

ENTREPRENEURIAL INSIGHT & PERSONAL DEVELOPMENT

PSYCHOLOGY OF ENTREPRENEURSHIP

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There are three types of people in the world:

- those who wonder what has happened
- those who observe what is happening
- those who make things happen

Psychology of entrepreneurship



1. Personality traits
2. Cognitions and abilities
3. Motivation
4. Competencies
5. Career and development
6. Measuring entrepreneurial propensities

INTRODUCTION

Who is an entrepreneur?

Definition: entrepreneur

- Term „entrepreneur“ in economic literature by Richard Cantillon (1680-1734): entrepreneur is „...a speculator, one that is ready to buy at a certain price and sell at an uncertain price“ or “anyone with uncertain income”
- Schumpeter: entrepreneurship appears in 5 categories of new:
 - *New products*
 - *New methods of production*
 - *New markets*
 - *New sources of materials*
 - *New organizations*

Definition: entrepreneur

- Schumpeter: „...*entrepreneur is an innovator, a person who creates new value, destroys existing markets, creates new demand and increases wealth...*“
- current definitions of entrepreneur are determined through:
 - *profit making*
 - *personal risk*
 - *introduction of new*
 - *value added*

Definition: entrepreneurship

- from the word *entrepren dre* (*undertake*), which means not to wait for something to happen by itself, but to take action
- Timmons: „*Entrepreneurship is a process in which something valuable is created from practically nothing.*“
- Singer et al. (2005) “*any attempt to start a new business venture, such as self-employment, new business organization or expansion of an existing venture by individuals, teams or already existing organizations*”

Definition: entrepreneurship

- Kaufmann and Dant (1998) categorize the different definitions of entrepreneurship according to their fundamental focus:
 - ▣ definitions that emphasize personal characteristics or *qualities of entrepreneurs*
 - such as: propensity for risk taking, leadership, motivation, solving problems and crisis situations, innovativeness, decision-making ...
 - ▣ definitions that emphasize entrepreneurship process and *its results*
 - including: establishing new companies, introducing new combinations of factors of production and new unique combinations of resources in insecure and uncertain conditions ...
 - ▣ definitions that emphasize entrepreneurs' activities
 - for example: connecting with new markets, creating and managing contractual obligations, supplying resources that are lacking in the market...

Definition: entrepreneurship

- the following definition is widely accepted: *„Entrepreneurship is a process that involves discovery, evaluation and exploitation of opportunities, in order to create new products, services, processes, methods of organizing or markets.“* (Shane and Venkataraman, 2000)
- entrepreneurship is essentially dependent on the person: turning a business idea into a successful business requires human:
 - ▣ vision
 - ▣ intent
 - ▣ work
- the human factor is the most important for business success, much more important than the business idea, market or industry (Baum et al., 2007)

Entrepreneurship as a process

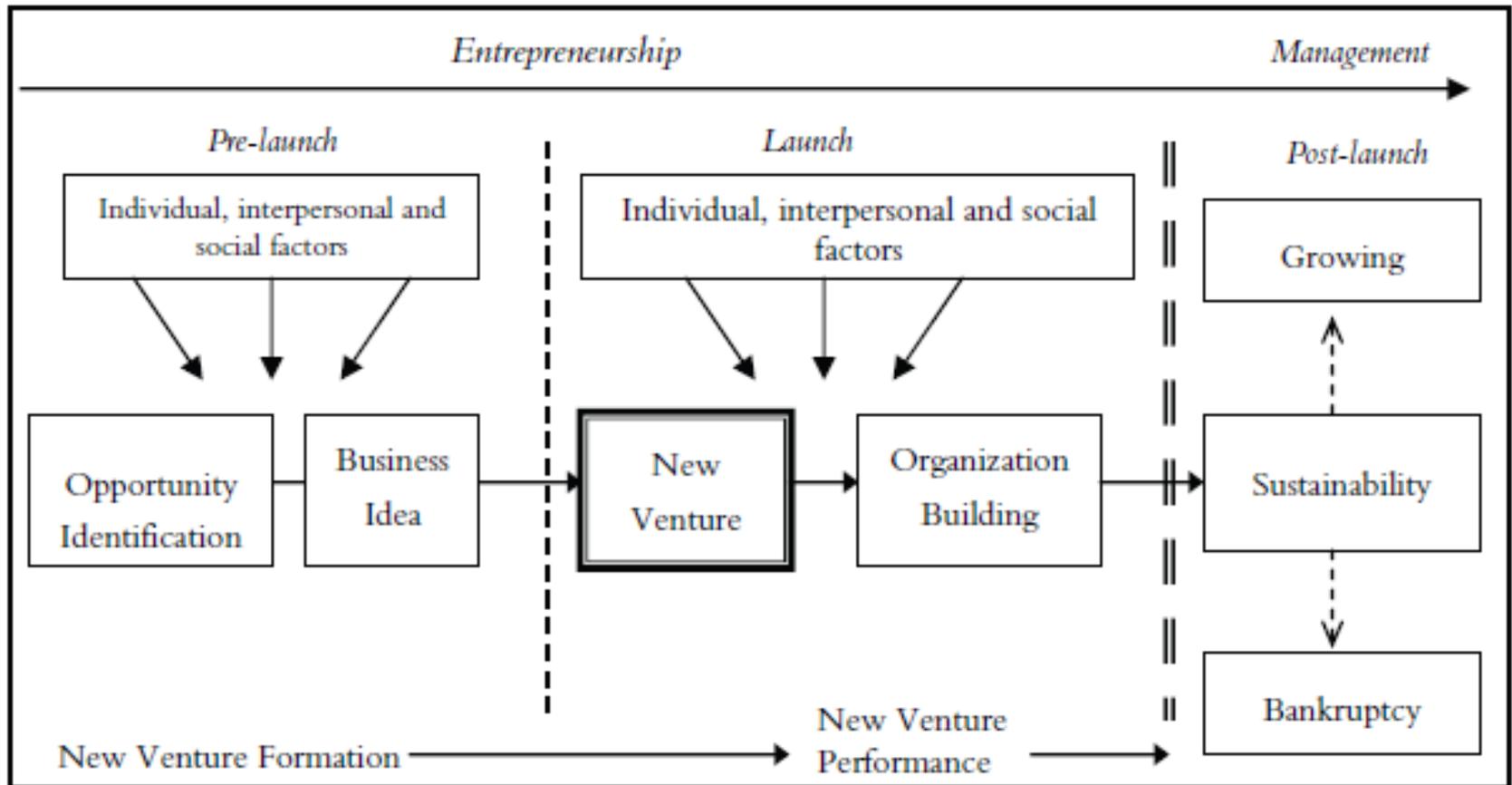


Figure 1. Entrepreneurial process

Who is an entrepreneur?

- commonly: entrepreneur = company owner
- different operationalizations distinguish:
 - ▣ company founders from non-founders
 - ▣ those who have been in business shorter or longer time
 - ▣ those with more or less employees
 - ▣ those with higher or lower level of innovativeness in business
 - ▣ those with higher or lower annual income
 - ▣ those with faster or slower development of the business
 - ▣ ...
- a common feature of all the definitions:
 - ▣ treating entrepreneur as a person who makes a profit, managing resources at own risk

Types of entrepreneurs

- different authors distinguish:
 - ▣ entrepreneur / small business owner
 - ▣ urban / rural entrepreneur
 - ▣ franchise/ less defined conditions
 - ▣ craftsmen/ promoters / administrators
 - ▣ novice / serial / portfolio entrepreneur
 - ▣ entrepreneur promoter / guardian
 - ▣ achiever of personal goals / super salesman / real manager / expert-creative person
- problem with typologies:
 - ▣ there is no one set of characteristics necessary for success
 - ▣ different characteristics required to start / maintain a business
 - ▣ it is actually a continuum of roles of entrepreneurs

Types of entrepreneurs

- it is possible to be entrepreneurial without being an entrepreneur
 - ▣ social entrepreneurship
 - its aim is not material, but specific social profit
 - ▣ entrepreneurship within an organization (*intrapreneurship*)
 - innovative behavior of employees of their own accord, with the aim of improving work procedures, products/services or researching and exploiting entirely new business opportunities

Psychology of entrepreneurship

- the most common papers in psychology of entrepreneurship are those that seek to determine individual characteristics that distinguish entrepreneurs from non-entrepreneurs
- managers are used for comparison the most often
- contradictory findings have been obtained for the majority of investigated characteristics, depending on:
 - ▣ definition of entrepreneur
 - ▣ conceptualization of the characteristic
 - ▣ used measuring instruments

Exercise 1:

- group work
- discuss and write down
- characteristics of a successful (ideal) entrepreneur
- primarily psychological features
- personality traits / abilities and skills
- what kind of person is (s)he? / what can (s)he do?
- plenary discussion

1. PERSONALITY TRAITS OF ENTREPRENEURS



Personality traits of entrepreneurs

- personality of entrepreneurs: is it special?
- good definition of personality:
 - ▣ unique pattern (set)
 - ▣ internal variables (characteristics, features)
 - ▣ consistency (in behavior, thinking, emotions, motivation)
 - ▣ stability (relative) through situations and time
- the word “personality” comes from the Greek word “persona”, which means mask...

Personality traits model: immaturity/maturity (Argyris)

- passive / active
- dependent / independent
- a little / lot of behavior
- superficial / deep interest
- short-term / long-term perspective
- subordination / superordination
- weak awareness of oneself / higher self-awareness and control

Personality traits of entrepreneurs

- motive for achievement
- propensity for risk taking
- tolerance to uncertainty
- innovativeness and creativity
- autonomy, locus of control and proactivity
- self-confidence and entrepreneurial self-efficacy
- “BIG 5” model of personality

Motive for achievement (MFA)

- early papers in the psychology of entrepreneurship
- McClelland's theory of need for achievement (N-Ach)
- assumption that entrepreneurs have more pronounced MFA
- it is not an isolated trait, but a series of behaviors:
 - ▣ *setting demanding objectives*
 - ▣ *proactivity*
 - ▣ *perseverance*
 - ▣ *assuming responsibility for the task*
 - ▣ *planning and controlling events*
 - ▣ *seeking specific feedback on tasks completed*
 - ▣ *thinking on how to improve task performance*

Motive for achievement (MFA)

- individual dependent motives are the basis of MFA:
 - ▣ need for achievement: individual predisposition to strive for success, or desire for success
 - ▣ motive of avoidance: predisposition for reducing errors and pain, or fear of failure
- basic hedonistic principle of striving to pleasure and avoiding discomfort
- projective techniques (TAT) were initially used
- later, improved methods of measurement
- multidimensional conceptualization of MFA :
 - ▣ work orientation, use of skills and competitiveness

Motive for achievement (MFA)

- MFA distinguishes entrepreneurs from certain professions (maritime and civil servants, students)
- university professors and managers are equally oriented towards achievement as entrepreneurs
- some authors state that MFA is not a predictor for establishing a business, but a characteristic of successful people in general
- depends on conceptualization and measuring of MFA:
 - ▣ personal responsibility or willingness to deal with insecurity – entrepreneurs are better
 - ▣ inventiveness or willingness to work hard – contradictory findings

Motive for achievement (MFA)

- however, findings of the majority of studies confirm the positive relationship between MFA and entrepreneurship
- differences in relation to managers become greater when only company founders are selected among entrepreneurs
- and even greater when only entrepreneurs who are development-oriented are taken into consideration (in relation to those who are profit-oriented)

Motive for achievement (MFA)

- entrepreneurs with a high need for achievement
 - ▣ prefer moderately challenging tasks
 - ▣ assume personal responsibility for their performance
 - ▣ seek feedback on their performance
 - ▣ look for new and better ways to improve performance
- MFA of entrepreneurs is higher than in the rest of the working population
- MFA of entrepreneurs is connected to business success ($r=.31$)

Motive for achievement (MFA)

- conclusions based on meta-analysis of 41 studies (Chen, 2008)
 - ▣ there is no basis to believe that the method of defining the population of entrepreneurs influences the relationship between MFA and entrepreneurial activity
 - ▣ MFA is significantly related to the choice of career, especially entrepreneurial career
 - ▣ MFA significantly differentiates entrepreneurs and non-manager population
 - ▣ MFA is significantly related to entrepreneurs' success
 - ▣ MFA is a better predictor of company success than of choice of entrepreneurial career
 - ▣ these findings are valid regardless of the used measure of MFA

Propensity for risk taking

- conduct business activity when probability of success is low
- important because entrepreneurs by definition work in less structured or certain conditions
- a direct linear correlation is assumed
 - ▣ entrepreneurs have higher propensity for risk taking in relation to others
 - ▣ those who are more tolerant towards risk are more likely to start a business than those who have an aversion to risk
 - ▣ meta-analyses:
 - studies of propensity for risk taking of entrepreneurs and managers ($r=.11$)
 - correlation between propensity for risk taking and success ($r=.09$)
- significant and positive, but small correlation

