-value of 0.002) for the Steadiness cluster compares well with the **significant** difference calculated by the Kruskal-Wallis Rank Test (p-value of 0.004). The Wilcoxon Rank Sum Test results regarding the Steadiness cluster is set out in table 3.10 on the next page.

Table 3.10: Wilcoxon Rank Sum Test for Steadiness Cluster

<i>Accommodation Industry Sample</i>	
Sample Size	13
Sum of Ranks	152.5
<i>Restaurant Industry Sample</i>	
Sample Size	25
Sum of Ranks	588.5
Intermediate Calculations	
Total Sample Size n	38
T1 Test Statistic	152.5
T1 Mean	253.5
Standard Error of T1	32.5
Z Test Statistic	-3.107692
Two-Tail Test	
Lower Critical Value	-2.57583
Upper Critical Value	2.575829
p-value	0.001886
Rejects the null hypothesis	

*Level of Significance: 0.01

3.6.5.4 Compliance Analysis

The Wilcoxon Rank Sum Test results in table 3.11, **p-value of 0.001 < α -value of 0.01**, means that for these two business industries there seem to be a **significant** difference in the **Compliance** cluster's competency profiles between the guest house sample and the restaurant sample.

This **significant** difference result (p-value of 0.001) for the Compliance cluster compares well with the **significant** difference calculated by the Kruskal-Wallis Rank Test (p-value of 0.004). The Wilcoxon Rank Sum Test results regarding the Compliance cluster is set out in table 3.11 overleaf.

Table 3.11: Wilcoxon Rank Sum Test for Compliance Cluster

Accommodation Industry Sample	
Sample Size	13
Sum of Ranks	148
Restaurant Industry Sample	
Sample Size	25
Sum of Ranks	593
Intermediate Calculations	
Total Sample Size n	38
T1 Test Statistic	148
T1 Mean	253.5
Standard Error of T1	32.5
Z Test Statistic	-3.246154
Two-Tail Test	
Lower Critical Value	-2.57583
Upper Critical Value	2.575829
p-value	0.001170
Rejects the null hypothesis	

*Level of Significance: 0.01

In the light of the relative good comparison between the Wilcoxon and Kruskal-Wallis results, the researcher decided that it would not be necessary to repeat the Wilcoxon calculation for the inferential statistical analyses of the individual entrepreneurial DISC competencies and therefore only used the Kruskal-Wallis calculations. These results are discussed in the following sub-sections.

3.6.6 Kruskal-Wallis Rank Test Analyses of Individual DISC Competencies

All of the individual entrepreneurial competencies in the **Dominance** cluster have a **p-value larger than the level of significance (α -value of 0.01)** which was no surprise in the light of the Dominance cluster statistic that is also larger than 0.01.

Many of the individual entrepreneurial competencies in the **Influence** cluster have a **p-value smaller than the level of significance (α -value of 0.01)** which was no surprise in the light of the Influence cluster statistic that is also smaller than 0.01.

Based on the literature study, this cluster is strongly associated with typical entrepreneurial competencies and therefore the Influence cluster's individual

entrepreneurial competencies will be discussed in much more detail in the following pages than the other three competency clusters' individual entrepreneurial competencies.

In contrast to the ***Steadiness*** and ***Compliance*** clusters' ***p-values*** being ***smaller than the level of significance (α-value of 0.01)***, all of the ***p-values*** of the ***individual*** Compliance competencies and most of the ***p-values*** of the ***individual*** Steadiness competencies are ***larger than the level of significance (α-value of 0.01)***. The only individual Steadiness competency that has a ***p-value smaller than the level of significance (α-value of 0.01)*** is "...Satisfied to stay at this job level" and will be discussed more in the following pages.

3.6.6.1 *Influence*

Three of the six individual entrepreneurial competencies in the Influence cluster that differed significantly regarding the three business industries (Real Estate Agencies, Accommodation and Restaurants) include the competencies reflected in HJA questions 8, 11 and 13. HJA questions 4, 18 and 21 of this cluster showed no significant difference.

