

Entrepreneur Scan identifies potential fast growers

Rutger van der Laan, Martijn Driessen and Peter Zwart

INTRODUCTION

Being an entrepreneur is cool! More and more people see self employment as a positive thing (Risseuw & Thurik, 2003). The number of businesses listed in the (Dutch) trade register has nearly doubled in recent years. Even in schools there is a growing focus on entrepreneurship. Under the guise of 'learning by doing', students learn to run their own business. Furthermore, the (Dutch) government has made a lot of money available for identifying and managing potential new and fast developing entrepreneurs. This has led to the existence of the successful 'IkStartSmart' project of the Dutch Chamber of Commerce where intensive coaching and training help to create more and better entrepreneurs (www.ikstartsmart.nl). But how do you know whether someone – business starter or student - has the necessary entrepreneurial competence to be able and willing to become a successful entrepreneur? The Entrepreneur Scan (E-Scan) can help. This validated online test provides an insight into the competence for entrepreneurship of any individual (Driessen, 2005). In this article we provide evidence that the E-Scan can distinguish potential fast developers from those who want to remain small, based on their entrepreneurial competence.

Alongside entrepreneurial competence, entrepreneurial intentions are central in this article. By this we mean the goal or aim that an entrepreneur has for their company. We make a distinction between business and personal entrepreneurial intentions (par 2.1). Our assumption is that an entrepreneur must pursue the best possible match between what they want and what they can do with their company. That is to say, their entrepreneurial competence should match their entrepreneurial intentions (see Keuning, 2001).

Miner (1997) classifies entrepreneurs into four types, which he then attributes to various entrepreneurial competencies. He notes the importance of choosing the right career for the right entrepreneurial competencies, the so-called 'fit'. An entrepreneur must do what they are good at and thus choose an entrepreneurial intention that best fits their entrepreneurial competencies. After conducting a literature review, we concluded that - according to us - little statistical research has been done into the relationship between entrepreneurial intentions and entrepreneurial

competencies. This applies in particular to the relationship between personal entrepreneurial intentions and competencies. We believe that gaining more insight into this relationship is useful for entrepreneurs, government and business coaches or consultants. If, for example, the main objective of a business owner is 'to do work that I enjoy', then it makes little sense to persuade them with varying advice, grants or (government) programs to develop the competencies that are necessary for *growing* their business. He or she will probably not be really motivated to grow their business.

The aim of this research is to demonstrate the relationship between entrepreneurial intentions and the entrepreneurial competence. In section 2, the intentions of entrepreneurs and the entrepreneurial competence are defined and the relationship between them is elaborated on. Paragraph 3 shows the research design and section 4 shows the results. Finally section 5 contains the conclusions.

THEORY

In this section, the entrepreneurial intentions and entrepreneurial competence are discussed. Then the relationship between the two is discussed and finally hypotheses are formulated.

The entrepreneurial intentions

In research literature, 'business growth' is often seen as the most important entrepreneurial intention. However, many entrepreneurs may have an intention other than business growth. Entrepreneurs will regard themselves as successful, once they meet their own intentions (goals). Their intention could be to create profitable growth, but it may also be less entrepreneurial and be about pursuing continuity or just staying small (self-employed).

Recognition, autonomy, personal development and financial success are suggested by Birley and Westhead (1994) as being important entrepreneurial intentions amongst others. Gatewood, Shaver & Gartner (1995) suggest that 'independence' and 'financial success' are important entrepreneurial intentions and add to this 'the ability to successfully respond to a market demand'.

As well as a business intention, entrepreneurs also have a personal intention for their business.

Important personal intentions are named as 'financial independence' and 'autonomy and independence' (Burns, 2001, Stokes & Wilson, 2006).

Entrepreneurs who are purely focused on creativity, form a separate group. They would prefer to be remembered for their creative achievements and less for their business performance (Bolton & Thompson, 2000). Artists and others see a creative process as a reward in itself (Gill, 2006). Despite some creative minds being very profitable in business, business growth as such doesn't seem to be an important intention for these entrepreneurs. As these entrepreneurs do not pursue business growth, good business competencies are less of a requirement.