Propensity for risk taking

- theoretically, there is another possible explanation of the correlation between propensity for risk taking and entrepreneurship: a curved relationship
- pronounced MFA of entrepreneurs means moderate propensity for risk taking
- are entrepreneurs more inclined to risk in the sense that they are actively seeking it or in the sense that they do not shy away from risk?
- entrepreneurs prefer medium risk levels and the difference between them and non-entrepreneurs is that they are better at assessing risk
- entrepreneurs do not consider themselves prone to risk taking

Propensity for risk taking

- entrepreneurs' cognitive processes of risk assessment differ in so far as in risky business situations they perceive:
 - ▣ more advantages than disadvantages
 - ▣ see them more as a challenge than a threat
 - ▣ more as an opportunity for advancement than a potential failure
- entrepreneurs enjoy a challenge, but they do not gamble
- they avoid low risk situations because they do not present enough of a challenge
- but also high risk situations, because they want to succeed

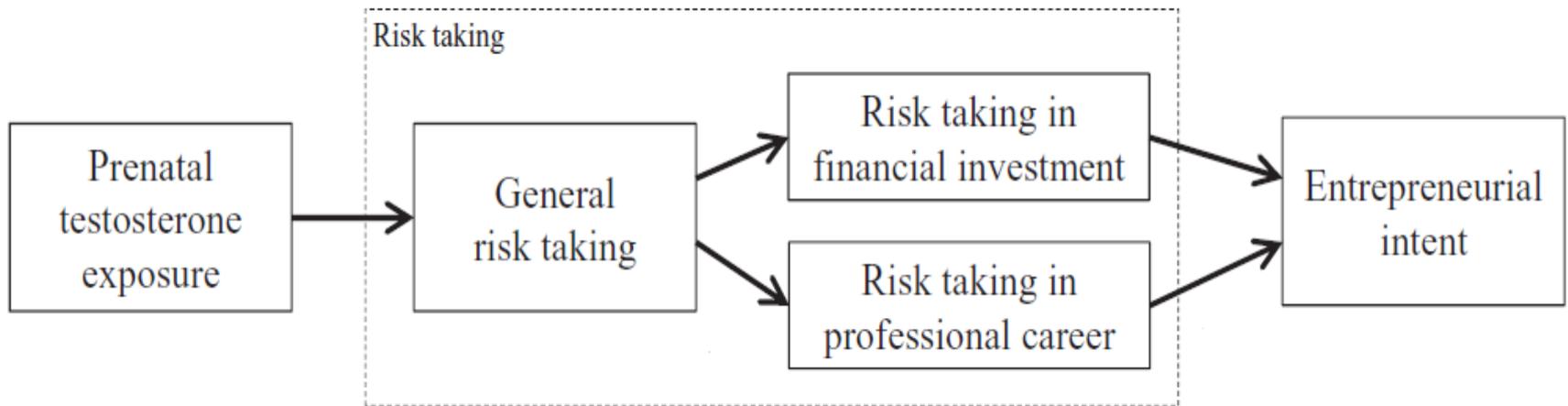
Propensity for risk taking

- differences between entrepreneurs and other people should not be sought in propensity for risk taking (characteristic), but in ways of perception and thinking about risk
- entrepreneurs to a significantly greater extent use
 - ▣ heuristics of representativeness
 - drawing conclusions based on little information
 - small sample
 - based on personal experience
 - ▣ heuristics of too great self-confidence

Propensity for risk taking

- biological basis of entrepreneurship?
- empirical results indicate a positive and statistically significant association between Prenatal Testosterone Exposure (PTE) measured by 2D:4D and entrepreneurial intent
- the estimated effect size of the total PTE effect - the sum of direct and indirect effects - is comparable to the effect sizes of other variables that are usually considered as important antecedents to entrepreneurship, e.g., parental self-employment and general personality characteristics
- which indicates its empirical relevance

Propensity for risk taking



Tolerance for uncertainty

- characteristic that is inseparable from the propensity for risk taking
- ability to effectively deal with situations about which we have incomplete, unclear or uncertain information
- persons with low tolerance for uncertainty will tend to perceive such situations as potentially dangerous or unpleasant
- differentiates entrepreneurs from non-entrepreneurs well
- although there are no differences in the way ambiguous data is processed, entrepreneurs perceive that data more positively than managers

Innovativeness and creativity

- innovativeness: readiness and interest of a person (entrepreneur) for new ways of action
- entrepreneurs are more innovative than other people ($r=.24$)
- innovativeness of entrepreneurs is connected with success ($r=.22$)
- similar coefficient as in the connection between organizational innovativeness and success ($r=.21$)
- therefore, innovativeness is directly connected with starting a business and business success
- traditional measures of creativity (e.g. divergent thinking) are relatively rarely used in studies of entrepreneurs

Innovativeness and creativity

- however, some authors believe that these results depend on the sample with which entrepreneurs are compared
 - ▣ teachers, lecturers and trainers show the same level of creativity as entrepreneurs
- crucial distinction of concepts should be made, i.e., determine whether we are referring to:
 - ▣ creativity as an ability (generating new ideas)
 - ▣ creativity as a trait (propensity for, or openness to new ideas)
- others point to the mediating role of creativity between the motive for achievement and company success

Autonomy

- popular literature is abundant with anecdotal examples of entrepreneurs who have left secure positions in well-established companies to start their own business
- the following characteristics of entrepreneurs, which distinguish them from employees, are usually given:
 - ▣ they like to make decisions without supervision
 - ▣ they seek to independently set goals and develop plans
 - ▣ they want to control the achievement of objectives personally
 - ▣ they avoid organizational constraints and rules
 - ▣ they are non-socialized, even deviant persons
- therefore they rather choose the role of entrepreneur than the role of employee

Autonomy

- developed need for independence is a “double-edged sword”:
 - ▣ it may contribute to survival because entrepreneurs are extremely motivated to not have a “boss” above them
 - ▣ it can jeopardize cooperation with others
- empirical findings confirm the difference between entrepreneurs and non-entrepreneurs to a certain extent ($r=.14$)
- the connection between autonomy and success is positive and significant ($r=.16$)
- unfortunately, there are no studies that observe the relationship between autonomy and development orientation in business operations

Locus of control

- degree of belief in the ability to control events in one's life
 - ▣ internal locus of control: we “shape” our own destiny
 - ▣ external locus of control: under the influence of others or environmental (random or predetermined) events
- assumption that entrepreneurs are largely “internals” in relation to non-entrepreneurs is generally well confirmed in literature
- locus of control of owners / non-owners ($r=.20$)
- internal locus of control and success ($r=.11$)

Locus of control

- comparison mainly with managers, who have similar beliefs about the control of outcomes as entrepreneurs
- comparisons of successful and unsuccessful entrepreneurs show that successful entrepreneurs express significantly higher levels of internality
- is lower internality in unsuccessful entrepreneurs a cause or a consequence of business failure?
- some cross-cultural studies confirm that this is a learned trait and that some nations in the start have a higher predisposition for entrepreneurial behavior

Proactivity

- level of engagement that a person invests to act on the environment
- entrepreneur is the one that actively monitors business environment in search for new opportunities
- proactivity has been proven as a significant correlate of entrepreneurial intention
- proactivity has both the distal (trait) and the proximal (initiative) effect on success

Proactivity

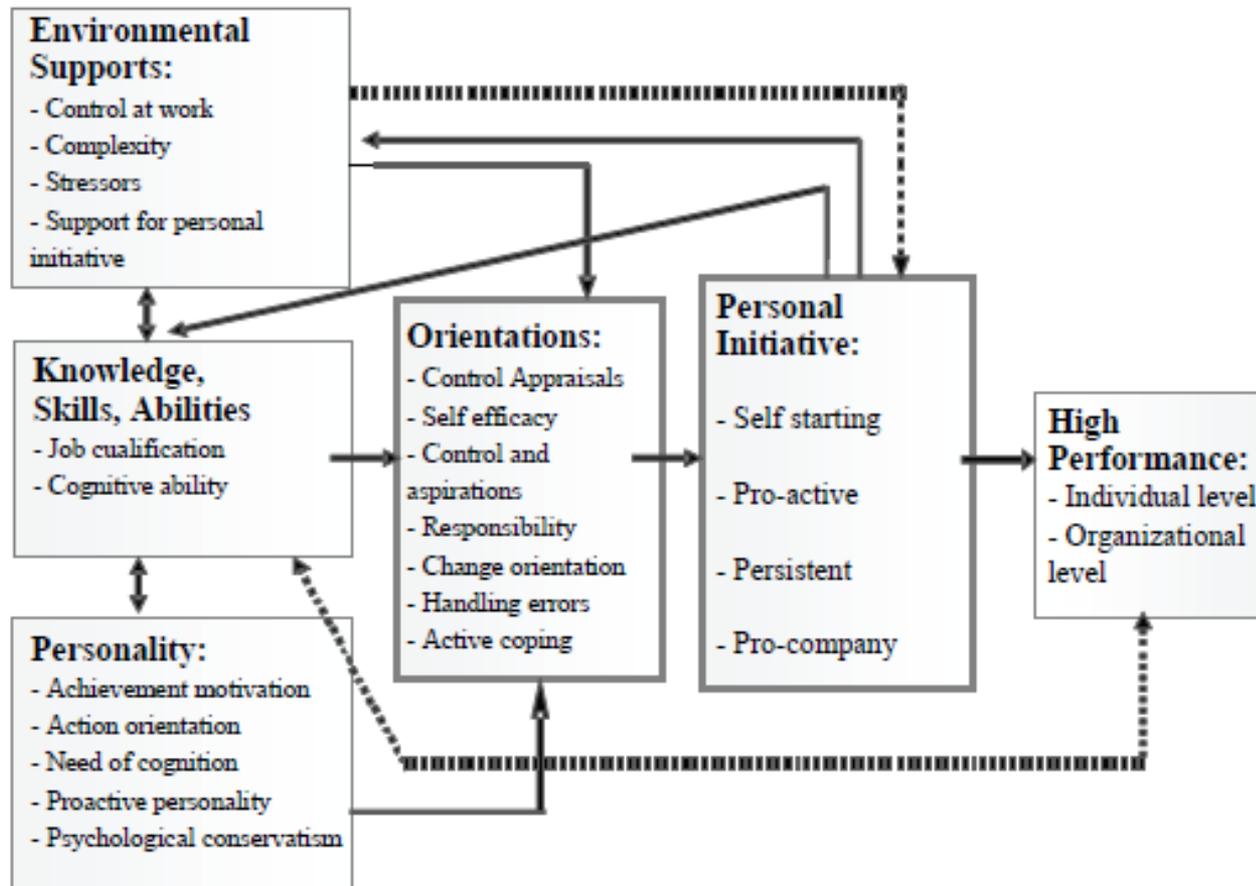


Figure 1. Model of personal initiative (taken from Frese & Fay, 2001)

Self-confidence

- confidence about own ability to think, learn, choose, make decisions, overcome challenges and changes
- entrepreneurs are often characterized by excessively high self-confidence, which:
 - sometimes implies risk
 - but can be an advantage (e.g. it can help entrepreneurs to more easily convince financiers to support their projects)
- a very general concept, therefore insufficiently discriminatory for entrepreneurs compared to other successful individuals
- therefore, the similar, but situationally more specific construct of entrepreneurial self-efficacy is being researched more

Self-efficacy

- belief that we are able to perform some action or behave in a certain way
- it is the strongest predictor of career choice
- subjective assessment of own skills, knowledge and abilities in a given situation
- it must be distinguished from other related, but more general concepts, such as self-confidence, self-esteem, locus of control...
- because it is more specific, related to the task
 - it is possible that a person has generally high self-confidence, self-respect and internal locus of control, but at the same time low self-efficacy for some activity or task

Self-efficacy

- people with high self-efficacy:
 - ▣ do not give up when problems occur
 - ▣ seek opportunities for improvement
 - ▣ show a higher degree of personal initiative
 - ▣ hope for success to a greater extent, and are therefore long-term oriented
 - ▣ actively seek information and therefore have more knowledge
 - ▣ in employees, self-efficacy is connected with performance
- empirical data confirms that entrepreneurs have higher self-efficacy than non-entrepreneurs
- self-efficacy is the most connected with success ($r=.42$)

Theory of self-efficacy (Bandura)



- own experience
- experience of others (model)
- verbal persuasion of others
- emotional (physiological) states

