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**Innovation versus leadership in entrepreneurial growth**

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### **Abstract**

Entrepreneurial growth is a current aspiration in most continents. However, entrepreneurial growth demands learning from experiences, which requires collection of knowledge based on practitioners. Accordingly, this paper present empirical data from active entrepreneurs in relation to innovation and leadership attitudes measured by a standardized personality test (Østergaard, 2017). These results indicate that the amount and the combination of innate attributes of innovation and leadership prompt diverse categories of entrepreneurs that provide different kinds of growth. Hence, the entrepreneurial category described as self-employed retain growth in the local environments, where the business owners sustain leadership in a company and manage a number of employees with diverse background and education, and finally the core entrepreneurs are the most innovative with continuously launching of new ideas, projects and enterprises. The notion is that the impact of political supported entrepreneurial initiatives as for relevance and outcome would benefit from using a distinction between entrepreneurial categories, particularly regarding leadership and innovation personality traits in relation to ensure growth.

## **Innovation versus leadership in entrepreneurial growth**

### **Entrepreneurial growth**

Entrepreneurial growth (Baum et al., 2001; Baum, Frese, & Baron, 2007; Baum & Locke, 2004) is a current aspiration in most continents. However, entrepreneurial growth demands learning from experiences including failures (Davidsson, Delmar, & Wiklund, 2006; Morris, Kuratko, Schindehutte, & Spivack, 2012; Morris, Miyasaki, Watters, & Coombes, 2006), which requires a collection of knowledge based on practitioners. Moreover, scholars have to address the journals' requirement of theoretical-cum-empirical contributions, whereas the empirical part is especially emphasized.

Nevertheless, the entrepreneurial literature has suffered from insignificant results for decades due to for instance, questionnaires with self-scores (Davidsson, 2005, 2008). Accordingly, significant empirical research is commonly requested to set the foundation for theoretical development and for the purposes of policy makers, allowing them the ability to make decisions based on valid knowledge. With the intention of addressing the required knowledge, this paper provides empirical data on which to base future theoretical development and government initiatives regarded with increasing the aspired entrepreneurial growth.

Entrepreneurship literature has moved from a purely economic perspective, where firms were the main level of analysis (Schumpeter, 1934), to a perspective where the individual is central to understand the entrepreneurial phenomena (Gartner, Shaver, Gatewood, & Katz, 1994). Scholars within the entrepreneurial literature agree that entrepreneurs' have a positive impact on the economic growth. Thus, Carree and Thurik argue that growth is positively related to entrepreneurial activity measured in terms of firm size and age (Carree & Thurik, 2003; Wennekers & Thurik, 1999; Wennekers, Van Wennekers, Thurik, & Reynolds, 2005), as well as, number of enterprises and employees (Audretsch, Carree, & Thurik, 2001; Thurik, Carree, Van Stel, & Audretsch, 2008). More specific, Wennekers and Thurik (1999) argues how entrepreneurs in a specific context of culture, institutions and personal conditions impact economic growth via innovation, variety, competition and personal efforts with knowledge spillover (Delmar, Wennberg, & Hellerstedt, 2011).

However, the dilemmas of growth (Morris et al., 2006) are depending on the relationship between the type of entrepreneur and the firm's growth (Miner, Smith, & Bracker, 1994; N R Smith & Miner, 1983; Norman R. Smith, 1967). Hence, it has been suggested to psychologically test the types of entrepreneurs (Miner, 2000). Moreover, concepts such as entrepreneurial mindset (Haynie, Shepherd, Mosakowski, & Earley, 2010; McGrath & MacMillan, 2000) and entrepreneurial cognition as the basis of entrepreneurial thinking and action (Mitchell et al., 2002) demonstrate that individual motivations, perceptions and predispositions towards entrepreneurship are central to understand entrepreneurial activity and success.

Generally, severe measuring constraints might be attributable to a paucity of theoretical frameworks that link entrepreneurs to economic growth in a cross-national context (Carree & Thurik, 2003, p. 437), hence, a framework based on valid measurement is required. Consequently, the aim is to develop a theoretical framework considering the innovation and leadership attributes of entrepreneurs in the society by means of solid measurement instruments.

### **A renewed framework of entrepreneurs emerge due to necessity**

Often, a framework is developed either as an arch within which several similar concepts are gathered or as an attempt to achieve coherent knowledge of a diverse theoretical field. For instance, scholars' attempt to develop typologies and groups of entrepreneurs is habitually done in order to improve the understanding of entrepreneurs and possibly to interpret, for example, the entrepreneurs' motivation, behavior and cognitive style. In (2000), Miner launched an entrepreneurial typology, Singh and DeNoble (2003) developed a theoretically grounded typology, and Hisrich et al. (2007) created an amended empirically-based typology; each of these typologies are supported theoretically (Eckhardt & Shane, 2003; Hisrich, Langan-Fox, & Grant, 2007; Shook, Priem, & McGee, 2003). Hisrich et al. (2007) suggest that entrepreneurs form three groups: craftsmen, who are allocated as entrepreneurs; creative and innovative people without interest in growth and business; and entrepreneurial types divided into potential, ordinary and team entrepreneurs.

According to Chowdhury (2005), the team entrepreneur has a significant role in new product innovation. A team entrepreneur refers to a group of owners and managers of the same firm, most commonly family firms (Ensley, Pearce, & Hmieleski, 2006; Ucbasaran, Lockett, Wright, & Westhead, 2003). However, in industries requiring a diversity of expertise, Ruef, Aldrich, & Carter

(2003) argue that innovation (creating a new firm, organisation, product or process) differs from imitation (replicating an existing market).

A priori model is presented in figure 1, developed from Hisrich et al. (2007) towards a renewed framework for entrepreneurial types.