Creative entrepreneurs who are motivated by the 'creativity' intention belong to the so called 'lifestyle businesses'. Growth entrepreneurs who want to grow should possess a strong entrepreneurial competence. Lifestyle entrepreneurs start a company because it gives them a comfortable lifestyle, but they are often not focused on business growth (Burns and Dewhurst, 1996, Burns, 2001; Bridge, O'Neill & Cromie, 2003). For lifestyle entrepreneurs, a strong entrepreneurial competence is less important.

Besides creativity, 'deciding my own time' and 'doing work that I enjoy" (Bruins, 2004) are also mentioned. These two intentions are well suited to the pursuit of a certain lifestyle instead of pursuing growth or profit.

Within this study we looked at the following entrepreneurial intentions:

Business intentions

Maximizing profit

Strong growth in turnover and employees

Continuity

Remaining small

Personal intentions

Staying autonomous and independent

Becoming financially independent

Expressing my creative ideas

Determining my own time

Doing work that I enjoy

The entrepreneurial competence

A competence can be described, as something a person is very good at. It is a talent, which enables them to do their job well. Lathi (1999) summarizes this as a collection of knowledge, capabilities, characteristics and attitudes in relation with, or necessary for a good performance. Stoof et al. (2000) also conclude that competences can be interpreted as successful behaviour in (critical) practice where knowledge, capabilities and attitude work together to accomplish this behaviour. We define four components that jointly form a person's entrepreneurial competence: Motivation, Characteristics, Capabilities and Knowledge.

Driessen (2005) divides the characteristics component into *six characteristics*. The

capability component for the early stage of a business is divided into *three capabilities or qualities*. All of these 9 aspects are included in the Entrepreneur Scan. The *characteristics* consist of: Need for Achievement, Need for Autonomy, Need for Power, Social Orientation, Self Belief and Endurance. The *qualities* are: Market Awareness, Creativity and Flexibility. In his Ph.D. thesis, Driessen (2005) gives a detailed description of the various characteristics and capabilities that are measured with the E-Scan (see also Driessen and Zwart, 2006). The first three characteristics: Need for Achievement, Need for Autonomy and the Need for Power, are an indication for the first component of motivation (the need) to be or become an entrepreneur. Knowledge, the fourth component, is not measured at all through the E-Scan.

Need for Achievement. Performance-based entrepreneurs demand the highest of themselves. They have a strong commitment to high performance. They want to perform to the best of their ability in everything they do, and always strive to do better than last time.

Need for Autonomy. An 'independent' person solves problems independently as much as possible. They are autonomous and independent and want to make decisions on their own.

Need For Power. A person in this category wants to be in charge of other people. Such 'dominant' individuals are good at imposing their will on others.

Social Orientation comes from the Need For Affiliation. Socially oriented people are good at developing and maintaining contacts, never overlooking the business perspective.

Self belief or personal efficacy comes from the 'Internal Locus Of Control'. People that score high for this characteristic are convinced that personal success depends on them. Success is not dependent on others or on circumstance. These people are convinced of their own ability. They are confident of their personal influence on events.

Endurance. A person with perseverance will never give up when faced with adversarial situations. They are committed to the goal they want to achieve and in the short term they do more than is necessary.

Market awareness is the ability to estimate the demands of customers. They know what is happening in a given market, both in terms of customer need as well as the position of competitors.

Creativity is the ability to recognize new opportunities. Creative entrepreneurs see opportunities where others do not; they often have an alternative perspective on a situation, seeing solutions rather than problems.

Flexibility is the capacity to adapt. When new developments in the area are identified, plans are easily changed.

Of course other entrepreneurial traits and qualities do exist. (Nandram & Samson, 2000). But in the research by Driessen (2005) these are the characteristics and qualities found to be key for an entrepreneurial attitude and behavior.