SE: own experience

- previous (successful) experience in entrepreneurship
 - ▣ experience in founding a company and experience in running a company
 - ▣ ESE measures also include skills / roles from different phases of company development (before, during and after founding)
- ESE also depends on numerous other factors of personal experience:
 - ▣ previous assumptions about own abilities
 - ▣ perceived severity of the task
 - ▣ amount of invested effort and time
 - ▣ circumstances of performance
 - ▣ temporal pattern of success and failure
 - ▣ ways in which those experiences are cognitively organized and reconstructed in memory
 - ▣ structure of the existing self-realization (attribution of success / failure)

SE: experience of others (model)

- vicarious experience or learning by model
 - ▣ based on observation of behavior of another person (the so-called role model) and the consequences of that behavior
 - ▣ social comparison: assessment whether we are better, worse or average in relation to others in a certain activity (model)
- conditions that are conducive to vicarious learning :
 - ▣ amount of uncertainty about own efficiency
 - ▣ lack of skill
 - ▣ role model's confidence in their own self-efficacy
 - ▣ model that in addition to the observer's activity also teaches predictability and controllability
 - ▣ similarity of the observer and the model

SE: verbal persuasion of others

- verbal persuasion: when a person, which we consider credible, gives us real support or encouragement for a specific activity, in an appropriate manner
- if in that activity, despite the encouragement from the environment and increased own efforts, we experience failures, then we start to regard our “persuaders” as incompetent
- feedback is effective persuasion:
 - which emphasizes abilities, rather than the effort invested (better in the long run)
 - which highlights the advance that the person has made in relation to the previous phase (more effectively than if it is presented how much still has to be done to reach a certain level of success)
 - it is generally better to get even unrealistically positive social support than negative

SE: emotional (physiological) states

- assessment of physical indicators, i.e. physiological and affective states that are accompanying some activity
- it is especially important in those domains that involve physical achievement, health and coping with stress
- people monitor and interpret their body signs, on the basis of which they draw conclusions on their own (in)competence)
- the level of physical (bodily) and affective reactions is not as important as the way in which they interpreted
 - ▣ past experiences on how a specific reaction is connected to performance
 - e.g.: individuals who are successful in a certain activity will generally consider the accompanying physiological-affective arousal to be a mitigating, energizing factor, while those who are unsuccessful will consider it their own weakness
 - ▣ personality traits influence cognitive bias in interpretation of physiological states :
 - e.g.: self-esteem, self-monitoring, depression, locus of control...

Model of self-efficacy and success

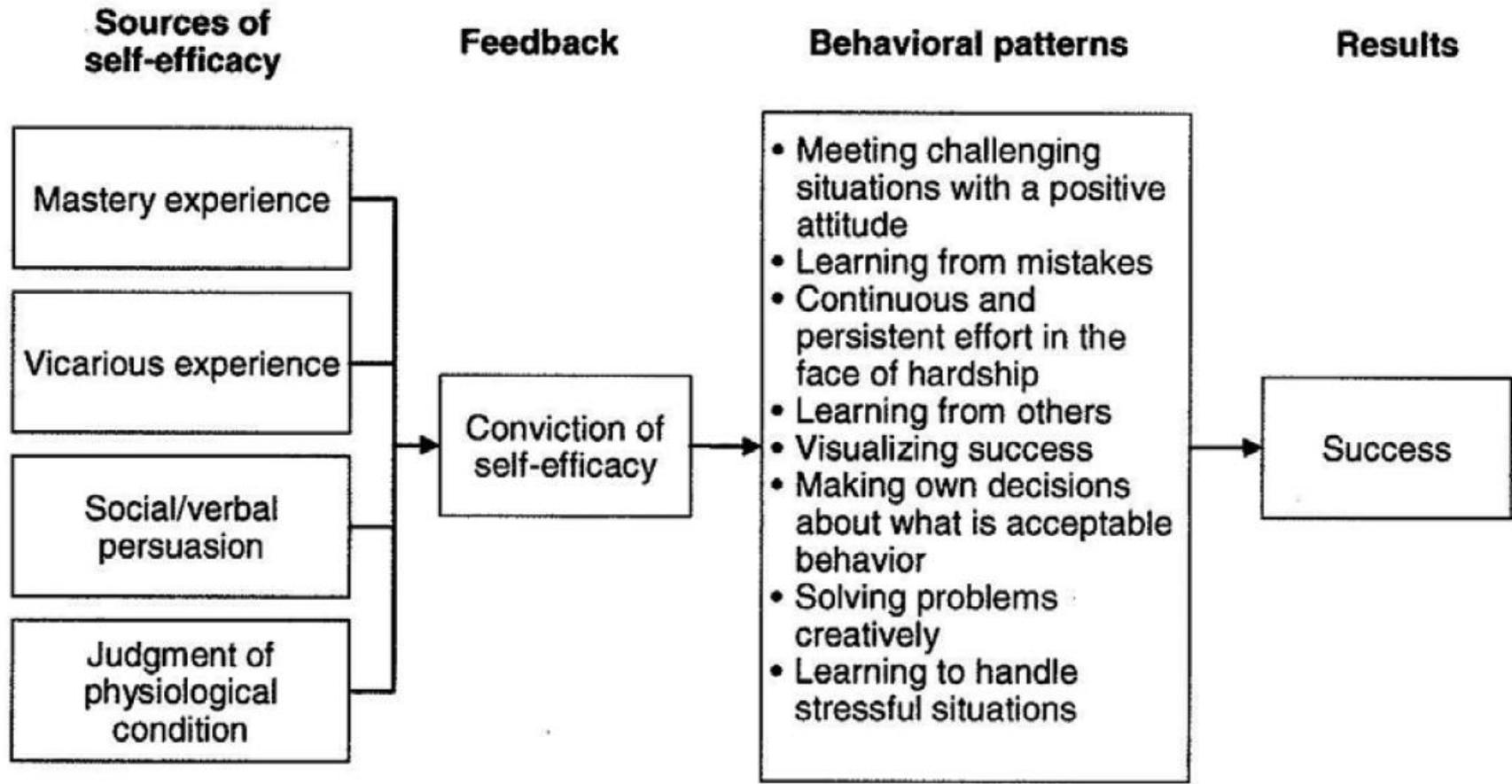


Fig. 11.3 A general model for successful training of self-efficacy (based on Bandura 1997)

Entrepreneurial self-efficacy

- person's belief in their own ability to establish a company
- meta-analysis of the relationship between self-efficacy and efficiency $r=.38$
- also affects assessment of situations – in the context of entrepreneurship:
 - ▣ one and the same environment for the person with high entrepreneurial self-efficacy is rich in opportunities
 - ▣ for a person with low ESE, it is full of threats
 - ▣ even with the same assessment of environment, a person with higher self-efficacy will feel more competent to cope with a situation
 - ▣ all of this together leads to better efficiency in tasks, and again affects the increase of SE (reciprocal relationship)
- ESE is the most significant individual predictor of entrepreneurial intentions, entrepreneurial behavior and a significant predictor of future company success

“BIG 5” model of personality

- extraversion
 - ▣ loquacity, penetration, activity / quietness, passivity, restraint
- agreeableness
 - ▣ kindness, trust, warmth / hostility, selfishness, mistrust
- conscientiousness
 - ▣ organization, thoroughness, reliability / sloppiness, carelessness, unreliability
- emotional (in)stability
 - ▣ irritability, bad temper, moodiness, sensitivity to negative stimuli
- openness to new experiences
 - ▣ imagination, curiosity, creativity / superficiality, experiences of unthoughtfulness

“BIG 5” model of personality

- each of the five broad dimensions of the five-factor model is comprised of multiple components that represent the basic characteristics of individuals:
 - ▣ extraversion
 - sociability, enterprising spirit, ambition, assertiveness
 - ▣ agreeableness
 - kindness, cooperativeness, propensity for helping
 - ▣ conscientiousness
 - need for control (as opposed to impulsivity), caution, reliability, responsibility, propensity for hard work and achievement
 - ▣ emotional stability (neuroticism)
 - emotional reactivity, irritability and uncertainty
 - ▣ openness
 - intellect in the narrower sense (intelligence, acumen, creativity), openness to experience (curiosity, imagination, liberality), some aspect of culture, personal attitudes, preferences and orientations (artistic interests, nonconformity, progressive and unconventional values, need for diversity of experiences)

“BIG 5” model of personality

- studies of personality (“big five”) and work behavior show connection with:
 - choice of occupation
 - choice of company
 - work performance
 - team building
 - training
 - counterproductive behaviors
 - occupational accidents
 - job satisfaction
 - management

“BIG 5”: Extraversion

- describes social, dominant, energetic, talkative, active people
- it has proved important for many professions that involve working with people, especially for sales
- it is undoubtedly important for managers, entrepreneurs have to communicate with a much wider range of people – from suppliers, financiers, clients, to subordinates, and they have to sell their product / service,
- proved to be positively associated with interest in entrepreneurial occupations
- extraversion is strongly associated with the success of franchisors
- extraversion (assertiveness) is a factor for distinguishing successful from average entrepreneurs
- difference in extraversion between entrepreneurs and managers is not clear: different meta-analyses give different results:
 - there is no effect
 - significant correlate of entrepreneurial intentions and success of entrepreneurs

“BIG 5”: Agreeableness

- denotes someone's interpersonal orientation:
 - ▣ highly agreeable persons: warmth, altruism, tenderness, caring for others
 - ▣ the opposite end consists of coarse, manipulative, egocentric persons
- studies have confirmed that agreeableness is negatively correlated with the success of managers
 - ▣ explained by the nature of managerial work, which requires making „unpopular“ decisions (too much agreeableness can be a hindrance)
- even more true for entrepreneurs:
 - ▣ they depend entirely on their own decisions, so even minor concessions or sentiments for others can have significant consequences for the business
- if a manager is too rough, that can have more severe consequences on his future work and acceptance in the environment than similar behavior of an entrepreneur would have
- entrepreneurs need and can afford a lower level of agreeableness towards people whom they work with

“BIG 5”: Conscientiousness

- tendency of a person for self-sacrificing work, his or her reliability, responsibility, thoroughness
- some researchers see it composed of two sub-dimensions – motivation for achievement and reliability
- the biggest difference between the populations of entrepreneurs and managers has been found in conscientiousness
 - ▣ more in terms of motive for achievement than reliability
- it has been proven that entrepreneurs' conscientiousness is positively connected with long-term survival of the business

“BIG 5”: Emotional stability

- neuroticism / emotional stability:
 - ▣ negative emotions, such as anxiety, hostility, depression, impulsiveness and vulnerability
 - ▣ emotionally stable persons are confident, calm, relaxed
- entrepreneurs' job is described as 24/7 work in unstructured conditions, with very high level of stress due to responsibility for all the aspects of company operations
- managers, on the other hand, work in organized conditions, with (mostly) fixed working hours, and they are responsible only for their scope of activities
- emotionally unstable people are not successful (at least not in the long-term) in jobs that are stressful, nor are selected for such occupations
- entrepreneurs are people with high self-esteem and internal locus of control, which are facets of the dimension of neuroticism

“BIG 5”: Openness

- characteristics of intellectual inquisitiveness, curiosity and openness to new ideas, innovativeness, imagination and untraditionality
- positively associated with intelligence, especially with divergent production
- proved to be discriminative for the population of entrepreneurs:
 - ▣ important in the initial phase of establishment of a business, while it can be a hindrance later
 - ▣ research show a negative connection between entrepreneurs' openness to experience and long-term survival of enterprises
 - ▣ similar as in propensity for risk taking:
 - important in the phase of business establishment
 - less important or even contraindicated in later stages of development of a business
- entrepreneurs who stick to the task, instead of experimenting with different options, are more suitable for running a business
- conditions of global economic crisis demand continuous innovation and change

“BIG 5” and entrepreneurship

- “Big five” are relatively little studied in the context of entrepreneurship in relation to specific traits
- contradictory and disappointing findings
- however, meta-analyses show significant, but low correlation with success of entrepreneurs ($r=.15$)
- “Big 5” and starting a business are not significantly correlated