<b>Entrepreneur types, developed from Hisrich et al. (2007)</b>		
Craftsman:	Administrative (Cooper et al., 1997), Opportunistic Inventor (Miner et al., 1992), and Opportunistic (Smith, 1967; Smith & Miner, 1983)	
Creative selfish types:	Creative acquirer, Controlled perseverator, Distant achiever, Rational manager, Egocentric agitator (Muller & Gappisch, 2005), and Personal achiever, Emphatic super-salesperson, Real manager, Expert idea generator (Miner, 1997; 2000)	
Typologies of entrepreneurs with interest in innovation and business:	Potential:	Ready, Ready reluctant, Ready unfeasible, Ready unconvinced, Daydreamer, Undesirable, Uncredible, Bureaucrat (Erikson, 2001)
	Ordinary:	Nascent: Nascent entrepreneurs against-their will, Would-be nascent entrepreneurs, Net-working nascent entrepreneurs with risk-avoidance patterns (Korunka et al., 2003)
	Based on work expectation:	Craftsmanship, Security, Risk/Challenge, Managerial (Lafuente & Salas, 1989)
	Female:	Need achiever, Pragmatic, Managerial (Langan-Fox & Roth, 1995)
	Retiree:	Constrained, Rational, Reluctant (Singh & DeNoble, 2003)
	Fatherless (male):	Entrepreneurs who become their own fathers (successful), Self-destroyers (unsuccessful), Grandiose dreamers (unsuccessful) (Strenger & Burak, 2005)
	Team:	Corporate entrepreneur or intrapreneur and the team entrepreneur (Hisrich et al., 2007) with a diversity of expertise (Chowdhury, 2005) Group of owners and managers (Ensley et al., 2000) Family firms (Ucbasaran et al., 2003).

FIGURE 1 ENTREPRENEURIAL TYPOLOGY DEVELOPED FROM HISRICH ET AL. (2007)

On top of organizing the current known types of entrepreneurs, the call for psychological investigations of the entrepreneurial personality form the way forward. For instance, the personality characteristics of entrepreneurs are one of five key topics suggested by Hisrich et al. (2007) to organise the psychological research of entrepreneurs, besides psychopathology, cognition, education, and entrepreneurship, as a global phenomenon. In addition, Charan et al. argue that one cannot underestimate the importance of the individual entrepreneur in the process of entrepreneurship, and that entrepreneurial commitment and leadership are central to the success of ventures (1980). “In other words, entrepreneurship research cannot develop a consistent theory about entrepreneurship if

it does not take personality variables into account as well” (Rauch & Frese, 2007b, p. 375). Consequently, the personality of an entrepreneur needs further investigation in the attempt to reach a sustainable clarification of the entrepreneurial types.

## Methodology

The development of a framework of entrepreneurial types is based on an empirical survey of active entrepreneurs using a standardized personality test (PAPA Test). The results are further processed through a factor analysis that has been interpreted by psychological means (Østergaard, 2017). Innovation and leadership attitudes are part of the personality test and become significant in the shaping of entrepreneurial types, as displayed in figure 2.

<b>Overview of the PAPA Test personality variables in hierarchy</b>		
1 Leadership Potential	1.1 Change Management	1.1.1 Initiative
		1.1.2 Risk Willingness
		1.1.3 Creative Drive
	1.2 Motivation Management	1.2.1 Will of Delegating
		1.2.2 Passion
		1.2.3 Dominance
	1.3 Efficiency Management	1.3.1 Target Drive
		1.3.2 Achievement Instinct
		1.3.3 Decision-making Ability
2 Social Potential	2.1 Interaction	2.1.1 Flexibility
		2.1.2 Social Dependence
		2.1.3 Adaption Capacity
	2.2 Co-operation	2.2.1 Tolerance
		2.2.2 Social Maturity
		2.2.3 Democratic Attitude
	2.3 Integration	2.3.1 Care
		2.3.2 Responsibility
		2.3.3 Will of Integration
3 Innovation Potential	3.1 Growth	3.1.1 Exploration Drive
		3.1.2 Preparedness for Change
		3.1.3 Experience of Well-being
	3.2 Power	3.2.1 Vigour
		3.2.2 Urge to Rebel
		3.2.3 Self-preservation Instinct
	3.3 Vitality	3.3.1 Need for Contact
		3.3.2 Dynamism
		3.3.3 Personal Manifestation
4 Potential for Effectiveness	4.1 Stability	4.1.1 Self-control
		4.1.2 Objectivity
		4.1.3 Structuring Capacity
	4.2 Integrity	4.2.1 Stress Tolerance
		4.2.2 Self-confidence
		4.2.3 Autonomy
	4.3 Analytical Capacity	4.3.1 Empathy
		4.3.2 Systematic Mindedness
		4.3.3 Reflectiveness

FIGURE 2 VARIABLES OF THE PERSONALITY TEST, PAPA TEST, IN A HIERARCHY

The personality test, Panastell Advanced Personality Aptitudes Test (PAPA Test), is a 480 items psychometric inventory test and measures the personal potential in four main aptitudes: Leadership Potential, Social Potential, Innovation Potential, and Potential for Effectiveness, whereas innovation and leadership is the most interesting in this research. Each main aptitude consists of three functional categories, and each functional category consists of three personality traits, with overall 36 traits covering the entire personality. PAPA Test demonstrates a significant high test - retest mean reliability coefficient of + 0.9 over 1 year, + 0.8 over 2 years and + 0.7 over 5 years. It is standardised on a population of 840 individuals aged 18-70 years in respect to age, sex, social strata, ethnicity and geography. It has been validated over a span of 20 years through more than 8.000 interviews, consisting of approximately one hour, from a validation pool of around 20.000 individuals. The standardisation of the used personality test is built, among others, on Svalastoga's five stratifications and therefore requires neither stratifications afterwards nor a non-population (Thurstone, 1959). The survey takes into account three basic types of validity: criterion-related, content, and construct (Carmines & Zeller, 1979) and the four types of validity outlined by Cronbach and Meehl (1955): predictive validity, concurrent validity, content validity, and construct validity.