The entrepreneurial competence in relation to business intentions

Many literature sources divide entrepreneurs into two types: the craftsman and the opportunist. There are clear differences between the competencies of these two types of entrepreneur. Moreover, these two different types of entrepreneur have different business intentions. Chell (2001) suggests that the craftsman type is an entrepreneur who wants to do everything on their own and who avoids building relationships as much as possible. The opportunist often has a professional background and craves development. The craftsman is mainly engaged in technical work (Woo, Cooper & Dunkel Berg, 1991) and is product-oriented, compared to the more market-oriented opportunist (Risseuw & Thurik, 2003).

Smith & Miner (1983) also point out the differences between these two types of entrepreneur and then provide the evidence for it. In contrast to the opportunist, the craftsman is often poorly educated and not very concerned with their surroundings. Their company can be characterized as rigid. They often have no long term vision. The more an organization resembles that of the opportunist, the more adaptive the organization and the more it is focused on company growth. Carland, Hoy, Boulton & Carland (1984) see a clear difference between an opportunist and a craftsman. An opportunist will (more than a craftsman) strive for profit and business growth.

So, an entrepreneur is to be characterized along the continuum from craftsman to opportunist. The more an entrepreneur tends to be an opportunist, the more they will focus on business growth. Because high scores on the entrepreneurial competence is necessary in order to achieve business growth, entrepreneurs with the business intentions 'strong growth in turnover and employees' must score high on the E-Scan (Driessen, 2005). This also seems to hold true for the entrepreneurial intention 'maximizing profit'. Entrepreneurs who opt for 'staying small' will be more likely to

be a craftsman and will have less of a need to have high score on the entrepreneurial competence than the opportunist.

As well as the craftsman and opportunist - some call for a third type of entrepreneur: the 'administrator' (or 'manager'). The administrator is focused on controlled business growth (Burns and Dewhurst, 1996; Hornaday, 1990). Hornaday (1990) stresses the importance of continuity of the company. The administrator wants to achieve growth, but only steady growth. The company's growth will be lower than that of the opportunist, however, higher than that of the craftsman. It seems plausible that these entrepreneurs need to score lower on the entrepreneurial competence than the opportunist, but better than the craftsman. For this we expect entrepreneurs with the business intention 'continuity' to score between 'strong growth in turnover and employees / maximizing profit' and 'staying small'.

The following hypotheses have been formulated:

Hypothesis 1: The business intention 'strong growth in turnover and employees' will score higher on all 9 aspects of the entrepreneurial competence than:

(a) 'continuity'

(b) 'staying small'

Hypothesis 2: The business intention 'maximizing profit' will score higher on all 9 aspects of the entrepreneurial competence than:

(a) 'continuity'

(b) 'staying small'

Hypothesis 3: The business intention 'continuity' will score higher on all 9 aspects of the entrepreneurial competence than 'staying small'

Entrepreneurial competence in relation to personal intentions

The entrepreneurial intentions 'expressing my creative ideas' as well as 'determining my own time' and 'doing work that I enjoy' can all be described as lifestyle intentions. It seems therefore likely that entrepreneurs who pursue these three entrepreneurial intentions don't need to possess a high entrepreneurial competence. In our opinion, these three entrepreneurial intentions should score lower than the

intentions 'staying autonomous and independent' and 'becoming financially independent'.

Hypothesis 4: The personal intention 'staying autonomous and independent' will result in a higher score on all 9 aspects of the entrepreneurial competence than these below:

- (a) 'Expressing my creative ideas'
- (b) 'Determining my own time'
- (c) 'Doing work that I enjoy'

Hypothesis 5: The personal intention 'becoming financially independent' will score higher on all 9 aspects of the entrepreneurial competence than:

- (a) 'Expressing my creative ideas'
- (b) 'Determining my own time'
- (c) 'Doing work that I enjoy'

RESEARCH DESIGN

In this section the research process and data analysis are discussed

Research process

The database used in the present study was provided by Entrepreneur Consultancy BV. Visitors to their website (<http://www.ondernemerstest.nl>) completed the E-Scan. In the E-Scan they were asked to choose from the personal and business intentions mentioned above. It was made clear to each candidate completing the E-Scan that their personal details would be kept in the strictest confidence.