The ***Kruskal-Wallis Rank Test*** statistic detail for the individual ***Influence*** entrepreneurial competency in ***question 8 ("Ability to deal with strangers")*** shows that this entrepreneurial competency is regarded significantly different between the three particular industry samples and would still be statistically significant if the level of significance was 0.005 or 0.0025. This is summarised in table 3.12 below.

Table 3.12: Kruskal-Wallis Rank Test for "Deal with Strangers" (Influence) Competency

Intermediate Calculations	
Sum of Squared Ranks/Sample Size	24378.95
Sum of Sample Sizes	44
Number of Groups	3

Group	Sample Size	Sum of Ranks	Mean Ranks
1	6	186	31
2	13	158	12.1538462
3	25	646	25.84

Test Result	
H Test Statistic	12.7512
Critical Value	9.21034
p-Value	0.001703
Rejects the null hypothesis	

	REA	Accom	Rest
Industry Average	5.00	4.08	4.76

*Level of Significance: 0.01

The estimated industry average ratings for *these* three industry *samples* shows that, despite their significant difference, their lowest average value for this competency (“*Ability to deal with strangers*”) appears to be 4.08 for the Accommodation Industry sample and the highest average rating appears to be 5.00 (the maximum rating) for the Real Estate Agency sample. This might mean that this competency is regarded as of high importance (at least) to very high importance for these particular samples.

In the light of the limitations of this study and of these sample populations, the sample industry averages as well as any inferences drawn from them regarding the “*Ability to deal with strangers*” should be considered very cautiously.

The *Kruskal-Wallis Rank Test* statistic detail for the individual *Influence* entrepreneurial competency in **question 11** (“*Mastery of language in expression*”) shows that this entrepreneurial competency is regarded significantly different between the three particular industry samples and would still be statistically significant if the level of significance was 0.005, 0.0025 or 0.001. This entrepreneurial competency’s detail is summarised in table 3.13.

Table 3.13: Kruskal-Wallis Rank Test for “Language Expression” (Influence) Competency

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	25044.56	1	6	172.5	28.75
Sum of Sample Sizes	44	2	13	133.5	10.2692308
Number of Groups	3	3	25	684	27.36

Test Result		REA	Accom	Rest
H Test Statistic	16.7852	4.50	3.00	4.36
Critical Value	9.21034			
p-Value	0.000227			
Rejects the null hypothesis				

*Level of Significance: 0.01

The estimated industry average ratings for *these* three industry *samples* shows significantly that their lowest average value for this entrepreneurial competency (“*Mastery of language in expression*”) appears to be 3.00 and the highest average rating appears to be 4.50. This might mean that this entrepreneurial competency is

regarded as of significant importance by the Accommodation sample of lead entrepreneurs on the one side and on the other side regarded by the Real Estate sample of lead entrepreneurs as of high importance for these particular two industry samples.

In the light of the limitations of this study and of these sample populations, the sample industry averages as well as any inferences drawn from them regarding the *“Mastery of language in expression”* should be considered very cautiously.

The *Kruskal-Wallis Rank Test* statistic detail for the individual *Influence* entrepreneurial competency in **question 13 (“Ability to help others solve human problems”)** shows that this entrepreneurial competency is regarded significantly different between the three particular industry samples and would still be statistically significant if the level of significance was 0.005 or 0.0025. This entrepreneurial competency’s detail is summarised in table 3.14.

Table 3.14: Kruskal-Wallis Rank Test for “Help Solve Human Problems” (Influence) Competency

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	24370.84	1	6	164.5	27.4166667
Sum of Sample Sizes	44	2	13	154	11.8461538
Number of Groups	3	3	25	671.5	26.86

Test Result		REA	Accom	Rest
H Test Statistic	12.70206	3.83	2.62	3.84
Critical Value	9.21034			
p-Value	0.001745			
Rejects the null hypothesis		*Level of Significance: 0.01		

The estimated industry average ratings for *these* three industry *samples* shows that, despite their significant difference, the lowest average value for this entrepreneurial competency (*“Ability to help others solve human problems”*) appears to be 2.62 and the highest average rating appears to be 3.84. This might mean that this entrepreneurial competency is regarded as of significant to high importance by the Accommodation sample on the one side and on the other side regarded by the Restaurant sample as of high importance for these particular samples.