Afterwards, a factor analysis was conducted in the effort to arrive at a systematic classification of personality traits by means of an abductive method of the typology of entrepreneurs. This became significant with differentiation at an innate foundation concerning leadership and innovation potential. Thus, Ward, Vertue and Haig (1999, p. 62) conclude that "the abductive method provides valuable insights and suggestions for improving psychological assessment", where the hypothesis serves to provide an explanation of observed data (Laudan, 1981).

Fifty-five entrepreneurs accomplished the personality test, PAPA Test. According to Arrindell and Van der Ende (1985), the survey of 55 entrepreneurs is sufficient, since, "An N = 50 was shown to be the minimum to yield a clear, recognizable factor pattern" (Arrindell & Van der Ende, 1985, p. 167). Moreover, the validity of the survey rests on the fact that only components with an eigenvalue over 1.0 is used, and the KMO is above .60 in the main findings. Thus, factor analysis provides a technique for grouping personality inventory items into relative homogeneous and independent clusters. Thereby, an effective combination of scores permits a future prediction of specific criteria as a contribution to the academic discussion in line with previous psychologists. Guilford was one of the pioneers of this (Mischel, 1990). "Despite the extensive research conducted by Cattell and his associates for more than three decades, the proposed traits must be regarded as tentative" (Anastasi, 1988, p. 542).

Consequently, the empirical investigation displays the entrepreneurial factor types in the footsteps of Thurstone (1928, 1959; 1947): “The baseline represents ideally the whole range of opinions from those at one end, who are most strongly in favour of the issue, to those at the other end of the scale, who are as strongly against it” (Thurstone, 1928). However, the diversity (e.g. Gorgievski & Stephan, 2016; Miller, 2015b) speaks in favour of further interpretation, apart from being distributed on a baseline (Thurstone, 1928), since diversity occasionally produces encouraging results due to the mutual effect of the factorial methods and the psychological concepts as scientific methods:

“A factorial study is more likely to give convincing findings if it covers a restricted domain with only enough measures of known factorial composition to serve as a linkage between the factors that are already known and the factors that we hope to discover or isolate” (Thurstone, 1948, p. 402).

Hence, the factor analysis has sure enough resulted in a renewed typology within entrepreneurship which organizes into entrepreneurial categories (Østergaard, 2017), but the factor analysis displayed an interesting distribution between leadership and innovation in relation to each of the entrepreneurial types, which is presented particularly in this paper.

### **Nine significant entrepreneurial factor types**

By means of an explorative factor analysis, nine factors are extracted by a principal axes analysis. The clearest structure was achieved by an oblimin rotation with Kaiser normalization from which 9 factors out of 36 demonstrated an eigenvalue above one, and the first 9.674. The factor analysis displays a KMO on 0.7 (Kaiser-Meyer-Olkin test = 0.685, Bartlett test of sphericity = 1255.85, and a cumulative explained variance of 9 factors = 80%). A structure matrix by a principal axes analysis method, measured of 55 active entrepreneurs (Cronbach’s Alpha = 0.928), combined with an oblimin rotation with Kaiser Normalization between the nine factor types and the 36 personality traits, this yielded the value of all traits for each of the nine factors. However, a numeric limitation of 0.3 ensures a tangible figure content comprehensive enough for psychological interpretation. In addition, the factor correlation matrix, also extracted by principal component analysis and cleared out by an oblimin rotation with Kaiser normalization, display highest correspondence between Factor One and Factor Four (0.226), Eight (0.222) and Seven (0.208), and a further correspondence between Factor 2 and Factor 4 (0.310). On the contrary, Factor One is in opposition to Factor Nine (-0.342), Five (-0.241) and Three (-0.225) (Østergaard, 2017). Consequently, the anticipation is that all nine factors

possess valuable and diverse information to be analysed as separated entrepreneurial types concerning the substantial elements; this refers to the personality traits with either positive or negative values.

The nine entrepreneurial factor types are labelled in accordance with the psychological interpretation of the personality traits: The Synnovation Creator (Factor One), the Administrator (Factor Two), the Desperate Survivor (Factor Three), the Team Organizer (Factor Four), the Bag Carrier (Factor Five), the Opportunist (Factor Six), the Rebel (Factor Seven), the Adventurer (Factor Eight), and the Routinized Employee (Factor Nine).

In a psychological interpretation, the Synnovation Creator is aware of the importance of group processes and the synergetic power of the dedicated group members. Thus, the Synnovation Creator stimulates employees or other human resources committed to the purpose of innovation with lots of attention, care and motivational effort. In terms of confirming this entrepreneur type, a cross tabulation demonstrates that Factor One relates to more than half of the respondents, 31 individuals, in a medium to high degree. Moreover, the respondents strongly affiliated towards Factor One demonstrates no significant correlation towards the number of businesses, bankruptcy, or employees.

Each entrepreneurial factor type was processed by the most vital personality traits related and distributed in accordance with a psychological evaluation into strengths, weaknesses, or both, in order to gain an overview of the person behind the factor type. Both sides of the coin are at play concerning personality, and as a result, the entrepreneurial types' strengths and weaknesses are also characterised by conceptual descriptions in order to demonstrate both aspects of a personality. Miller (2015a) raises points about the role of personality traits in the formation and success of entrepreneurial enterprises and suggests that many of the traits leading people to become entrepreneurs, when taken to extremes, can lead to their failure. Individuals with low scores will never venture out to become entrepreneurs, but individuals with high scores will try and fail according to the logic of inverted U relationships (Grant & Schwartz, 2011).

### **The entrepreneurial factor types in relation to the a priori model**

A distribution of the factor types in accordance with the distribution from Hisrich et al. (2007) reveals new information in regard to entrepreneurial types. Hence, the typical entrepreneur characterised as a craftsman, work related, and nascent entrepreneur is seen comparable with the Synnovation Creator. The inventive dreamers seem to have much in common with the Opportunist, and the team-oriented



entrepreneurs seem similar to the Team Organizer. Moreover, the potential entrepreneur is well described by the Rebel and the Adventurer. However, there is no evidence from the empirical findings that support a differentiation between ordinary entrepreneurs on one hand, and female, retiree, and fatherless entrepreneurial types on the other hand.