There were 31,710 respondents in all. These consisted of 20,769 men and 10,941 (34.5%) women, which is close to the national figure of 33%.

Variables

The entrepreneurial intentions in the present study are considered as the dependent variables. The entrepreneurial competence is seen as the independent variables.

The research model relating to this is shown in Figure 1 and the research question is:

What is the relationship between the entrepreneurial competence identified by the E-Scan and the entrepreneurial intentions of entrepreneurs?

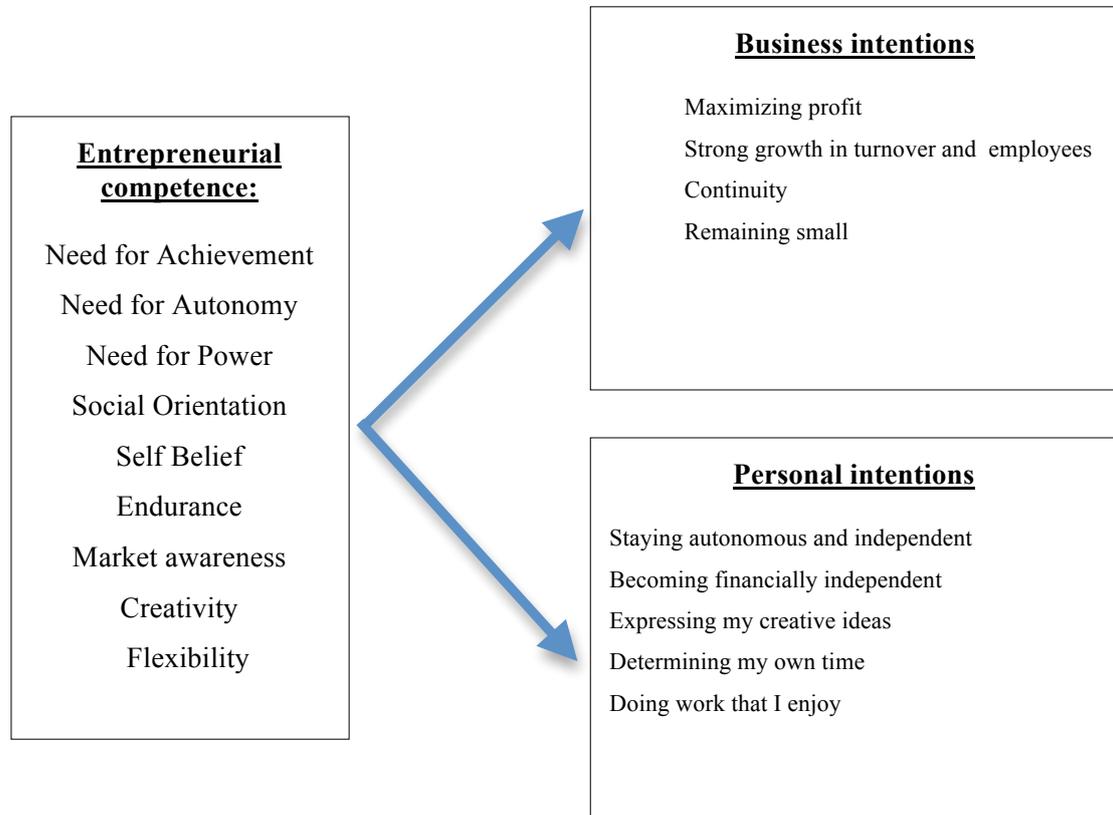


Figure 1. Model of the research into entrepreneurial intentions and entrepreneurial competence

The entrepreneurial competence is measured through assessing the answers given by the respondents to all aspects of the entrepreneurial competence above. The items are scored on a seven point Likert scale. Thus the scores for the entrepreneurial competence of the respondents are measured by finding the average of all the aspects relating to each characteristic or quality. Because the E-Scan research has been validated (Driessen, 2005), we can assume that the scores are a reliable and valid representation of the respondents' entrepreneurial competence.