In this case, the Real Estate Agency sample's industry average of 3.83 and that of the Restaurant sample of 3.84 measure nearly identical industry averages.

In the light of the limitations of this study and of these sample populations, the sample industry averages as well as any inferences drawn from them regarding the "***Ability to help others solve human problems***" should also be considered very cautiously.

The ***Kruskal-Wallis Rank Test*** statistic detail for the individual ***Influence*** entrepreneurial competency in **question 4 ("*Organise various types people*")** shows that this entrepreneurial competency is ***not*** regarded ***significantly different*** between the three particular industry samples. This entrepreneurial competency's detail is summarised in table 3.15.

Table 3.15: Kruskal-Wallis Rank Test for "Organise Various Types of People" (Influence) Competency

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	22709.24	1	6	171	28.5
Sum of Sample Sizes	44	2	13	240.5	18.5
Number of Groups	3	3	25	578.5	23.14

Test Result	REA	Accom	Rest
H Test Statistic	4.50	4.00	4.20
Critical Value			
p-Value			
Does not reject the null hypothesis			

Industry Average	REA	Accom	Rest
	4.50	4.00	4.20

*Level of Significance: 0.01

In the light of the fact these particular three industry samples do ***not differ*** from each other ***significantly***, the estimated industry average ratings for ***these*** three industry ***samples*** shows that their lowest average value for this entrepreneurial competency ("***Organise various types of people***") appears to be 4.00 and the highest average rating appears to be 4.5. This might mean that this entrepreneurial competency is regarded to be of high importance by all three industry samples in this study.

In the light of the limitations of this study and of these sample populations, the sample industry averages as well as any inferences drawn from them regarding the **“Organise various types of people”** should also be considered very cautiously.

The **Kruskal-Wallis Rank Test** statistic detail for the individual **Influence** entrepreneurial competency in **question 18 (“Ability to motivate others”)** shows that this entrepreneurial competency is **not** regarded **significantly different** between the three particular industry samples. The estimated industry average ratings for **these** three industry **samples** shows that these three industry samples also appear to be very near to each other with a minimum industry average value of 4.22 and a maximum industry average value of 4.50. This might mean that this entrepreneurial competency is regarded as of high importance by all three industry samples in this study. This entrepreneurial competency’s detail is summarised in table 3.16.

Table 3.16: Kruskal-Wallis Rank Test for “Motivating Others” (Influence) Competency

Intermediate Calculations	
Sum of Squared Ranks/Sample Size	22785.65
Sum of Sample Sizes	44
Number of Groups	3

Group	Sample Size	Sum of Ranks	Mean Ranks
1	6	138	23
2	13	225.5	17.3461538
3	25	626.5	25.06

Test Result	
H Test Statistic	3.094834
Critical Value	9.21034
p-Value	0.212797
Does not reject the null hypothesis	

	REA	Accom	Rest
Industry Average	4.50	4.23	4.44

*Level of Significance: 0.01

As in the previous cases, the sample industry averages as well as any inferences drawn from them regarding the **“Ability to motivate others”** should be considered very cautiously in the light of the limitations of this study and of these sample populations.

The *Kruskal-Wallis Rank Test* statistic detail for the individual *Influence* entrepreneurial competency in **question 21** (“*Persuade other people of your view*”) shows that this entrepreneurial competency is **not** regarded **significantly different** between the three particular industry samples as seen in table 3.14.