Accordingly, a typical entrepreneur corresponds to Factor One, the Synnovation Creator, who is characterised by a remarkable drive and interest in the innovation process as a social activity designed and managed by the entrepreneur. The team entrepreneurs, characterised by factor Four, the Team Organizer, feel morally committed to improve the world socially and are motivated by visible, measurable results from their own effort and from being dedicated, efficient and reliable to the team. The Team Organizer is characterised by a passion for the purpose, high empathy and a high structuring capacity in following a program or a script instead of adapting via flexibility and tolerance.

In addition, the potential entrepreneurs are described by first the anti-authoritarian factor Seven, the Rebel, who takes on confrontations anytime based on emotions and impulsive reactions. Thus, the Rebel, with the big ego and low empathy, has the conviction that necessary decisions have to be made no matter the inevitable risks and follows the motto that “the end justifies the means”. The second potential entrepreneur is described by factor Eight, the Adventurer, who is constantly looking for new experiences, new possibilities and new solutions with a continuously rotating mental radar. The Adventurer is a curious and independent person with a true interest in exploring the world without a specific goal or a specific plan. Moreover, the Adventurer is a passionate, dynamic and impulsive person who is able to cope with obstacles and carry out the necessary decisions. In this way, four factor types corresponding to Hisrich et al. (2007) form the entrepreneur type in general, whereas two of them are seen as potential.

From the factor analysis, a deeper insight into Factor Three, the Desperate Survivor tends to shed light on how to cope as an entrepreneur. Likewise, the learning from the contradictions to entrepreneurial types exemplified by the Administrator, the Bag Carrier, and the Routinized Employee with several negative values is expected to provide insight. However, in this survey factor three, the desperate survivor is considered irrelevant regardless of the value learning from survival has from this type.

In this way, four more factor types need further investigation: Factor Two, the Administrator; factor Five, the Bag Carrier; factor Six, the Opportunist and factor Nine, the Routinized Employee. For instance, the inventive dreamers corresponding to the Opportunist are characterised by a high degree

of tolerance and flexibility, as well as, a disposition to take risks and find new solutions while overcoming obstacles. However, the Opportunist takes no interest in personal involvement, care and responsible commitment towards others or a stable social life, implicating a preference towards working alone or with distance towards others. Hence, this paper provides a further examination of the impact of innate leadership and innate innovation potential.

### **Entrepreneurial leadership and innovation personality traits in relation to the factor analysis**

Originally, the psychological-interpreted factor analysis results are distributed in relation to all four basic aptitudes, but especially the leadership and the innovation aptitude reveal significant disparities of interest in the factor types. Thus, the mean trait scores display that the foundation of the entrepreneurial personality is based on first, the aptitude Innovation Potential with emphasis on the functional categories Power and Growth, and second, on the personality aptitude, Leadership Potential, with emphasis on the functional category Motivation Management. Furthermore, the lowest scores coincide with the aptitude Social Potential and especially the functional category Cooperation, meaning that this area is least emphasised by entrepreneurs (Østergaard, 2017).

The distinguishing between the innate leadership preference versus the innate innovation preference is an avenue for further analysis, where only the Synnovation Creator indicate a strong preference for both innovation and leadership. In the following analysis, the leadership potential traits are written in bold:

**Initiative, Risk Willingness, Creative Drive, Will of Delegating, Passion, Dominance, Target Drive, Achievement Instinct, and Decision-making Ability,**

and the innovation potential traits in bold italic style:

***Exploration Drive, Preparedness for Change, Experience of Well-being, Vigour, Urge to Rebel, Self-preservation Instinct, Need for Contact, Dynamism, and Personal Manifestation.***

The first factor, the Synnovation Creator (Cronbach's Alpha = 0.9) consists of 17 personality traits, and one of them is negatively related as outlined in Figure 3. Five traits belong to the leadership potential aptitude and six to the innovation potential. This entrepreneurial type manages to handle both leadership and innovation, which is required to endeavour as a successful entrepreneur.

<b>FACTOR ONE</b>	<b>Values &gt;  0.3 </b>
<i>Need for Contact</i>	<b>0.873</b>
<b>Dominance</b>	<b>0.785</b>
<i>Personal Manifestation</i>	<b>0.712</b>
<b>Passion</b>	<b>0.669</b>
<b>Will of Delegating</b>	<b>0.667</b>
<b>Initiative</b>	<b>0.635</b>
Will of Integration	0.602
Self-confidence	0.553
<i>Vigour</i>	<b>0.544</b>
<b>Achievement Instinct</b>	<b>0.454</b>
Stress Tolerance	0.396
<i>Dynamism</i>	<b>0.386</b>
<i>Experience of Well-being</i>	<b>0.371</b>
<i>Exploration Drive</i>	<b>0.358</b>
<i>Self-preservation Instinct</i>	<b>0.325</b>
Care	0.303
Adaption Capacity	-0.454

FIGURE 3 FACTOR ONE CONSISTING OF 17 PERSONALITY TRAITS |0.3|

The second entrepreneurial factor type, the Administrator (Cronbach's Alpha = 0.9) consisting of 12 personality traits, displays another picture as demonstrated in figure 4. None innovative traits are present, only the leadership traits with positive value, **Target Drive** and **Will of Delegating**, and two leadership traits with negative value, **Risk Willingness** and **Creative Drive**. This shows that this entrepreneurial type dislikes taking risks and being creative.