The entrepreneurial intentions are measured using two questions. The entrepreneurs were asked to choose the most important business intention out of four. Next they were asked to choose the most important personal intention from five

individual entrepreneurial intentions.

Data-analysis

The relationship between entrepreneurial intentions and entrepreneurial competence are measured using the ‘one-way analysis of variance’. The business and personal entrepreneurial intentions are nominal variables. The entrepreneurial characteristics and qualities are interval variables. For each aspect of the entrepreneurial competence, a check is made to see if the ‘mean averages’ of the entrepreneurial intentions are significantly different from each other.

To determine which groups significantly differ from each other, a multiple comparison test is performed. For this purpose, the Scheffe multiple comparison test is used. Compared to other multiple comparison tests, this test requires the biggest difference between two means before it is regarded as significant (Huizingh, 2006). This multiple comparison test makes it possible to significantly differentiate large groups from each other in a realistic manner.

RESULTS

Table 1 shows that under ‘business intentions’ the majority of respondents opted for ‘continuity’ for their business (63.1% of respondents). Financial success: made up of ‘maximizing profit’ and ‘strong growth in turnover and employees’ was relevant for 30.7% of the respondents. Table 2 shows that ‘staying autonomous and independent’ was one of the main intention chosen from the five possible personal intentions (34.3% of respondents). The highest scoring personal intention is ‘doing work that I enjoy’ (36.3% of the respondents). ‘Becoming financially independent’ was chosen by only 17.7% of the respondents.

	Percentage
Maximizing profit	14.5
Strong growth in turnover and employees	16.2
Continuity	63.1
Remaining small	6.2
Total	100.0

Table 1. Frequency table - business intentions

(N = 31,710)

	Percentage
Staying autonomous and independent	34.3
Becoming financially independent	17.7
Expressing my creative ideas	9.3
Determining my own time	2.4
Doing work that I enjoy	36.3
Total	100.0

Table 2. Frequency table personal intentions (N = 31,710)

The results of the Scheffe test for one aspect of the entrepreneurial competence (Need for Achievement) is indicated in Tables 3 and 4. The same tests are conducted for all aspects (see Annex 1). Tables 3 and 4 show the example of when two entrepreneurial intentions significantly differ from each other (using the Scheffe test). Entrepreneurial intentions that are significantly different, are in a different 'significance class' (sk). Entrepreneurial intentions that are not significantly different, are placed in the same significance class (sk).

For example, Table 3 shows that the entrepreneurial intention 'remaining small' scores 7.58 for the entrepreneurial competence Need for Achievement. This means that respondents who have chosen the option 'remaining small', collectively scored an average of 7.58 for Need for Achievement. This differs significantly from the score of 8.05 for 'continuity' or 8.21 for 'maximizing profit' and 8.29 for 'strong growth in turnover and employees'. The personal intentions 'becoming financially independent' (8.21) and 'staying autonomous and independent' (8.25) do not significantly differ from each other for Need for Achievement (Table 4).

	<u>sk1</u>	<u>sk2</u>	<u>sk3</u>	<u>sk4</u>
Remaining small	7.58			
Continuity		8.05		
Maximizing profit			8.21	
Strong growth in turnover and employees				<u>8.29</u>
p	<hr/>			
F=264.54				
p=.00				

Table 3. Business intentions and averages for Need for Achievement

	<u>sk1</u>	<u>sk2</u>	<u>sk3</u>	<u>sk4</u>
Determining my own time	7.46			
Doing work that I enjoy		7.90		
Expressing my creative ideas			8.08	
Becoming financially independent				8.21
Staying autonomous and independent				8.25
p	<hr/>			
F=287.66				.62
p=.00				

Table 4. Personal intentions and averages for Need for Achievement

Based on the Appendix 1 a total of 6 hypotheses are fully confirmed (1a, 1b, 2b, 4b, 4c, and 5b). This means that for these 6 hypotheses all 9 aspects of the entrepreneurial competence show significant differences between the proposed intentions:

The business intention ‘strong growth in turnover and employees’ has a significantly higher score for all of the 9 entrepreneurial aspects than ‘continuity’ (Hypothesis 1a) and ‘remaining small’ (Hypothesis 1b).