Personality and entrepreneurship

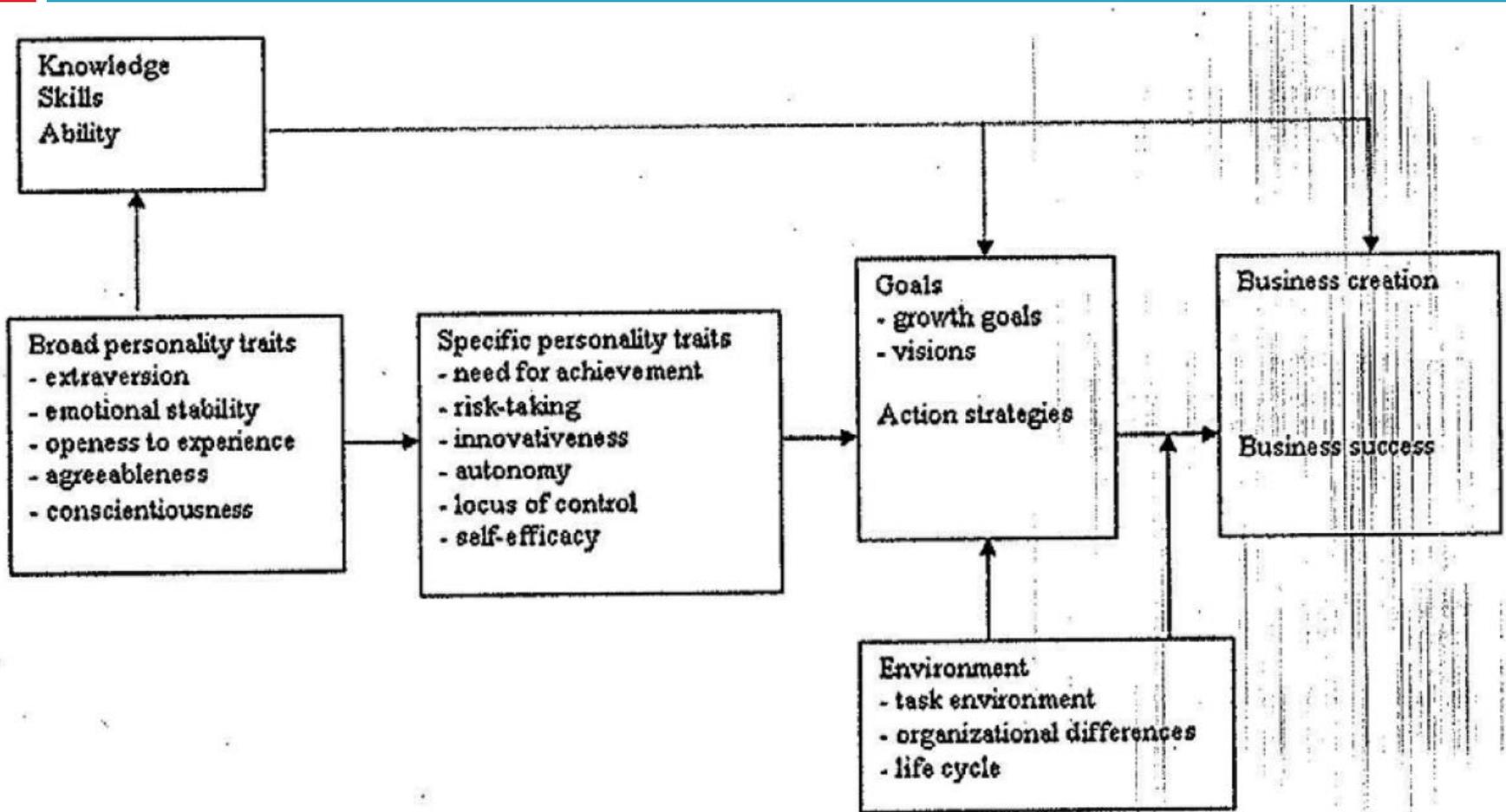
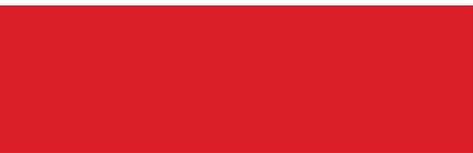


Figure 3.1. A model of entrepreneurs' personality characteristics and success.

Personality of entrepreneurs: conclusion

- research has not unambiguously determined which traits characterize entrepreneurs
- even less which traits of entrepreneurs allow for prognosis of success in entrepreneurial business
- therefore, to this day no universal measuring instrument has been developed, with which we could assess what kind of person will become and remain a successful entrepreneur
- however, personality plays a significant role in entrepreneurship, equally as in work behavior in general
- specific traits indicate a greater connection with establishing and success in business ($r = .20$ to $.40$)
- broad dimensions of personality do not predict specific behaviors in specific situations (insignificant or small correlations with entrepreneurship)

2. COGNITIONS AND ABILITIES OF ENTREPRENEURS



Cognitions and abilities

- why cognitions and abilities in entrepreneurship?
- entrepreneurship = development of an idea and installation of that idea into a successful business
- cognitive(thought) processes: perception, learning, memory, speech, decision making and problem solving, intelligence
- in the nineties of the last century, there was a shift in psychology of entrepreneurship from the personality approach to the cognitive perspective
- specific entrepreneurs' cognitions are defined as
 - structures of knowledge that people use in order to make assessments, judgments and decisions
 - related to assessment of opportunities, establishment and development of companies

Cognitions of entrepreneurs

- decision making
 - in entrepreneurs it is more based on heuristics than in managers and others
- ways of perception and thinking about risk
 - bias and the use of heuristics
 - heuristics are defined as shortcuts in thinking or simplified decision making strategies, present especially in uncertain and complex circumstances
 - entrepreneurs often make decisions with very little information, in conditions of uncertainty, under time pressure and without established, known procedures
 - this can lead to biased, overconfident and wrong decisions

Cognitive biases and mistakes of entrepreneurs, such as:

- counterfactual thinking
 - ▣ thinking about what could have been
- affect infusion
 - ▣ influence of emotions on the way a situation is perceived and judged
- self-serving bias
 - ▣ success is attributed to internal factors, while failure is attributed to external factors
- entrepreneurs can have a so-called cognitive blind spot
 - ▣ they base their forecasts of the future on plans and glittering images of the future, instead on the past, which can result in too bold business moves
- planning fallacy
 - ▣ denotes the belief that they need less time for a specific task than they realistically need

Cognitive biases and mistakes of entrepreneurs, such as:

- escalation of commitment
 - ▣ having already invested considerable effort and resources in a particular project, they feel subjective attachment to it, making it more difficult to give the project up, even when all evidence is against the continuation of operation
- and other cognitive biases of entrepreneurs (Baron, 1989):
 - ▣ recollection based on ease of access or availability of information in memory
 - ▣ selective perception
 - ▣ illusory correlations (connecting unrelated things)
 - ▣ conservatism (in the sense of overestimation of past events)
 - ▣ causal attributions (erroneous attribution of causes of success and failure)
 - ▣ wishful thinking: overestimation of the probability of the desired outcome
 - ▣ illusion of control (overestimation of real control that they have in a specific situation)
 - ▣ information reduction (using too little information)
 - ▣ information overload (which creates stressful conditions for making conclusions)
 - ▣ overconfidence/overoptimism (tendency to expect positive outcomes or to perceive heightened chances of success)

Recognition of opportunities

- proven in practice as an important predictor of establishment of a business
- it denotes a certain type of thinking and behavior, rather than a personality trait
- entrepreneurs are often labeled as people who function with a „time frame in the future“, that is, as people who pay particular attention to specific information, enabling them to recognize opportunities and gather resources for their exploitation
- construct of entrepreneurial alertness
 - in order to be able to recognize opportunities, specific knowledge structures called cognitions of entrepreneurial alertness are triggered in entrepreneurs

Entrepreneurial alertness

- possession of a distinctive set of perceptual and cognitive processing skills, which direct the process of opportunity recognition
- Tang et al. (2012) propose three dimensions of this construct:
 - ▣ scanning and searching
 - continuous searching of the environment in order to gather new information or detect changes and trends overlooked by others
 - encompasses previous knowledge, preparedness and sensitivity to new information
 - ▣ networking and connectivity
 - linking previously unrelated information into a coherent option
 - ▣ evaluation and valuation
 - evaluation of information, changes and trends and deciding whether they represent a valid business opportunity with certain profit

Entrepreneurial alertness

- research confirms that entrepreneurs are continuously involved in these mental processes
 - in one study, almost all of the surveyed entrepreneurs have indicated that they have pursued a big, new business opportunity in the last five years
 - as much as half of them have pursued 5 and more such opportunities
 - out of that, as many as 40% of opportunities were totally unrelated to their current business

Intuition

- with regard to the specific working conditions (time pressure, incomplete information, uncertainty and insecurity), some studies are checking whether entrepreneurs differ from managers according to preferred cognitive style
- the assumption that entrepreneurs will be more inclined to use intuition proved correct
 - ▣ intuition: synthetic, inductive and divergent way of thinking
- the biggest difference when entrepreneurs are compared with managers with little experience and with those in lower positions
- there are no significant differences between entrepreneurs and top managers in using intuition (similar working conditions)

Entrepreneurial intuition

- Mitchell et al. (2005) have systemized the existing conceptualizations of entrepreneurial intuition and proposed the following definition:
 - dynamic process
 - with which cognitions of entrepreneurial alertness
 - operate in interaction with entrepreneur's specific competencies (in concrete area of work, industry, technology, culture, etc.)
 - in the way that makes him or her aware of opportunities
 - for creating new value

Perception

- mental process or psycho-neural activity that captures and becomes acquainted with the objective reality
- perception enables the capture of relevant characteristics of surrounding objects and phenomena – their spatial and temporal arrangement, shape, size, and qualitative and intensity differences
- active mental process in which stimuli are selected (isolated) and organized so that they have a specific meaning
- understanding or view that people have about things and the world around them

Perception

- selectivity of perception
 - process in which we filter and throw out information that we do not need
- organization of stimuli
 - process through which new stimuli are organized in a systematic manner, so that they have a specific meaning
- perceptual world: picture, map, image of the (business) environment

Entrepreneurial perception

- Douglas (2009) introduced the “entrepreneurial lenses” analogy:
 - Clear: self-efficacy
 - Pink: cognitive bias
 - Blue: simple decision making rules
 - Yellow: preference for monetary gain
 - Purple: tendency for intrinsic well-being
 - Telescopic: overestimating profits and underestimating risks

- “Perceptions are the reality for entrepreneurs who have to make decisions in an uncertain world based on what they see or what they think they see.”

Attribution (success / failure)

fundamental attribution error:

□ I

we attribute our success to ourselves (internal attribution)

failure to others or the environment (external attribution)

□ OTHERS

we attribute success of others to the environment or the circumstances (external)

we attribute failure of others to themselves (internal)

Attributions of entrepreneurs

- after experiencing success, those with generally high self-confidence will increase conviction in their own abilities
- those who doubt their efficiency will attribute the same success to their invested effort, hard work, etc.
- when people attribute failure to bad strategies (instead to stable internal factors), than that failure can increase self-efficacy:
 - ▣ strengthens the belief that, under the right circumstances, they will succeed the next time
- the way in which they interpret business experience, i.e., to what they attribute it, is important for entrepreneurs' self-efficacy:
 - ▣ internal stable factors (e.g. intelligence)
 - ▣ internal unstable factors (e.g. invested effort)
 - ▣ external stable factors (e.g. support from the environment)
 - ▣ external unstable factors (e.g. market situation, luck)

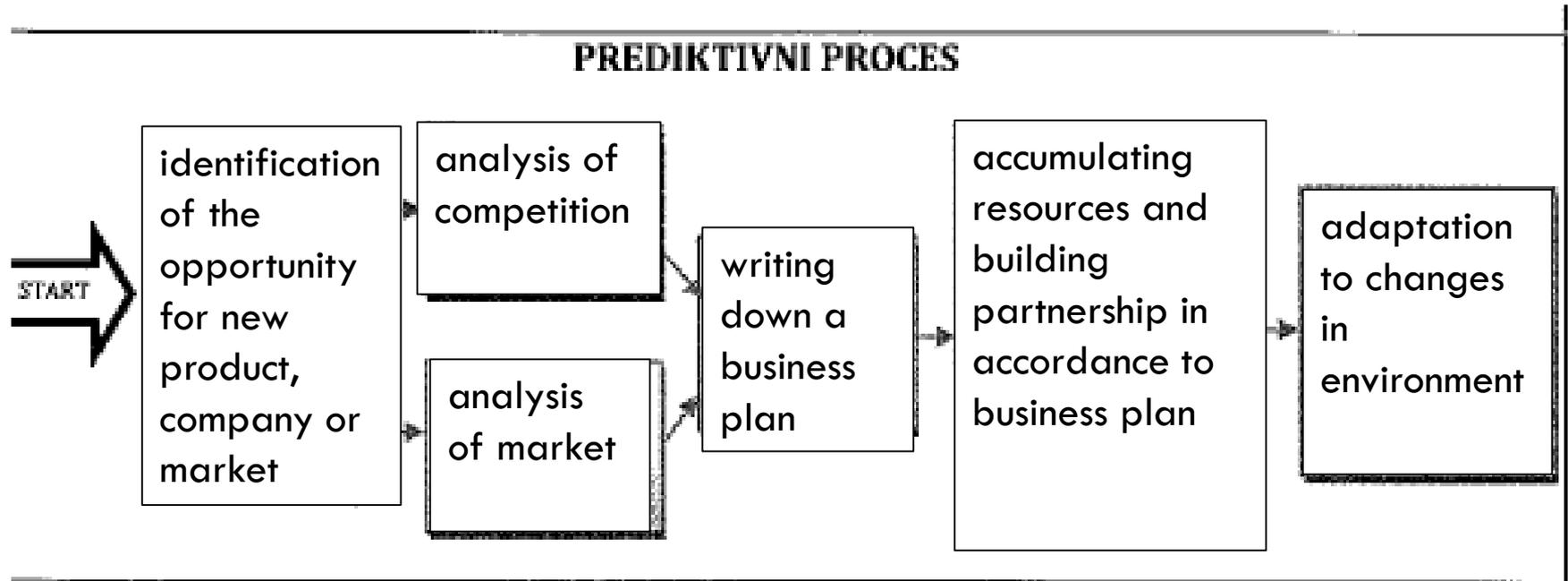
Attributions of entrepreneurs

- both emotional stability and independence of entrepreneurs are associated with the way they perceive and attribute business success
- in case of failure, there are no significant correlations between personality traits and attributions
- but, the more entrepreneur feels responsible for his or her failure, the higher are the expected outcomes in the next five years and the likelihood of business expansion
- correlations are higher in the founders' group than in successors
- in case of success, attributions positively correlate with emotional stability, independence and expected outcome
- failure is less attributed to oneself than success, and it is more attributed to general economic situation than success
- males prefer internal attributions (for both success and failure)
- founders attribute both success and failure to themselves more than successors, and in the case of failure they have lower external attributions than successors