The estimated industry average ratings for **these** three industry **samples** (as seen in table 3.17) shows that these three industry samples also appear to be very near to each other with a minimum industry average value of 3.67 and a maximum industry average value of 4.69. This might mean that this entrepreneurial competency is regarded as of high to very high importance by all three industry samples in this study.

Table 3.17: Kruskal-Wallis Rank Test for “Persuade Other People” (Influence) Competency

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	23558.73	1	6	81	13.5
Sum of Sample Sizes	44	2	13	389.5	29.9615385
Number of Groups	3	3	25	519.5	20.78

Test Result		REA	Accom	Rest
H Test Statistic	7.780177	3.67	4.69	4.00
Critical Value	9.21034			
p-Value	0.020444			
Does not reject the null hypothesis				

*Level of Significance: 0.01

The estimated industry average ratings for **these** three industry **samples** shows that these three industry samples also appear to be very near to each other with a minimum industry average value of 3.67 and a maximum industry average value of 4.69. This might mean that this entrepreneurial competency is regarded as of high to very high importance by all three industry samples in this study.

Here also the sample industry averages as well as any inferences drawn from them regarding the “*Persuade other people of your view*” should be considered very cautiously in the light of the limitations of this study and of these sample populations.

3.6.6.2 Steadiness

The **Kruskal-Wallis Rank Test** statistic detail for the individual **Steadiness** inverse-entrepreneurial competency in **question 24 (“Satisfied to stay at this job level”)** shows that this entrepreneurial competency **is** regarded **significantly different** between the three particular industry samples as seen in table 3.18. The estimated industry average ratings for **these** three industry **samples** shows that, despite their significant difference, their lowest average value for this entrepreneurial competency (“Satisfied to stay at this job level”) appears to be 1.77 and the highest average rating appears to be 4.00. This might mean that this entrepreneurial competency is regarded as of low importance by the Accommodation sample on the one side and on the other side regarded by the Real Estate Agency sample as of high importance for these particular samples.

Table 3.18: Kruskal-Wallis Rank Test for “Stay at This Job Level” (Steadiness) Competency

Intermediate Calculations		Group	Sample Size	Sum of Ranks	Mean Ranks
Sum of Squared Ranks/Sample Size	24026.57	1	6	204	34
Sum of Sample Sizes	44	2	13	184.5	14.1923077
Number of Groups	3	3	25	601.5	24.06

Test Result		REA	Accom	Rest
H Test Statistic	10.61558	4.00	1.77	2.92
Critical Value	9.21034			
p-Value	0.004953			
Rejects the null hypothesis				

*Level of Significance: 0.01

Again, the sample industry averages as well as any inferences drawn from them regarding the “Satisfied to stay at this job level” should be considered very cautiously in the light of the limitations of this study and of these sample populations.

These limitations will now be discussed in the next section.

3.7 LIMITATIONS OF THIS STUDY

Due to the nature of this study and exploratory studies in general, multiple limitations needs to be highlighted and will be briefly discussed below.

The convenience sampling method, the small sizes of the samples and the unlikelihood of any of the samples in this study having normal distributions limits this study regarding parametric statistics and limiting generalisation to the particular broader industry populations.

Small sample sizes are also prone to facilitate greater variation and therefore larger standard deviations.

Despite the efforts in sampling appropriate respondents, some of them might still lack adequate industry experience, business-management and/or entrepreneurial experience that could potentially compromise the quality of their responses.

Some of the respondents in the samples used probably do not qualify as entrepreneurs themselves, despite the fact that they may even be owner-managers of the business. A more scientific selection process is needed than the one that was applied in this study.

3.8 CHAPTER SUMMARY

This chapter reported on the research methodology and the results of the data gathered during the survey undertaken for this research project.

The sample characteristics and related descriptive statistics were analysed and briefly discussed. Although the most descriptive statistics indicated interesting results, the most important statistics are the median related statistics, because of the unlikelihood of these samples being normally distributed.