<b>FACTOR TWO</b>	<b>Values &gt;  0.3 </b>
Objectivity	0.889
Structuring Capacity	0.821
<b>Target Drive</b>	<b>0.702</b>
Systematic Mindedness	0.647
Reflectiveness	0.511
Self-control	0.475
Empathy	0.372
Responsibility	0.363
<b>Will of Delegating</b>	<b>0.347</b>
Flexibility	-0.370
<b>Risk Willingness</b>	<b>-0.440</b>
<b>Creative Drive</b>	<b>-0.745</b>

FIGURE 4 FACTOR TWO CONSISTING OF 12 PERSONALITY TRAITS |0.3|

Hence, the factor type analysis creates an entrepreneurial type not acting as a typical entrepreneur. On the contrary, this type never creates, but acts preferably target-driven. Regardless that the type possesses leadership skills, the skills tend to be weak since this type, unless acting in line with a specific target, only likes to include others that take responsibility themselves. Consequently, the notion is that factor Two, the Administrator displays a well-functioning self-employed type that is stable, goal-oriented and works in strict accordance with the purpose.

The fourth factor type, the Team Organizer (Cronbach’s Alpha = 0.9) consists of 16 personality traits as outlined in figure 5. This type possesses three leadership traits with medium to low value in **Passion, Target Drive, and Will of Delegating**, and possesses one innovative trait **Personal Manifestation**. The Team Organizer does not like taking risks and being creative or innovative in general; however, this type wishes to make a difference and to 'become someone'. This description emphasises that this type of entrepreneur acts as a team entrepreneur or a team leader in, for example, a family business.

<b>FACTOR FOUR</b>	<b>Values &gt;  0.3 </b>
Responsibility	0.883
Social Maturity	0.742
Democratic Attitude	0.742
Care	0.740
Will of Integration	0.625
<b>Passion</b>	<b>0.530</b>
<b>Target Drive</b>	<b>0.484</b>
Empathy	0.431
Structuring Capacity	0.404
Objectivity	0.385
<b>Personal Manifestation</b>	<b>0.380</b>
Reflectiveness	0.369
Autonomy	0.358
<b>Will of Delegating</b>	<b>0.344</b>
Stress Tolerance	0.330
<b>Risk Willingness</b>	<b>-0.420</b>

FIGURE 5 FACTOR FOUR CONSISTING OF 16 PERSONALITY TRAITS |0.3|

The next in line, factor Five, the Bag Carrier (Cronbach’s Alpha = 0.9) consists of 12 personality traits and only three traits are positively related as visualised in figure 6. All innovation and leadership potential traits are negatively related, meaning that this type does not need personal achievements and contact, but prefers to work at an individual pace without risk and changes and especially without noticeable management. The behaviour of this type is characterised by a self-employed prioritising

work-life balance, as for example a hair-cutter choosing to work at home to take care of the children concurrently or an unemployed giving the entrepreneurial lifestyle a shot. Later on, this type often tends to leave being self-employed and becomes an employee at an official business.

<b>FACTOR FIVE</b>	<b>Values &gt;  0.3 </b>
Social Dependence	0.801
Adaption Capacity	0.663
Structuring Capacity	0.450
<b>Personal Manifestation</b>	<b>-0.311</b>
<b>Need for Contact</b>	<b>-0.328</b>
Creative Drive	-0.341
Self-confidence	-0.385
<b>Decision-making Ability</b>	<b>-0.390</b>
<b>Vigour</b>	<b>-0.396</b>
<b>Risk Willingness</b>	<b>-0.472</b>
<b>Initiative</b>	<b>-0.493</b>
<b>Dominance</b>	<b>-0.537</b>

FIGURE 6 FACTOR FIVE CONSISTING OF 12 PERSONALITY TRAITS |0.3|

<b>FACTOR SIX</b>	<b>Values &gt;  0.3 </b>
Flexibility	0.766
Tolerance	0.594
<b>Risk Willingness</b>	<b>0.391</b>
<b>Creative Drive</b>	<b>0.357</b>
Objectivity	-0.300
Responsibility	-0.301
Autonomy	-0.321
<b>Target Drive</b>	<b>-0.361</b>
Care	-0.397
Structuring Capacity	-0.410
Will of Integration	-0.417
Reflectiveness	-0.427
<b>Systematic Mindedness</b>	<b>-0.557</b>

FIGURE 1 FACTOR SIX CONSISTING OF 13 PERSONALITY TRAITS |0.3|

Factor Six, the Opportunist (Cronbach's Alpha = 0.9) consists of 13 personality traits with four positively related as outlined in figure 7. Two of them are leadership traits with low values: **Risk Willingness** and **Creative Drive**. Both of these traits belong to the functional category Change Management (see figure 2). Hence, this factor type is suggested to characterise a business owner that primarily functions as a change manager maintaining a business surviving without considering

growth. This business owner type might make mistakes due to the lack of target; however, the flexible and emotional mindset provides new and unexpected solutions. In this way, the pros and cons depend on the individual entrepreneur.

The lack of innovative traits is interesting in the description of a business owner, as this type primarily focuses on the operation of the business and achieving a revenue in accordance with the expectation of the stakeholders. In order to change a business managed by such a type into a growth enterprise, the focus must be aimed at thoroughly developed arguments in, for instance, export potentials that make this type feel motivated to enter into a growth direction due to easily achieved advantages. Policy makers and consultants have to be aware of the innate disposition that determines the instinctive behaviour of a business owner similar to this factor type.

Factor Seven, the Rebel (Cronbach's Alpha = 0.9) consists of 9 personality traits displayed in figure 8. Five personality traits are positively related and four negatively, and all of them have a relatively low value except for the leadership trait **Decision-making Ability**. This trait, along with **Dominance** and **Risk Willingness**, and together with the innovative trait **Urge to Rebel**, offers a powerful type with high speed in risky decisions and no particular interest in waiting for better times or listening to advices from others.