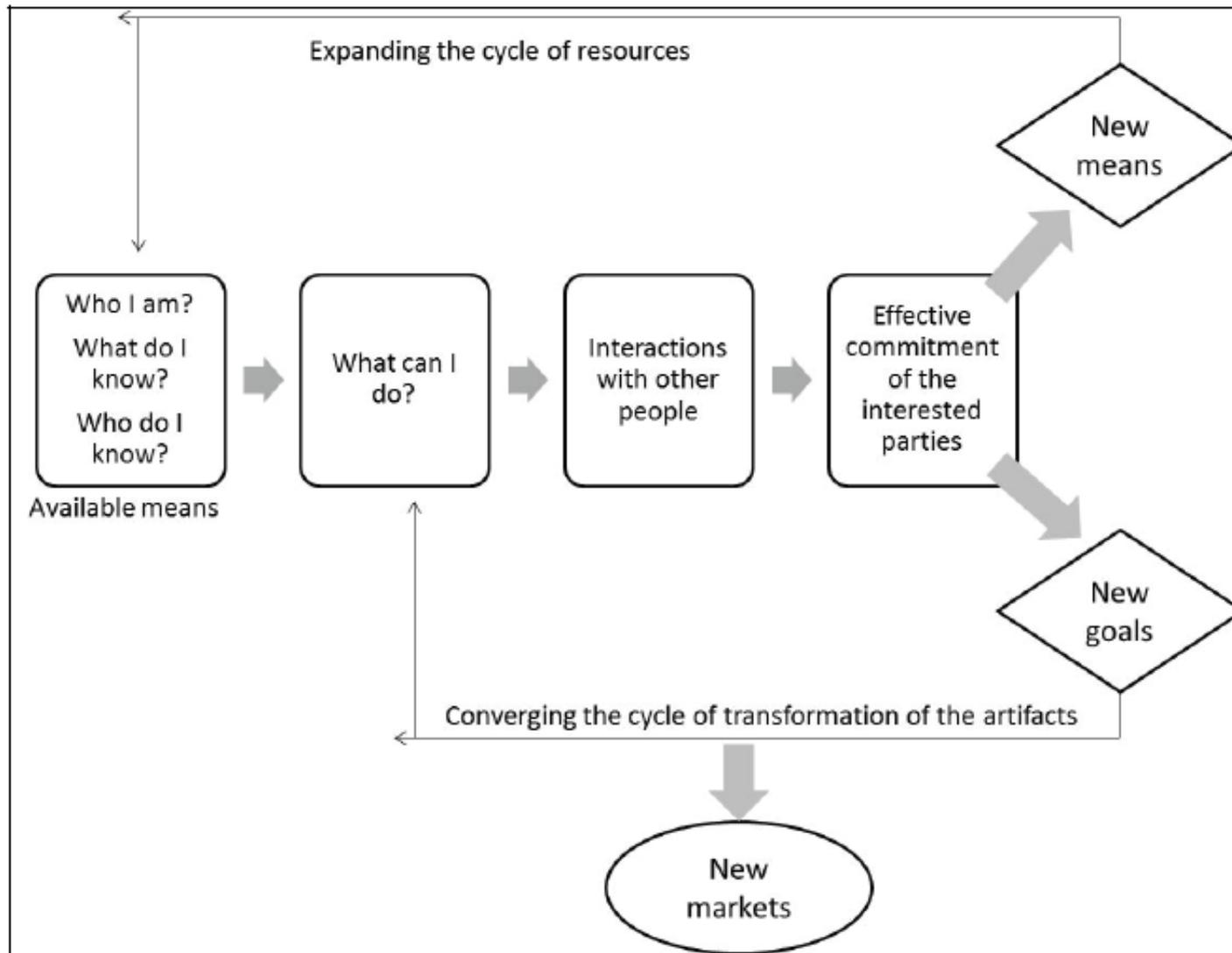
Effectuation

- theory of effectuation (Sarasvathy, 2008)
 - ▣ instead of finding and responding to the opportunities that exist (causal logic)
 - ▣ entrepreneur creates opportunities based on its own intellectual, human and social capital (effectual logic)
- principles of effectuation:
 - ▣ the bird-in-hand principle (resources vs. goals)
 - ▣ the affordable-loss principle (acceptable loss vs. possible profit)
 - ▣ the crazy-quilt principle (developing partnership)
 - ▣ the lemonade principle (exploiting the contingencies)
 - ▣ the pilot-in-the-plane principle (non-predictive control)

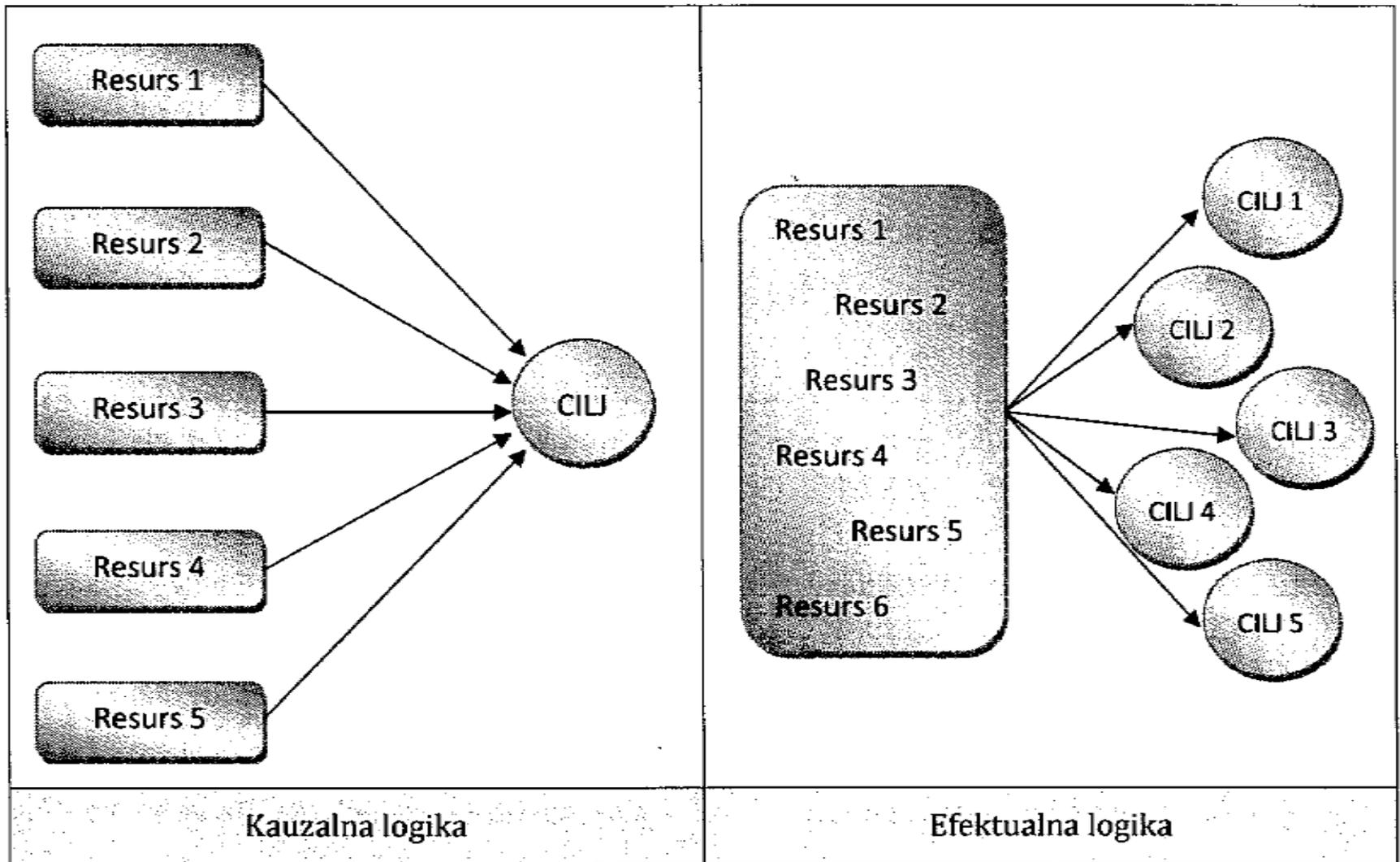
Effectual and **predictive** process - 1



Effectual and predictive process - 2



Effectual and causal logic



3. MOTIVATION OF ENTREPRENEURS



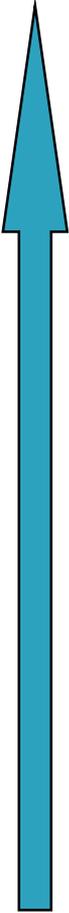
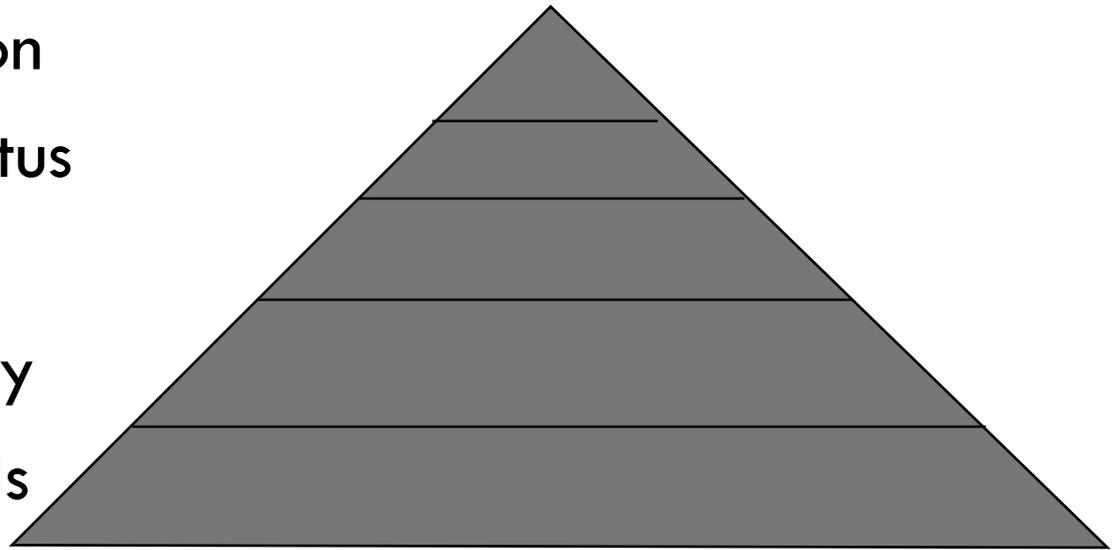
Motivation for work

- work motivation relates to three dimensions:
 - direction
 - intensity
 - persistence
- theories of work motivation:
 - content theories
 - needs, motivators, job characteristics
 - process models
 - behaviorism, expectations, goals, fairness, self-efficacy

Hierarchy of needs: Maslow

needs for:

5. self-actualization
4. respect and status
3. social needs
2. need for security
1. existential needs