Because of the sample limitations, only non-parametric results applied. The Kruskal-Wallis Rank Test and the Wilcoxon Rank Sum Test were therefore used for the inferential statistical analyses. Due to the similarity in results that both tests' statistics showed, the Wilcoxon Rank Sum Test was not repeated to analyse the individual entrepreneurial competencies; only the Kruskal-Wallis Rank Test was used for that purpose.

Certain entrepreneurial competency clusters, as well as certain individual entrepreneurial competencies, showed no significant differences in their median rankings. Others showed significant differences in their median rankings, which corroborates the literature study's sources, emphasising that there is not one entrepreneurial profile that fits all.

This study has multiple limitations, many of which were discussed in the previous sub-section.

In the next chapter, conclusions are drawn and recommendations made, based on the research results reported and discussed in chapter 3, regarding differentiated competency profiles for lead entrepreneurs associated with each particular business context that could enable the particular optimal entrepreneurial mix for different types of business industries.

CHAPTER FOUR: CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

Chapter one introduced the intended research project and gave an overview regarding the problem statement (research problem), the research questions asked, the general aim and specific goals of this study, a brief overview of the intended research methodology and a brief chapter delineation of this research report.

Chapter two reported on the literature overview of entrepreneurial competencies, profiling entrepreneurial competencies and the development of differentiated competency profiles for lead entrepreneurs. It also discussed the definitions and concepts regarding entrepreneurship, the entrepreneurial process, certain relevant myths, the entrepreneur and the entrepreneurial competencies; and especially that there does not exist only one profile of entrepreneurial competencies that fits all types of industries. All this emphasized the need for differentiated competency profiles to enable the particular optimal entrepreneurial mix for different business contexts such as the specific type of business industry.

The third chapter reported on the research methodology and the results of the data gathered in the survey research process. The sample characteristics and related descriptive statistics were analysed and briefly discussed. Although the most descriptive statistics indicated interesting results, the most important statistics are the median related statistics, because of the *unlikelihood* of these samples being normally distributed. Because of the sample limitations, only non-parametric results applied.

The Kruskal-Wallis Rank Test and the Wilcoxon Rank Sum Test were therefore used for the inferential statistical analyses. Due to the similarity in results that both test statistics had with each other, the Wilcoxon was not repeated for the analyses of the individual entrepreneurial competencies' analyses and only the Kruskal-Wallis Rank Test was used for that purpose.

Certain entrepreneurial competency clusters, as well as certain individual entrepreneurial competencies, showed no significant differences in their median

rankings and others that do have significant differences in their median rankings which compare with the literature study sources that emphasize that there is not one entrepreneurial profile that fits all.

4.2 CONCLUSIONS

Multiple results were able to be reported on in chapter three, but when we take into account the limitations of this study and its sample characteristics, possibly none of the conclusions that can be drawn from the results can be safely generalised to their broader industry populations.

Any conclusions drawn from this study's samples should preferably be limited to the particular samples only and mostly focus on what can be derived from the median's statistics provided by the Kruskal-Wallis Rank Test and the Wilcoxon Rank Sum Test.

The most important conclusions that can be drawn within the context of the abovementioned limitations includes that the Dominance cluster of entrepreneurial competencies showed *no* statistical significant difference across the different business industry samples. Therefore it may be concluded that the particular three industry samples (Real Estate, Accommodation and Restaurant) all regarded more or less equally important to very important.

On the other hand, significant difference in importance was found across the different business industries for the other three entrepreneurial competency clusters.

The most important conclusion that can be drawn from this, is that there is not one entrepreneurial profile that fits all lead entrepreneurs across different types of business industries.

Instead it can be concluded, at least regarding this study's industry samples, that there may be a part of the entrepreneurial competency profile that is similar for all three industries surveyed, but that a significant part of the entrepreneurial profile (three of the four competency clusters in this study's case) has a statistically significant different entrepreneurial competency profile.

These conclusions supports the researcher's initial reason for this exploratory study and should be followed up with further research projects using representative random samples, so that generalisations to the broader industry populations can be made

and the hypothesis of differentiated entrepreneurial competency profiles for different business industries can be properly tested.