The business intention ‘maximizing profit’ has a significantly higher score for all 9 entrepreneurial aspects than ‘remaining small’ (Hypothesis 2b)

The personal intention ‘staying autonomous and independent’ has a higher score for all the 9 entrepreneurial aspects than ‘determining my own time’ (Hypothesis 4b) and ‘doing work that I enjoy’ (Hypothesis 4c).

The personal intention ‘becoming financially independent’ has a higher score for all 9 aspects of the entrepreneurial competence than ‘determining my own time’ (Hypothesis 5b).

As for the other 5 hypotheses (2a, 3, 4a, 5a and 5c) it can be concluded in general that they are largely supported.

Hypothesis 2a is supported for 4 of the 9 aspects of the entrepreneurial competence. For four aspects of the entrepreneurial competence ‘maximum profit’ scores significantly higher than ‘continuity’ (Need for Achievement, Autonomy,

Power and Self Belief). For four aspects of the entrepreneurial competence, there is no significant difference between 'maximizing profit' and 'continuity' (Social Orientation, Market awareness, Creativity and Flexibility). Only once did 'maximizing profits' score significantly lower than 'continuity' (Endurance).

Hypothesis 3 is supported for 8 of the 9 entrepreneurial aspects. For 8 of the entrepreneurial competence the entrepreneurial intention 'continuity' scores significantly higher than 'remaining small' (Need for Achievement, Need for Power, Social Orientation, Self Belief, Endurance, Market Awareness, Creativity and Flexibility). For Need for Autonomy, there is no significant difference between 'continuity' and 'remaining small'.

Hypothesis 4a is supported for 7 of the 9 entrepreneurial aspects. For 7 entrepreneurial aspects 'staying autonomous and independent' scores significantly higher than 'expressing my creative ideas' (Need for Achievement, Need for Autonomy, Need for Power, Social Orientation, Self Belief, Endurance and Market Awareness). For one entrepreneurial aspect 'staying autonomous and independent' scores significantly below 'expressing my creative ideas' (Creativity). For one entrepreneurial aspect, there is no significant difference between 'staying autonomous and independent' and 'expressing my creative ideas' (Flexibility).

Hypothesis 5a is supported for 6 of the 9 entrepreneurial aspects. For 6 entrepreneurial aspects 'becoming financially independent' scores significantly higher than 'expressing my creative ideas' (Need for Achievement, Need for Autonomy, Need for Power, Social Orientation, Self Belief and Endurance). For one entrepreneurial aspect, there is no significant difference between 'becoming financially independent' and 'expressing my creative ideas' (Market Awareness). For two entrepreneurial aspects 'becoming financially independent' scores significantly lower than 'expressing my creative ideas' (Creativity and Flexibility).

Hypothesis 5c is supported for 8 of the 9 aspect of the entrepreneurial competence. For 8 entrepreneurial aspects 'becoming financially independent' scores significantly higher than 'doing work that I enjoy' (Need for Achievement, Need for Autonomy, Need for Power, Social Orientation, Self Belief, Endurance, Creativity and Market Awareness). For one entrepreneurial aspect, there is no significant difference between 'becoming financially independent' and 'doing work that I enjoy' (Flexibility).

CONCLUSION

The purpose of this article is to demonstrate the relationship between entrepreneurial intentions and the entrepreneurial competence. After the concepts of entrepreneurial intentions and the entrepreneurial competence are discussed, the relationship between the two is examined with the help of one-way analysis of variance. In the literature it is found that the entrepreneurial type of the 'opportunist' fits well with the business intentions 'strong growth in turnover and employees' and 'maximizing profit'. The entrepreneurial type of the 'craftsman' has a better fit with intentions like 'continuity' and 'remaining small'. The business intentions 'expressing my creative ideas', 'determining my own time' and 'doing work that I enjoy' are better suited to the lifestyle-entrepreneur. We also conclude that on the basis of Miner et al. (1997) growth-entrepreneurs score higher than lifestyle-entrepreneurs regarding the entrepreneurial competence. Or in other words: we assume a 'fit' between entrepreneurial intentions and entrepreneurial competence. According to the Scheffe test the following can be concluded:

Entrepreneurs who opt for the business intention 'strong growth in turnover and employees' score higher on all aspects of the entrepreneurial competence than entrepreneurs who opt for 'continuity' and 'remaining small'. Entrepreneurs who opt for the personal intentions of 'staying autonomous and independent' score higher on all aspects of the entrepreneurial competence than entrepreneurs who choose 'determining my own time' and 'doing work that I enjoy'. The assumptions were not fully supported for all 9 aspects but gave support to the overall picture: entrepreneurs clearly choose an intention that fits their entrepreneurial competence.

The present study thus confirms the existence of a 'fit' between an entrepreneurial intention and entrepreneurial competence. If the intention of an entrepreneur does not match his entrepreneurial competence, a financial advisor or business coach may point out that this is an unrealistic intention. For an entrepreneur who does not have the entrepreneurial competence to grow, it would be better not to pursue high growth. Still an entrepreneur with less entrepreneurial competence (as long as he has a matching entrepreneurial intention) can be successful.

The government can learn from the results of this study. By encouraging entrepreneurship, the government often focuses on growth (or on fast developing

business start-ups). With the E-Scan, the government can help entrepreneurs to bring their intentions in line with their entrepreneurial competence. Now they can design projects that focus on the entrepreneur as the starting point. This can work both ways. Either by bringing the entrepreneurial competence of the entrepreneur in line with their intentions and ambitions or the other way around: bringing their intentions in line with their entrepreneurial competence. It is possible to develop the entrepreneurial competence of entrepreneurs and encourage them to become more entrepreneurial, if they choose to do so. The IkStartSmart project in the province of Gelderland in the Netherlands is an example of where the E-Scan has been used successfully as a starting point (and an end point for research reasons). Tillaart (2008) describes how the E-Scan has successfully been put to use in this initiative for the development of entrepreneurship, operationally and scientifically. It would be wise for the government to provide specific financial packages according to the type of entrepreneur. For the opportunist (the growth-oriented entrepreneurs) it would help to strengthen the entrepreneurial competence needed for growth. The lifestyle entrepreneur, in contrast, would be better served by recognition. For this, group growth initiatives and subsidies will probably miss their aim. It is better to appreciate their creative ideas and, if possible, to connect them to the more growth oriented entrepreneurs. Now with E-Scan it is possible to discover the growth potential and willingness of the entrepreneurs themselves, and what the possibilities are for developing the entrepreneurial competence of the entrepreneur towards fast growth.

LITERATURE

- Birley, S., & P. Westhead (1994), A Taxonomy of Business Start-Up Reasons and Their Impact on Firm Growth and Size, *Journal of Business Venturing*, 9(1), 7-31.
- Bolton, B., & J. Thompson,(2000), *Entrepreneurs: Talent, Temperament, Technique*, Oxford: Butterworth-Heinemann.
- Bridge, S., K. O'Neill & S. Cromie(2003), *Understanding Enterprise, Entrepreneurship and Small Business*, 2nd edition, New York: Palgrave Macmillan.
- Bruins, A.(2004), *Starter in een recessie*, EIM, Zoetermeer
- Burns, P. (2001), *Entrepreneurship and Small Business*, 1st edition, New York: Palgrave, Macmillan.
- Burns, P., & J. Dewhurst (1996), *Small Business and Entrepreneurship*, 2nd edition, New York: Palgrave Macmillan.