Needs: organizational examples



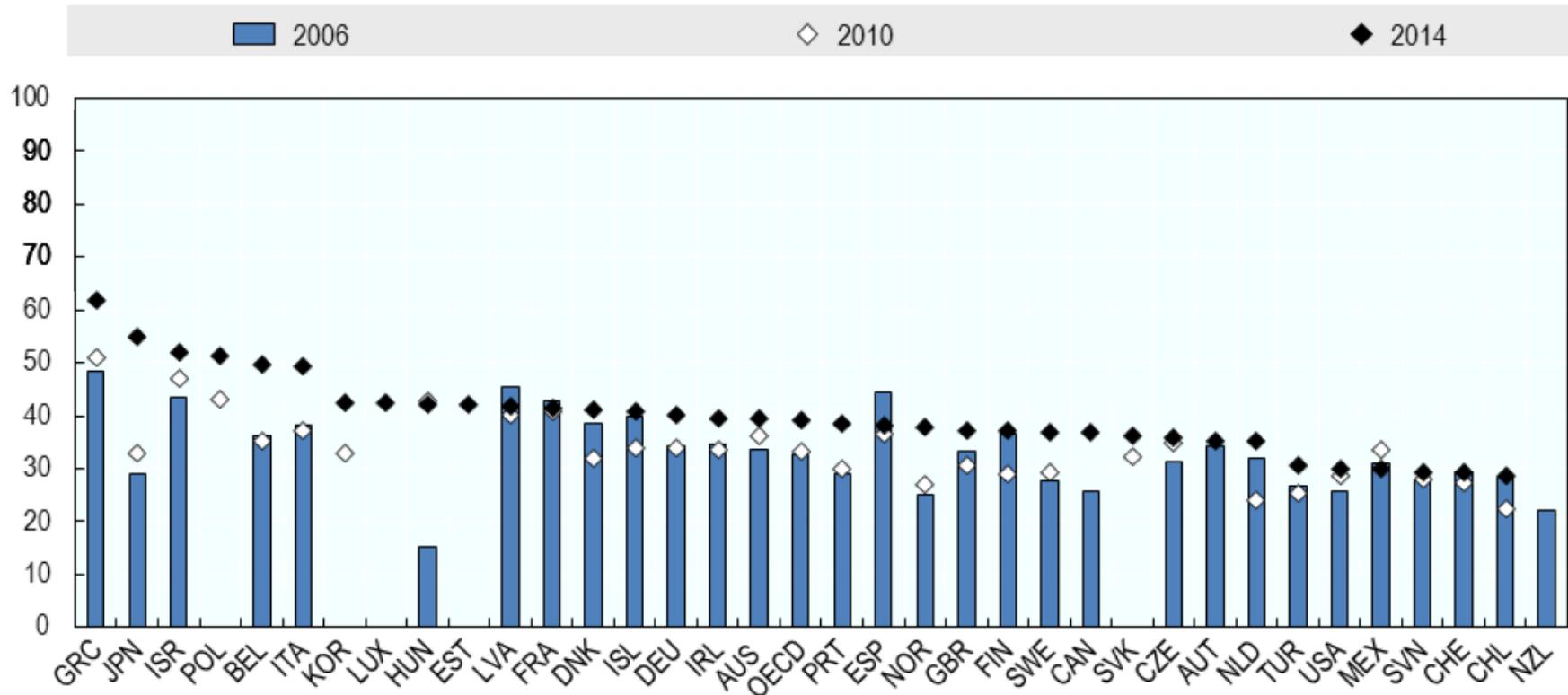
Specific needs (Atkinson, McClelland)



- need for achievement
 - ▣ desire for success
 - ▣ fear of failure

Fear of failure

Percentage of 18-64 year-old population, who indicates that fear of failure would prevent them from setting up a business



Note: New Zealand refer to 2005 instead of 2006; Austria, Israel, Portugal and Switzerland refer to 2007 instead of 2006; Czech Republic, Poland and Slovak Republic refer to 2011 instead of 2010; Czech Republic, Israel, Korea, Latvia and Turkey refer to 2013 instead of 2014.

Source: OECD (2017b), based on data from the Global Entrepreneurship Monitor.

Specific needs (Atkinson, McClelland)



- need for achievement
 - ▣ desire for success
 - ▣ fear of failure
- need for power
- affiliative motive

Two-factor theory (Herzberg)

motivators

- advancement opportunities
- possibilities for personal development
- recognition
- responsibility
- achievement

hygienics

- quality of leadership
- salary
- company policies
- physical working conditions
- job security

Job characteristic theory (Hackman and Oldham)

JOB CHARACTERISTICS

1. identity
2. significance
3. variety
4. autonomy
5. feedback



PSYCHOLOGICAL STATES

- experienced
meaningfulness
- experienced
responsibility
- knowledge of
results



PERSONAL AND WORK OUTCOMES

- high intrinsic motivation
- high quality of work
- high job satisfaction
- low fluctuation and
absenteeism

need for growth



Behavioral approach: reinforcements

type of reinforcement:

strategy:

positive reinforcement

praise, higher salary

negative reinforcement

stop objecting

extinguishing

prevent praise or criticism

punishment

reprimand, complaint, lower salary

Expectancy theory (Vroom)

- cognitive model of motivation
- motivation = $V \times I \times E$
- valence
 - ▣ desirability (attractiveness) of reward or outcome
- instrumentality
 - ▣ belief that a reward follows
(likelihood of achieving the reward or outcome)
- expectancy
 - ▣ expectancy that performance is possible
(likelihood of performance or success)

VIE model: factors that affect I and E

- objective situation
 - others' opinion about the situation
 - individual experience
 - personal characteristics (self-confidence)
- Instrumentality**
- attractiveness of the outcome (valence)
 - internal or external control
 - accuracy of estimates of instrumentality
- Expectancy**

Equity theory (Adams)

equity

- $O_p / I_p = 1$
- $O_p / I_p = O_o / I_o$

inequity

- $O_p / I_p \neq 1$
- $O_p / I_p < O_o / I_o$
- $O_p / I_p > O_o / I_o$

Reduction of inequity

behavioral

- change of input
- change of output
- influence others to change input / output
- change of job

cognitive

- change of experience of input / output
- influence others to change experience
- change of person for comparison

Goal setting theory (Locke)



**Conscious goals of individuals
are direct regulators of action.**

Goal setting theory

- difficult goal = better performance (than if goal is easy or there is no goal)
- clearly set goal = better performance
- feedback is necessary
- adoption of the goal is necessary
- adoption of the goal depends on expectations and valence
- interaction between goal and money
- there are no individual differences (except some personality characteristics)

Goals motivate individuals by...



- focusing attention
- regulating efforts (energy)
- increasing persistence
- encouraging alternative strategies

Personal relationship towards the goal...

money



accepting the goal

participation



adopting the goal

Theory of self-efficacy (Bandura)



- own experience
- experience of others (model)
- verbal persuasion of others
- emotional (physiological) states

Theories of motivation and entrepreneurship

- premises of different theories seemingly predict the occurrence of entrepreneurship in different ways:
 - ▣ need for achievement
 - ▣ expectancy theory
 - ▣ goal setting
 - ▣ self-efficacy
- contradictory or complementary?
- self-efficacy as moderator?

Motivation of entrepreneurs

- of the presented theories, expectancy theory, goal setting theory and theory of self-efficacy are most commonly used to explain entrepreneurial motivation
- little research that start from the stated models (with the exception of the goal setting theory and self-efficacy model)
- other motivational concepts:
 - ▣ resistance, tenacity, strength
 - ▣ perseverance of entrepreneurs

Entrepreneurial Motivators.

Motivational aspect	Characteristic
Independence	<ul style="list-style-type: none"> - wish to make key decision - think independently and unconventional - ability to make independent judgments
General self-confidence/ self efficacy	<ul style="list-style-type: none"> - belief to be able to perform successfully, achieve goals and defeat obstacles
Achievement motivation	<ul style="list-style-type: none"> - desire to improve, meet high standards and attain goals
Proactivity	<ul style="list-style-type: none"> - tendency to act and make things happen
Ambition (<i>Healthy ambition</i>)	<ul style="list-style-type: none"> - strong desire to attain high results - willingness to make something real great meeting high standards
Energy	<ul style="list-style-type: none"> - hardiness, endurance, stamina
Egoistic passion	<ul style="list-style-type: none"> - acting in one's own interests - passion in following own goals - does not mean ignoring other people - scarifying other things in order to follow own priorities
Tenacity	<ul style="list-style-type: none"> - being persistent in case of troubles - not giving up if failed - following determinedly own ideas

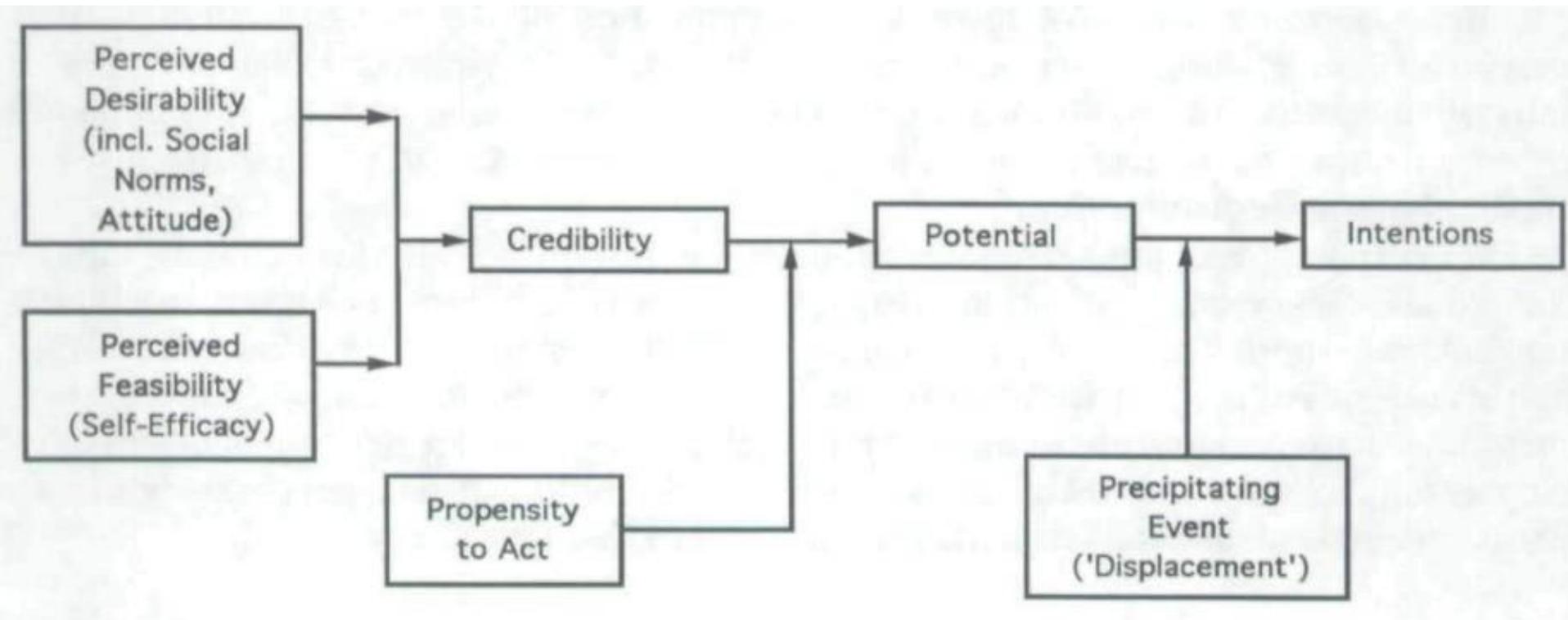
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- little research that start from the stated models (with the exception of the goal setting theory and theory of self-efficacy)
- other motivational concepts:
 - ▣ resistance, tenacity, strength
 - ▣ perseverance of entrepreneurs
 - ▣ perception of desirability and feasibility
 - ▣ entrepreneurial intentions

Entrepreneurial intentions

- pursuit of entrepreneurship is a targeted, planned activity
- therefore formal models of intentions should be used in the study of entrepreneurship
 - ▣ people behave by inertia until some event interrupts them
 - ▣ decision on the future direction of behavior will depend on the assessment of the desirability and feasibility of the option in question and the propensity for action
- intention focuses the decision to the targeted behavior (most important predictor of entrepreneurial behavior)
- entrepreneurs' attitudes and beliefs foresee intentions

Entrepreneurial intentions



Model of entrepreneurial potential (Krueger and Braezel, 1994)