<b>FACTOR SEVEN</b>	<b>Values &gt;  0.3 </b>
<b>Decision-making Ability</b>	<b>0.760</b>
<b>Dominance</b>	<b>0.382</b>
<b>Risk Willingness</b>	<b>0.375</b>
Self-Confidence	0.374
<b>Urge to Rebel</b>	<b>0.345</b>
Objectivity	- 0.318
Systematic Mindedness	-0.328
Empathy	-0.340
Reflectiveness	-0.556

FIGURE 8 FACTOR SEVEN CONSISTING OF 9 PERSONALITY TRAITS [0.3]

Next, factor Eight, the Adventurer (Cronbach's Alpha = 0.9) consists of 16 personality traits and only one trait is negatively related. Truly, this type is characterised with multiple positive innovation and leadership traits. Moreover, the scores are relatively high, especially the first innovative trait, **Exploration Drive**, followed by **Preparedness for Change**, **Dynamism**, **Urge to Rebel**, **Vigour**, **Self-preservation Instinct**, and **Need for Contact**. Likewise, the leadership traits in this factor type are six out of nine possible: **Initiative**, **Risk Willingness**, **Creative Drive**, followed by **Achievement**

**Instinct, Passion, and Dominance.** The innovative personality traits that are represented with seven out of nine possible call for interest in the last two: **Experience of Well-being** and **Personal Manifestation**. This pattern characterises an altruistic individual that has doubts and quarrels in its life, possibly due to the consequences of lacking self-control. It seems that only the lack of self-control prevents this type from being a well-functioning entrepreneur. Impulsive behaviour often produce positive but also negative effects, especially in cases that need more than luck to be accomplished, as in entrepreneurial business that requires endurance and continuous adjustment from its entrepreneurs.

<b>FACTOR EIGHT</b>	<b>Values &gt;  0.3 </b>
<i>Exploration Drive</i>	<b>0.803</b>
<i>Preparedness for Change</i>	<b>0.629</b>
<i>Dynamism</i>	<b>0.629</b>
<i>Urge to Rebel</i>	<b>0.614</b>
<i>Initiative</i>	<b>0.512</b>
<i>Risk Willingness</i>	<b>0.505</b>
<i>Creative Drive</i>	<b>0.494</b>
<i>Vigour</i>	<b>0.492</b>
<i>Self-preservation Instinct</i>	<b>0.393</b>
<i>Achievement Instinct</i>	<b>0.356</b>
Need for Contact	0.344
<b>Passion</b>	<b>0.318</b>
Self-Confidence	0.318
<b>Dominance</b>	<b>0.310</b>
Autonomy	0.307
Self-control	-0.559

FIGURE 9 FACTOR EIGHT CONSISTING OF 16 PERSONALITY TRAITS |0.3|

Finally, factor Nine, the Routinized Employee (Cronbach's Alpha = 0.9) consists of 16 negatively related personality traits, as outlined in figure 10. This types preferred behaviour are due to the negative values in opposition to seven innovative personality traits, **Urge to Rebel, Dynamism, Exploration Drive, Personal Manifestation, Preparedness for Change, Self-preservation Instinct, and Vigour**, as well as six leadership traits, **Creative Drive, Will of Delegating, Dominance, Passion, Initiative, and Achievement Instinct**. In other words, this type is the least likely to relate to, or in almost complete opposition to, the traits of an entrepreneur, supported in common sense by Thurstone's thoughts of a factor analysis baseline (1928). The Routinized Employee is by psychological interpretation self-employed, working diligently to achieve an outcome from everyday routines and tends to avoid risk. This type is a controlled and self-organized person who is able to understand other people but has no interest in leadership or innovation processes.

<b>FACTOR NINE</b>	<b>Values &gt;  0.3 </b>
<b>Creative Drive</b>	<b>-0.317</b>
Self-Confidence	-0.332
<b><i>Urge to Rebel</i></b>	<b>-0.393</b>
<b>Will of Delegating</b>	<b>-0.405</b>
Care	-0.429
<b><i>Dynamism</i></b>	<b>-0.476</b>
<b><i>Exploration Drive</i></b>	<b>-0.500</b>
<b>Dominance</b>	<b>-0.559</b>
<b>Passion</b>	<b>-0.636</b>
<b><i>Personal Manifestation</i></b>	<b>-0.637</b>
<b><i>Preparedness for Change</i></b>	<b>-0.649</b>
<b>Initiative</b>	<b>-0.655</b>
Autonomy	-0.726
<b><i>Self-preservation Instinct</i></b>	<b>-0.753</b>
<b><i>Vigour</i></b>	<b>-0.759</b>
<b>Achievement Instinct</b>	<b>-0.867</b>

FIGURE 10 FACTOR NINE CONSISTING OF 16 PERSONALITY TRAITS |0.3|

Taking everything into account, the entrepreneurial factor types that characterise entrepreneurs is suggested to emphasise factor One, the Synnovator and factor Four, the Team Organizer, followed by the potential types: factor Seven, the Rebel and factor Eight, the Adventurer. Corresponding, the rest of the factor types is suggested to characterise either non-entrepreneurs or other categories within entrepreneurship. Hence, these categories and their accumulated factor types are further investigated.

### **Innovation versus leadership in relation to three categories within entrepreneurship**

The personality characteristics predicting start-up behaviour may not predict behaviour later on in the entrepreneurship process (Eckhardt and Shane, 2003). According to Baumol (1993a), the key contribution of entrepreneurs to economic growth is the newness based on the dynamics of perceiving and creating opportunities. Entrepreneurs transform inventions and ideas into economically viable entities, and thereby an entrepreneur creates or operates a firm (Baumol, 1993b). However, small business owners' beliefs about the consequences of growth are considered the determinants of a their intentions and actions (Ajzen, 1991). Hence, Carland et al. (1984) support a deeper look into the personality of the entrepreneurial types, where an entrepreneur with an entrepreneurial enterprise differs from a business owner: "A small business venture is any business that is independently owned and operated, not dominant in its field, and does not engage in any new marketing or innovative



practices.” Moreover, Wiklund, Davidsson, & Delmar (2003) found that non-economic concerns for an entrepreneur are more important than the possibility of personal economic gain or loss, and that the well-being of the employees is important to entrepreneurs. Hence, an empirical investigation for in-depth knowledge of the entrepreneurial personality is expected to shed light on the relationship between the entrepreneur and the preferred type of firm (Smith & Miner, 1983; Smith, 1967). Furthermore, a distinction between entrepreneurs and business owner is an advantage:

“A small business owner is an individual who establishes and manages a business for the principal purpose of furthering personal goals. The business must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the business as an extension of his or her personality, intricately bound with family needs and desires.” On the contrary: “An entrepreneur is an individual who establishes and manages a business for the principal purposes of profit and growth. The entrepreneur is characterised principally by innovative behaviour and will employ strategic management practices in the business” (Carland, Hoy, Boulton, & Carland, 1984).