- Carland, J. W., F. Hoy, W.R. Boulton, & J.A.C. Carland (1984), Differentiating Entrepreneurs from Small Business Owners: A Conceptualization, *Academy of Management Review*, 9(2), 354-359.
- Chell, E. (2001), *Entrepreneurship: globalization, innovation and development*, 1st edition, London: Thomson Learning.
- Driessen, M. P. (2005), *E-Scan Ondernemerstest: Beoordeling en ontwikkeling ondernemerscompetentie (summary in English)*, 's-Graveland: Entrepreneur Consultancy BV.
- Driessen, M. P., & P.S. Zwart (2006), De E-Scan Ondernemerstest ter beoordeling van ondernemerschap, *Maandblad voor Accountancy en Bedrijfseconomie*, 80(7/8), 382-391.
- Gatewood, E. J., K.G. Shaver & W.B. Gartner (1995), A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation, *Journal of Business Venturing*, 10(5), 371-391.
- Gill, R. (2006), *Theory and Practice of Leadership*, London: Sage Publications.
- Hisrich, R. D., M.P. Peters & D.A. Shepherd (2008), *Entrepreneurship*, 7th edition, Boston: McGraw-Hill/Irwin.
- Hornaday, R. W. (1990), Dropping the e-words from small business research: An alternative typology, *Journal of Small Business Management*, 28(4), 22-33.
- Huizingh, E. (2006), *Inleiding SPSS 14.0 voor Windows en Data Entry*, 1^e druk, Den Haag: Sdu Uitgevers BV.
- Keuning, D. (2001), *Grondslagen van het management*, 3^e druk, Groningen, Houten: Wolters-Noordhoff BV.
- Lahti, R.K. (1999), "Identifying and Integrating Individual Level and Organizational Level Core Competencies", *Journal of Business and Psychology*, vol. 14, 1, p 59-75.
- Miner, J. B. (1997), *A Psychological Typology of Successful Entrepreneurs*, Westport: Quorum Books.
- Nandram, S.S. & K.J. Samson (2000), Succesvol ondernemen: eerder een kwestie van karakter dan van kennis, Breukelen: Universiteit Nijenrode.
- Risseuw, P. & R. Thurik (2003), *Handboek Ondernemers en Adviseurs: Management en Economie van het Midden - en Kleinbedrijf*, 1^e druk, Deventer: Kluwer.
- Smith, N. R., & J.B. Miner (1983), Type of Entrepreneur, Type of Firm, and Managerial Motivation: Implications for Organizational Life Cycle Theory, *Strategic*

Management Journal, 4(4), 325-340.

Stokes, D., & N. Wilson (2006), *Small Business Management & Entrepreneurship*, 5th edition, London: Thomson Learning.

Stoof, A., Martens, R.L., & van Merriënboer, J.J.G. (2000), *What is competence? A constructivist approach as a way out of confusion*, Paper presented at the Onderwijs Research Dagen (ORD), Leiden, The Netherlands.

Tillaart, van H. (2008), *Effectmeting Start Smart Project*, Nijmegen: ITS, Stichting Radboud Universiteit

Woo, C. Y., A.C. Cooper & W.C. Dunkelberg (1991), The Development and Interpretation of Entrepreneurial Typologies, *Journal of Business Venturing*, 6(2), 93-114.

APPENDIX

A one-way analysis of the variance is used for testing the relationship between the business intentions and the aspects of the entrepreneurial competence.

Need for Achievement (F=264.54, p=.00), Need for Autonomy (F=40.37, p=.00), Need for Power (F=398.55, p=.00), Social orientation (F=86.24, p=.00), Self belief (F=139.10, p=.00), Endurance (F=84.01, p=.00), Market awareness (F=158.65, p=.00), Creativity (F=69.92, p=.00) and Flexibility (F=51.21, p=.00) all show a significant difference in averages for at least two business intentions. Need for Achievement (F=287.66, p=.00), Need for Autonomy (F=189.58, p=.00), Need for Power (F=152.41, p=.00), Social orientation (F=164.13, p=.00), Self belief (F=214.67, p=.00), Endurance (F=363.19, p=.00), Market awareness (F=260.36, p=.00), Creativity (F=261.12, p=.00) en Flexibility (F=142.77, p=.00) all show significant differences in the average figures for at least two personal intentions.