Newer model of entrepreneurial intentions

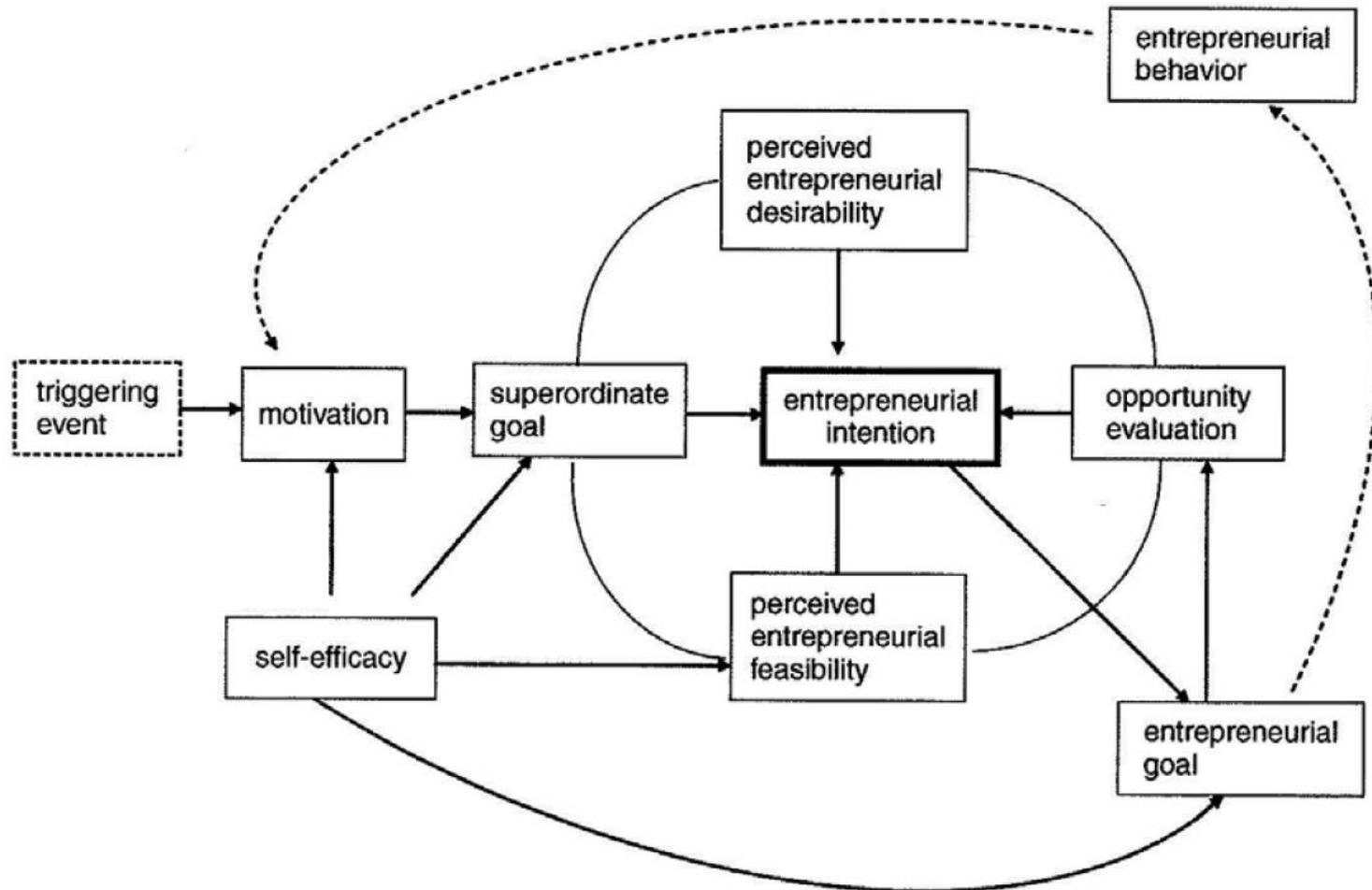
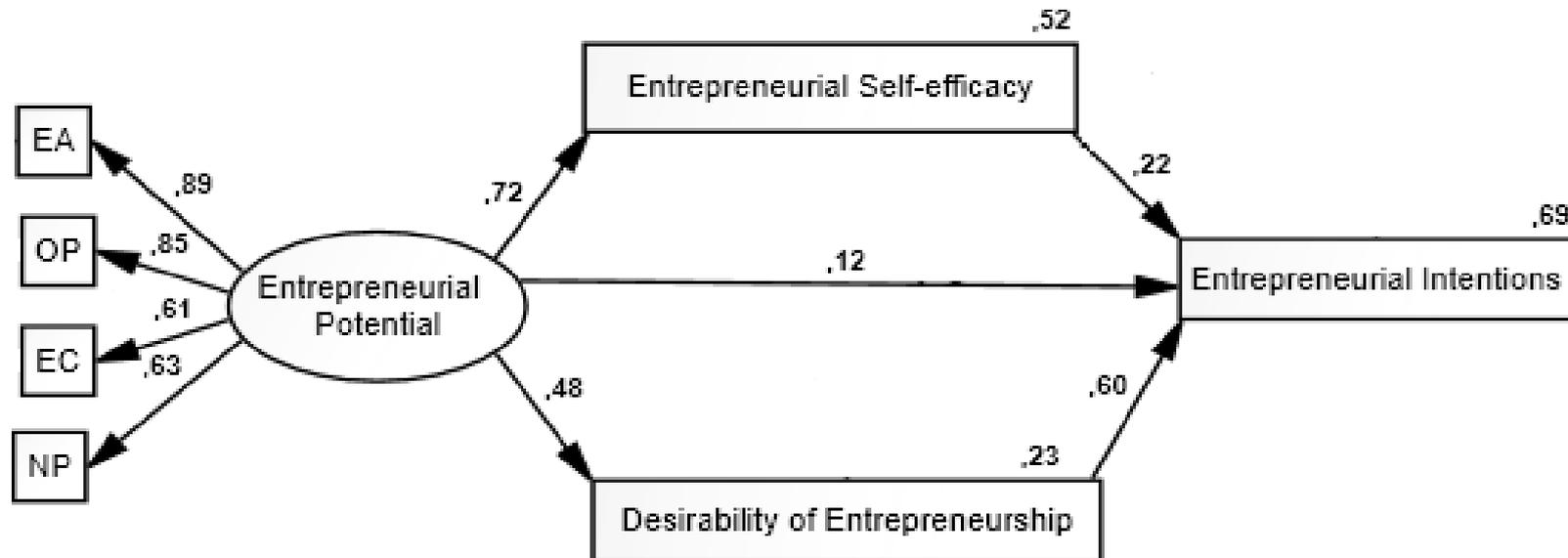


Fig. 2.2 The context-specific entrepreneurial intentions mode

Predictors of Entrepreneurial Intentions of Students of Economics (Jakopec, Miljković Krečar & Sušanj, 2013)



EA – Entrepreneurial Awareness
OP – Opportunism

EC – Entrepreneurial Creativity
NP – Need for Progress

Motivational factors of entrepreneurs

- Locke and Baum (2007)
- situational factors
 - ▣ the most direct cause of entrepreneurship is the entrepreneur
 - ▣ external factors (e.g. free market) can discourage or encourage entrepreneurs
 - ▣ market laws:
 - state of the economy, technology, availability of workforce, industry structure, availability of investment capital...
- vision
 - ▣ business idea and intention
 - ▣ vision is not just a declaratory sentence: those are formulated in order to motivate others, and it is complete only “in the head” of entrepreneurs
 - ▣ requires the ability of inductive thinking and insight

Motivational factors of entrepreneurs

- motivational traits, values and motives
 - independence
 - general self-confidence
 - motive for achievement
 - drive: proactivity, ambition and energy
 - egoistic passion (for work)
 - resistance, durability
- situation specific motivators
 - self-efficacy, goals, vision

Model of entrepreneurial motivation

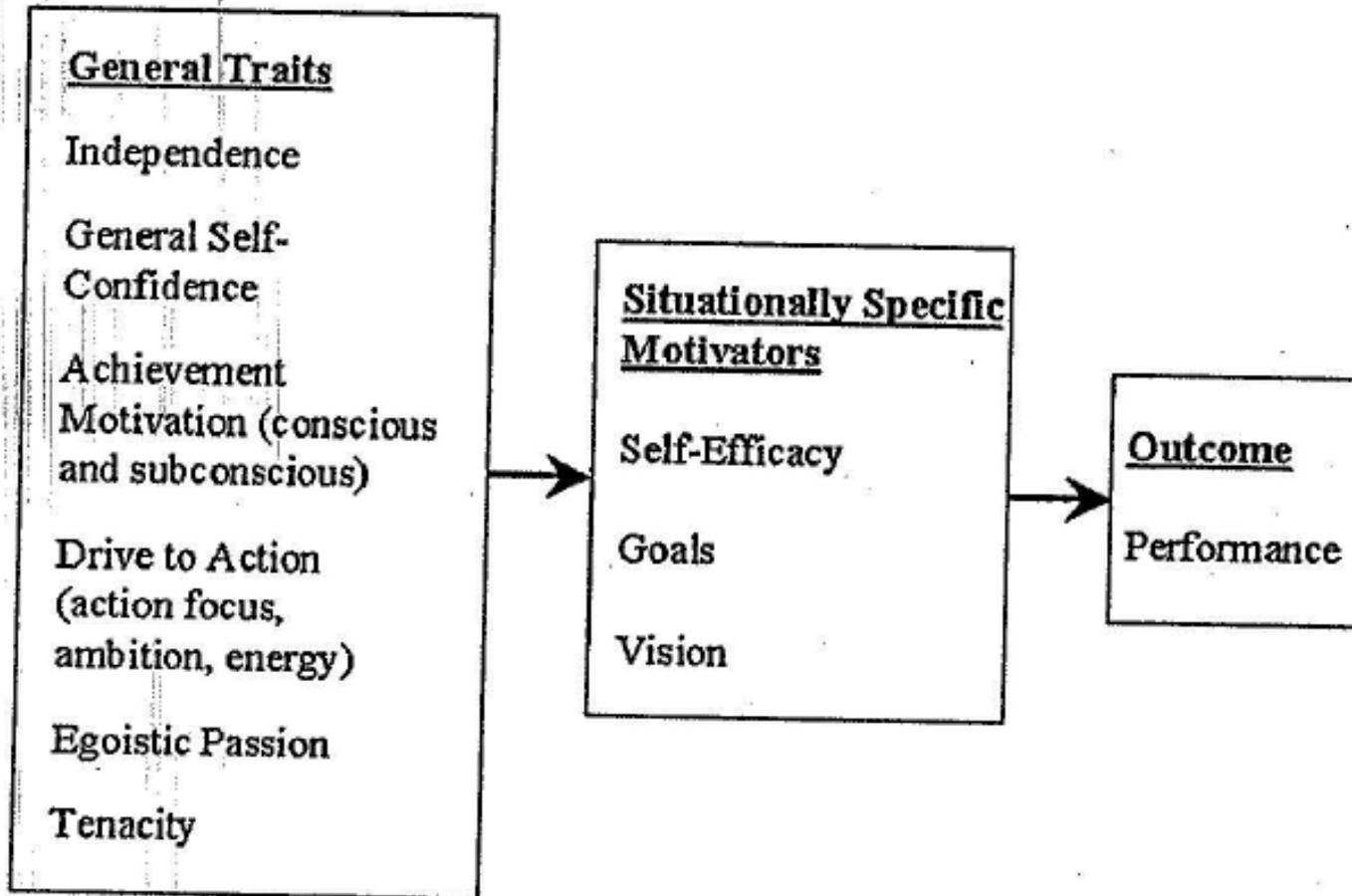


Figure 5.3. Summary of motivational traits and situationally specific motivators.