The psychological analyses and interpretation of the nine factor types of entrepreneurs advocate for a distribution of the traditional concept of an entrepreneur into three categories: The Self-employed, the Business Owner, and the Entrepreneur with four typologies (Østergaard, 2017).

The Self-employed category is suggested to be described through the factor typologies, the Administrator, the Bag Carrier and the Routinized Employee. In general, the self-employed manage to earn their own salary, pay taxes, and usually give rise to the financial foundation for several equivalent self-employed individuals, freelancers or sub-suppliers. More specific, the self-employed offer services or basic products for the population in local communities, both in rural district and downtown in capitals. The main difference between entrepreneurs and the self-employed concerns the innate need for creativity and innovativeness seen within entrepreneurs, meanwhile the self-employed prefer routines and parallel occupations to obtain work-life balance.

The Business owner category needs further investigation concerning personality traits due to the factor analysis conducted on a primarily entrepreneurial-identified cohort. However, the factor types in this category of special interest are found within the Opportunist, a type who possesses the ability of change management and is expected to handle business growth under the right circumstances. In contradiction with the arguments of Carland et al. (1984) and among others, there seems to be an overlap of the innate behavioural preference between the entrepreneur and a business owner,

exemplified by the Rebel, enjoying power, and second the Team Organizer. But then again, the similarities between traits of self-employed and business owners are less obvious.

The Entrepreneur category are subcategorised with four typologies based on the factor analysis. These typologies constitute the Synnovation Creator and the Team Organizer followed by the Adventurer and the Rebel. The distinction between the typologies matters in relation to how the society best support the specific entrepreneur.

Accordingly, the specific positive and negative leadership and innovation trait from the selected factor types are distributed in categories as outlined in figure 11.

<b>Entrepreneurial factor type traits distributed in categories</b>			
<b>Category</b>	<b>SELF-EMPLOYED</b>	<b>BUSINESS OWNER</b>	<b>ENTREPRENEUR</b>
Positive leadership traits	Target Drive, Will of Delegating	Risk Willingness, Creative Drive, Dominance, and Decision-making Ability	Initiative, Risk Willingness, Creative Drive, Will of Delegating, Passion, Dominance, Target Drive, Achievement Instinct, and Decision-making Ability
Negative leadership traits	Initiative, Risk Willingness, Creative Drive, Will of Delegating, Passion, Dominance, Achievement Instinct, and Decision-making Ability	Target Drive	Risk Willingness
Positive innovation traits	None	Urge to Rebel	Exploration Drive, Preparedness for Change, Experience of Well-being, Vigour, Urge to Rebel, Self-preservation Instinct, Need for Contact, Dynamism, and Personal Manifestation
Negative innovation traits	Exploration Drive, Preparedness for Change, Vigour, Urge to Rebel, Self-preservation Instinct, Need for Contact, Dynamism, and Personal Manifestation	None	None
Comments		Added with the traits from the Rebel	Passion, Dominance and Will of Delegating appear 3 times in leadership and Personal Manifestation in innovation

FIGURE 11 THE ENTREPRENEURIAL LEADERSHIP AND INNOVATION FACTOR TYPE TRAITS DISTRIBUTED IN CATEGORIES

Conclusively, a self-employed is mainly characterised by negative leadership and innovation personality traits, meaning that this type prefers to avoid perception, thoughts and behaviour related to these specific traits. An exception is the will of delegating tasks to others regarding a clear purpose. The business owner, on the other hand, avoids innovation and possess the skills in line with the

common perception of a leader: Risk Willingness, Creative Drive, Dominance, and Decision-making Ability. Finally, the entrepreneur is outstanding with all nine leadership traits and all nine innovation traits available for action. Moreover, the only traits with contradictory authority is Risk Willingness, meaning that the entrepreneur tends to calculate risk thoroughly in accordance with a personal quota before acting.

### **Business growth in a psychological perspective**

According to the trait distribution in categories, it is unlikely that the most successful entrepreneurs fulfil the myth of being the ruggedly independent, self-employed individual (Casson, 2010, p. 269). In agreement with Gupta et al. (2004), the concept of entrepreneurial leadership involves fusing the concepts of entrepreneurship (Schumpeter, 1934), entrepreneurial orientation (Covin & Slevin, 1988; Miller, 1983), and entrepreneurial management (Stevenson, 1983), with leadership. “Thus, entrepreneurship can form a basis for competitive advantage and technological growth in all types of firms that are oriented towards leadership and excellence in the new global economy” (Gupta et al., 2004, p. 243).

In addition, the inherent factors of entrepreneurial success matters (Walske & Zacharakis, 2009), as well as opportunity, as a component of the entrepreneurial process (McCline, Bhat, & Baj, 2000). Thus, the growth of individuals has a long tradition in psychology emphasized as progressing through interaction between genetic and environmental influences (Ainsworth & Bowlby, 1991). For instance, Rogers developed a professional approach to understanding an individual's ability to resolve difficulties and gain the necessary insight to restructure their life through personal changes and growth (Rogers, 1963a, 1963b; Rogers & Freiberg, 1969; Rogers & Skinner, 1956).