From the above conclusions could thus be concluded that it is important to learn more about the individual industry specific needs regarding the entrepreneurial competency profile in order to isolate the ideal entrepreneurial mix unique to each different type business industry. This should be done in such a way that we know which part is the generic core and how the rest of the industry specific entrepreneurial competency profile needs to be customised based on the industry specific needs. This type of information can add value to the executive coaching process and career development of current and future lead entrepreneurs in a business environment that is continuously more competitive and increasingly challenging.

4.3 LIMITATIONS OF THE STUDY

The greatest limitations of this study are related to the convenient nature and the small size of this study's industry samples which limits the use of the results and conclusions drawn from it probably only apply for this particular industry samples. Generalisations to the broader industry populations are therefore not supported, but at least the need for more extensive and more industry population representative research is supported.

Another important limitation of this study is the selection process of the respondents to ensure the best possible quality of responses collected – in this case assessing who are appropriate respondents to profile the entrepreneurial competencies for the specific business industry. This should include also more accurate means of distinguishing between a lead entrepreneur and somebody that is a business manager but not an entrepreneur.

The initial over-reliance on email data gathering strategies also pressurised the sampling process that was already limited by the convenience nature of the sample. Reasons why the email strategy was so dismally unsuccessful can be analysed further to avoid similar experiences and to determine if email surveys are an effective enough strategy in general.

4.4 RECOMMENDATIONS

The first recommendation the researcher would like to make based on this study's results, is that many more of this type of study need to be conducted and greater effort should be made to ensure random sampling strategies in order to enable generalisation regarding the particular business industry specific entrepreneurial competency profile to the particular total industry populations.

Another recommendation is that industry specific needs regarding entrepreneurial competencies need to be accommodated more directly to enable the ideal entrepreneurial mix of competencies for the particular business industry samples studied in this survey.

4.5 CHAPTER SUMMARY

This chapter briefly highlighted what were discussed in the first three chapters and then focused on conclusions that can be drawn from the survey results reported in chapter three.

Certain entrepreneurial competency clusters, as well as certain individual entrepreneurial competencies, showed no significant differences in their median rankings. Others have significant differences in their median rankings, which support the literature study's findings, emphasising that there is not one entrepreneurial profile that fits all.

This study has multiple limitations, which were discussed in section 4.3 above.

Lastly, a few recommendations based on the conclusions and limitations were made.

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APPENDIX A



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Test Name:	Personal Profile Analysis
Local test distributor / publisher:	Thomas International Ltd
Date of Current Review:	2003
Date of Publication of Current Review/Edition:	1998
Constructs Measured:	Dominance, Influence, Steadiness and Compliance
Administration Mode:	Administration is by means of a self-administered booklet or, alternatively, via computer, using Thomas International Human Resources Software.
Response Mode:	Manual operations Paper and pencil Computerised

Instrument Evaluation:

Characteristics	Evaluation
Quality of Documentation	★★★★
Quality of Materials	★★★★★
Norms and reference groups	N/A
Construct validity	★★★★
Criterion-related validity	★★★★★
Reliability-overall	★★★★★
Number of Computer-Generated Reports	Not recorded

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APPENDIX B



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Certificate of Registration as a Psychological Test

This is to certify that the English language version of **Personal Profile Analysis** has been audited against the technical criteria established by the European Standing Committee on Tests and Testing of the European Federation of Psychologists Associations.

It is hereby certified that **Personal Profile Analysis** meets the minimum psychometric requirements for use as a psychological test.

This Registration has been granted by the British Psychological Society's Psychological Testing Centre in good faith on the basis of documented evidence provided by the publisher of **Personal Profile Analysis**, which has been subject to independent review. Full details of the audit and evaluation process can be found on the BPS: PTC website: www.psychtesting.org.uk.

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This Registration was granted on 03/11/2005 and is valid until 02/11/2010.

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