Consequently, the claim is declined regarding the lack of empirical research on personality traits due to small correlations between traits and entrepreneurial behaviour (Aldrich, 1999) supported by Low and MacMillan's narrative reviews and others (Brockhaus, 1982; Brockhaus & Horwitz, 1986; Gartner, 1988; Low & MacMillan, 1988). In addition, Rauch & Frese found that business owners' personality traits were positively related to business creation and business success; the relationship is moderate, but nearly the same size as the correlation between personality traits and leadership, and also personality and performance in general (2007, p. 369). Generally, the interest in finding specific entrepreneurial traits is tremendous due to the differences among entrepreneurs and the recurrence of

specific personality traits, and especially the traits that differentiate the owners of the innovative, growth-oriented firms from others (Carland, Carland, & Hoy, 2002).

The results indicate that the amount and combination of innate innovative and leadership attributes prompt diverse types within entrepreneurship to provide very different kinds of growth. Thus, the type categorized as self-employed retain growth in the local environments mainly by local sub-suppliers and an increased level of local service. In fact, this is a requirement to avoid movement from rural districts to big cities and to secure a geographically, economically homogeneous nation. In general, the self-employed have no interest in innovation or in having employees. In opposition, the category of business owners gladly maintain leadership in a company with several employees. They have, however, no interest in innovation aside from natural adaptation to the ongoing requirements from mainstream development and from stakeholders more specifically. The entrepreneurial category with core entrepreneurs are the only innovative category that are able to root radical innovation. In their leadership preferences, they differ in the human touch with responsibility for their employees and initiatives with passion.

In agreement with Baron, Frese and Baum (2007), research benefits from a closer link towards psychology in relation to business creation and success. This is why the argument is strengthening for correcting the current terms of an entrepreneur due to diverse personalities, thus changing the term for entrepreneurs without employees and innovation to Self-employed, and for entrepreneurs with leadership but without innovation to be termed Business owners. Additionally, the psychological interpreted characteristics of the three categories within entrepreneurship are displayed in figure 12.

<b>Characteristics of self-employed, business owners and entrepreneurs</b>		
<b>SELF-EMPLOYED</b>	<b>BUSINESS OWNER</b>	<b>ENTREPRENEUR</b>
<p>The self-employed is characterised by autonomy in one-man-enter-prises in well-known types of businesses.</p> <p>They earn their own salary and pay a number of helpers, pay taxes and maintain subcontractors. Generally, they cause no trouble for society.</p> <p>They praise their freedom to determine pace, amount and kind of work</p>	<p>The business owner runs a business: individual, team, family or group-launched business consisting of various employees.</p> <p>They are in charge of allocating the skills of employees and ensures steady revenue to selected stakeholders.</p> <p>They operate with enough incremental development to keep the business running. Growth is not a goal in itself</p>	<p>The entrepreneur constantly launches ideas, usually several at the same time.</p> <p>They are entrepreneurial throughout life; however, the activity might change to e.g. charity finding better solutions.</p> <p>Sometimes, they slow pace due to life issues and settle as business owners or equivalent maintaining next generation of growth endeavours</p>

FIGURE 12 CHARACTERISTICS OF SELF-EMPLOYED, BUSINESS OWNERS AND ENTREPRENEURS

## **Conclusion and perspectives**

The empirical investigation of 55 active entrepreneurs argues for a future distinction between three categories: Self-employed, Business Owners and (Standard) Entrepreneurs (Østergaard, 2017). A thorough analysis of the differences of innate leadership and innovation attributes speaks in favour of the distinction between Self-employed, Business Owners and Entrepreneurs. Furthermore, the analysis of the distribution of leadership and innovation personality traits in relation to the factor types in each category point out a clear differentiation in the personal motives of growth and the preferred growth areas of the three categories. This pertains to learning programs and policy regarding future initiatives aiming to increase the entrepreneurial growth.

In cases of growth, seen as a broad spectre of vitalised societies with an increase of population, services and activity, this paper recommends a focus towards increasing the number of Self-employed. In cases where SME and alike are the foundation for keeping, securing and increasing working places of educated and unskilled workers, the initiatives towards personality types with business owner traits are seen as the most beneficial. These initiatives involve strong arguments as an important stakeholder to start, for instance, export to a new market. Lastly, the innate entrepreneurs are capable to open new avenues of growth and to manage the businesses with employees into new directions with sustainable growth.

Hence, the society has to take into account that the personality pattern enables the individual to be self-employed, a business owner, or an entrepreneur, according to the factor analysis.

“Leaders need to be both willing and able to grow their firms. Therefore, policy should promote growth-oriented training programmes that develop entrepreneurial cognition and motivations, as well as knowledge and abilities. The programmes should disseminate best practice for opportunity identification, growth capabilities and goal setting” (Wright, Roper, Hart, & Carter, 2015, p. 9).

In addition, the diversity outlined above enables scholars, politicians and practitioners to relate future initiatives to the nine typologies and the three categories within entrepreneurship. For example, on the subject of learning programs and policymaking, future programs may be then developed to meet the varied conceptions of business activity. The findings in this paper indicate that some entrepreneurial types replicate and operate a business; others operate a business independently, while others again invent, operate and collaborate in a hodgepodge of relationships. Hence, entrepreneurial growth is multi-faceted. In some cases, growth occurs according to the number of employees, in other

cases it is enriched by number of sub suppliers or by a mix with a number of ventures with different partners and associated freelancers.

Conclusively, self-employed individuals are characterised by routine and parallel vocations, business owners by running a balanced business primarily serving stakeholders with sufficient incremental growth, and the entrepreneurs are characterised by endless innovation. Indeed, this paper provides insight to the natural skills of leadership and innovation that determine the profound motivation and preference for a specific way of living that are fundamentally related to a specific kind of growth. Using this knowledge in the best way increases the likelihood of a beneficial outcome to the person in charge and to the society.

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