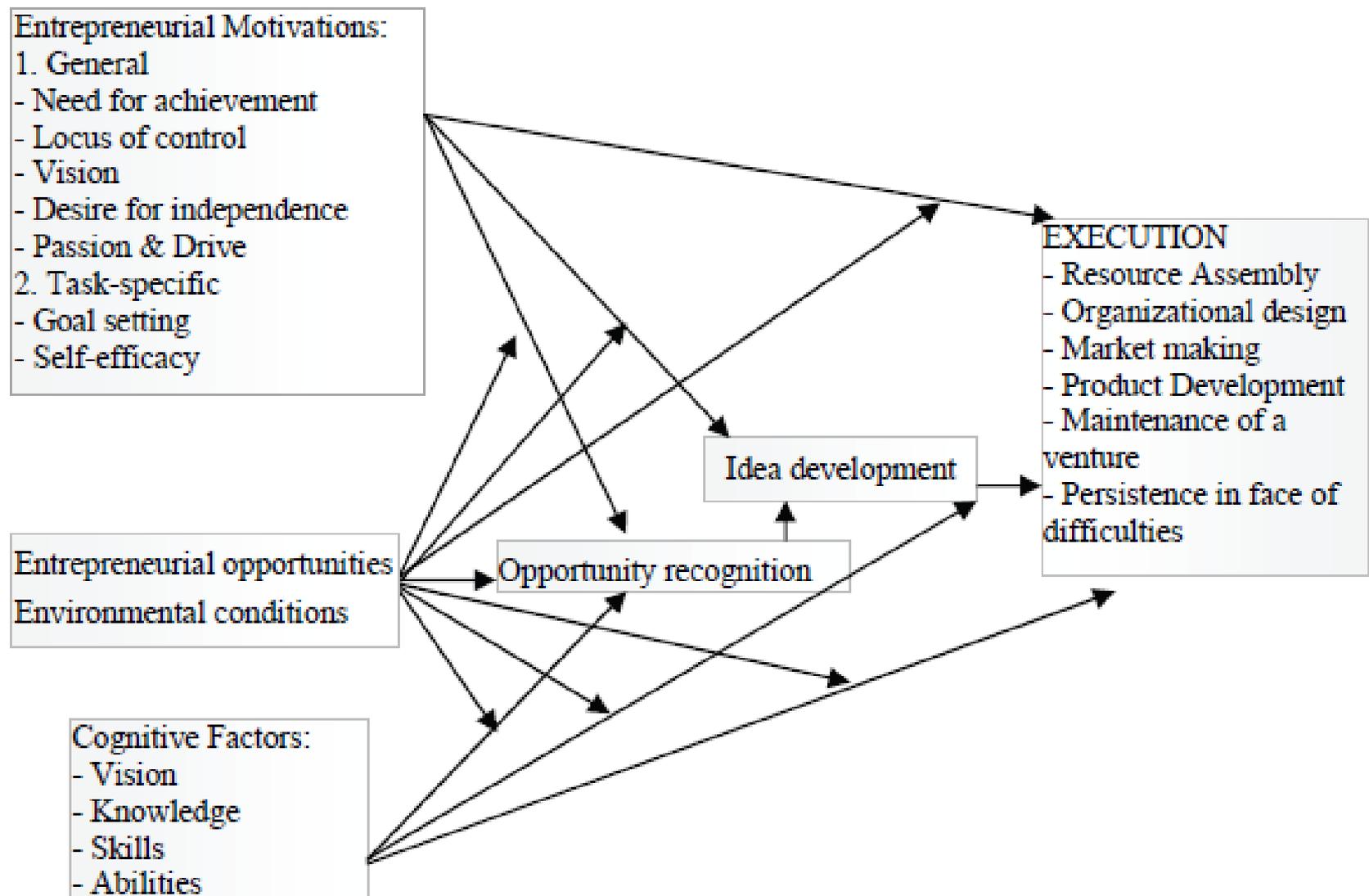


Figure 3. Model of entrepreneurial motivation and the entrepreneurial process (Shane, 2003)

Exercise 2:

- interview with an entrepreneur
- goal:
 - ▣ through information about a particular entrepreneurial experience
 - ▣ recognize entrepreneurial competencies needed for success
 - ▣ in all stages of the entrepreneurial process
- method:
 - ▣ preparation of a structured interview:
 - before starting: opportunity recognition, intention and decisions
 - starting the business: obstacles and problem solving
 - after starting: maintenance / expansion of business
 - ▣ drawing conclusions on:
 - personality, cognitions and motivation of the entrepreneur
 - knowledge, skills and attitudes of the entrepreneur
- group discussion

4. ENTREPRENEURIAL COMPETENCIES



Entrepreneurial competencies

- more competent entrepreneurs are more successful
 - ▣ this does not mean that high competencies of entrepreneurs will result in starting and success in business
 - ▣ the higher entrepreneurs' competencies are, the greater is the probability that they will be more successful in relation to those who are less competent (in the same conditions, if and when they start a business)
- in situations that are weak (poorly structured), individual differences become more prominent than in strong (well structured) situations
- knowledge, skills and abilities (KSA) are commonly mentioned

Entrepreneurial knowledge

- knowledge is important in entrepreneurship:
 - ▣ any discovery of a business opportunity is knowledge
 - ▣ knowledge helps in the assessment of the validity of transforming identified business opportunities into business ventures
 - ▣ knowledge also helps with implementation: in building, organization and execution of tasks
- new or uniquely connected knowledge help with solving problems in business development
- it is generally considered that application of general knowledge leads to average profits, while specific or unique knowledge bring above-average returns

Entrepreneurial knowledge

- knowledge varies through activities, technologies and markets by the degree of:
 - specificity
 - degree of asymmetry in possibilities for the application of knowledge
 - complexity
 - degree of complexity of information
 - cumulativeness
 - degree to which new knowledge is based on existing knowledge
 - availability
 - degree to which information is (un)available
 - codification
 - degree of systematization, organization of information

Entrepreneurial knowledge

- successful entrepreneurs are different from the less successful ones by:
 - ▣ what they know
 - ▣ how much knowledge they are able to acquire and how much knowledge do they have at their disposal
 - ▣ how able are they to distinguish relevant (rare, valuable, unique, executive knowledge) from sideline (irrelevant) knowledge
 - ▣ how quickly and efficiently can they adopt and share new knowledge

Entrepreneurial skills

- technical
 - ▣ processes through which products and services are created
- conceptual
 - ▣ discovering and recognizing opportunities, monitoring and processing market trends, evaluation and change of organizational functions, strategic planning and organizing
- human skills
 - ▣ influence on interpersonal relationships within and outside the company, leadership, negotiation, motivating, networking
 - ▣ social and human capital

Entrepreneurial abilities

- in general: successful entrepreneurs are capable of combining assets and resources in a new and profitable way
- intelligence is the ability of the individual to understand the world, and the ingenuity in dealing with its challenges (Wechsler, 1975)
- intelligence
 - ▣ G-factor: reasoning abilities and problem solving
 - ▣ factors: spatial, numerical, verbal, abstract, ...
 - ▣ so-called practical intelligence, emotional intelligence, ...
- cognitive abilities are usually the best predictor of work performance in general ($r=.54$)
- cognitive abilities can also be seen as both causal and moderator variable in entrepreneurship
 - ▣ e.g. owners with lower cognitive abilities can compensate for that by detailed planning of operations in order to be successful

Competencies: differentiation between concepts



- skills
 - ▣ skills – *know-how*
- knowledge
 - ▣ knowledge – *know-that*
- understanding
 - ▣ understanding – *know-why*

Additional entrepreneurial competencies?



- network
 - ▣ *know-who*
- experience/intuition
 - ▣ *know-when*

Competencies

- they are a practical demonstration of skills, knowledge and understanding in work environment, associated with the effects
- in English there are two words: *competence* and *competency* (second word has plural form)
- *competence* is the property of someone who is capable and qualified to do the job well
- *competencies* are in turn the components of that property

Competence	Definition
Entrepreneurial Career Vision	Includes formulation of long-term goals and preparation of action implementation plan.
Self-confidence	One's belief to be able to complete demanding tasks implies having the necessary knowledge, human and professional capacity, and the correct attitude and energy to achieve goals.
Widened Perception	Ability to explore beyond the boundaries of one's circle of experience and reference in order to find new opportunities.
Flexibility	One's disposition to change focus in order to follow better fitting options that allow tasks to be well executed.
Empathy	Ability to recognize and understand another's emotions, needs, and interests and to integrate them to one's own. (Ability to "put oneself into another's shoes")
Conceptual thinking	One's disposition to identify the relations existing among different components in complex situations that are not directly related; the ability to construct models that are easy to apply.
Management	Ability to gather, integrate, and manage required resources in order to start, maintain, and grow within the organization.
Entrepreneurial networking	Includes establishing, maintaining, and taking advantages of interpersonal and institutional relations in order to achieve entrepreneurial goals.
Decision taking	Analyzing the different alternatives available in order to determine the best path to follow, assuming full responsibility for the outcomes.
Action orientation	The energy, force, courage and dedication necessary to put into action and realize the ideas, proposals, opportunities, and entrepreneurial projects.

Competencies model

- a set of characteristics and behaviors that determine the competence of an individual at a job
- in practice that set uncritically includes all the determinants of work performance (abilities personality traits, motivational states...)

Entrepreneurial competencies are understood as the “total sum of entrepreneurs’ requisite attributes: attitudes, values, beliefs, knowledge, skills, abilities, personality, wisdom, expertise (social, technical, managerial,) mindset, and behavioural tendencies needed for successful and sustaining entrepreneurship” (Kiggundu, 2002).

- one such example is the Spencer and Spencer’s entrepreneurial competencies model (1973), which encompasses as many as 22 competencies in 7 categories:

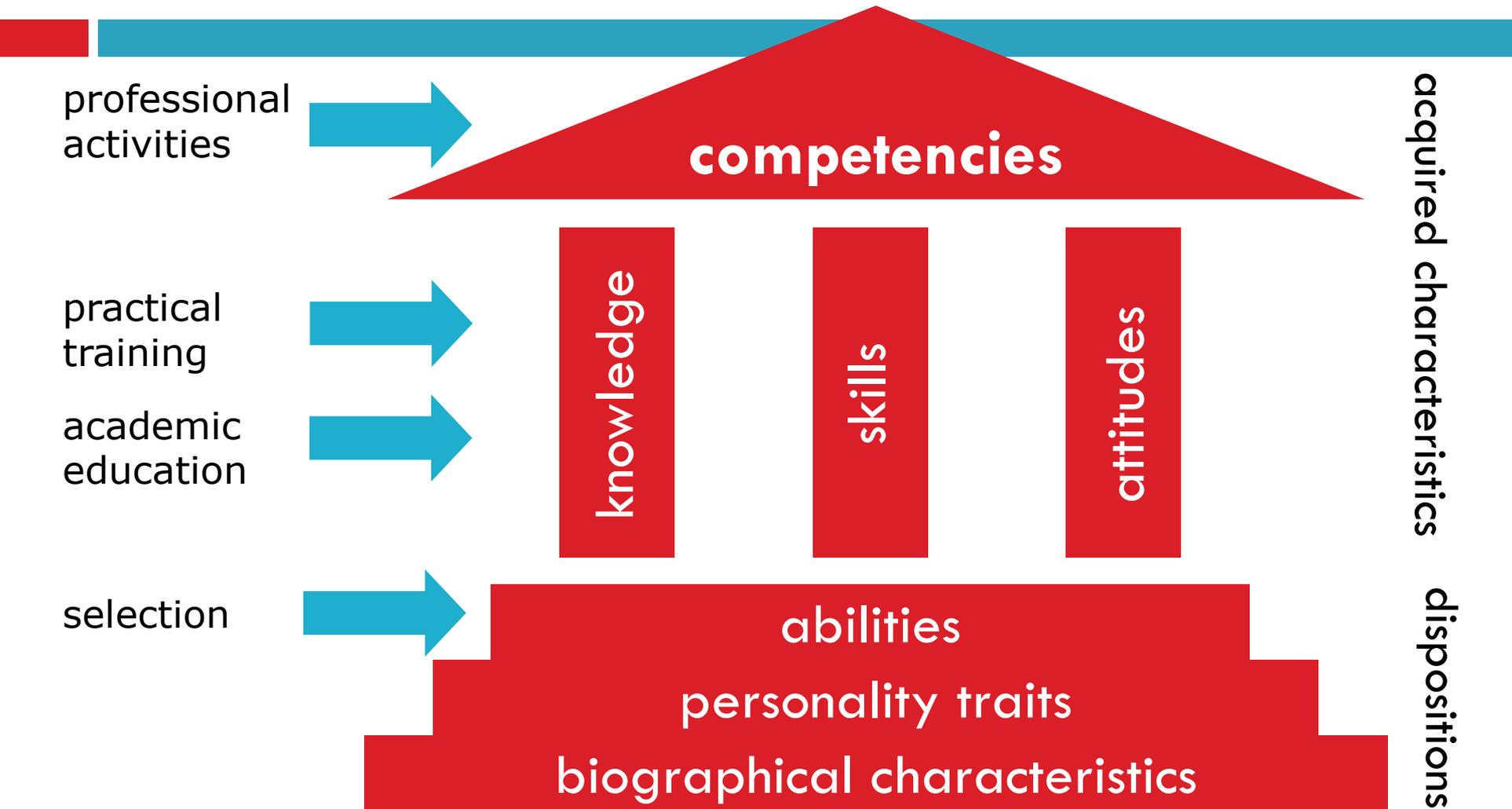
Entrepreneurial competencies model

- achievement
 - ▣ initiative, opportunity recognition, perseverance, seeking information, concern for the quality of work, commitment to work, focus on efficiency
- thinking and problem-solving
 - ▣ systematic planning, problem-solving
- personal maturity
 - ▣ self-confidence, expertise, awareness of personal limitations
- influence
 - ▣ persuasion, using influence tactics
- guidance and control
 - ▣ assertiveness, supervision
- orientation to others
 - ▣ credibility / integrity / honesty, concern for the welfare of employees, recognizing the importance of business relations, providing training to employees
- additional competencies
 - ▣ building capital, care about the image of products and services

Competencies are...

- components of professional qualifications which are reflected in the effective implementation of acquired knowledge, skills and attitudes in solving tasks of one's profession
- they are based on abilities and characteristics, integrate acquired knowledge, skills and attitudes and are formed during real professional practice

Competence architecture model (Roe, 2002)



Layers of competencies

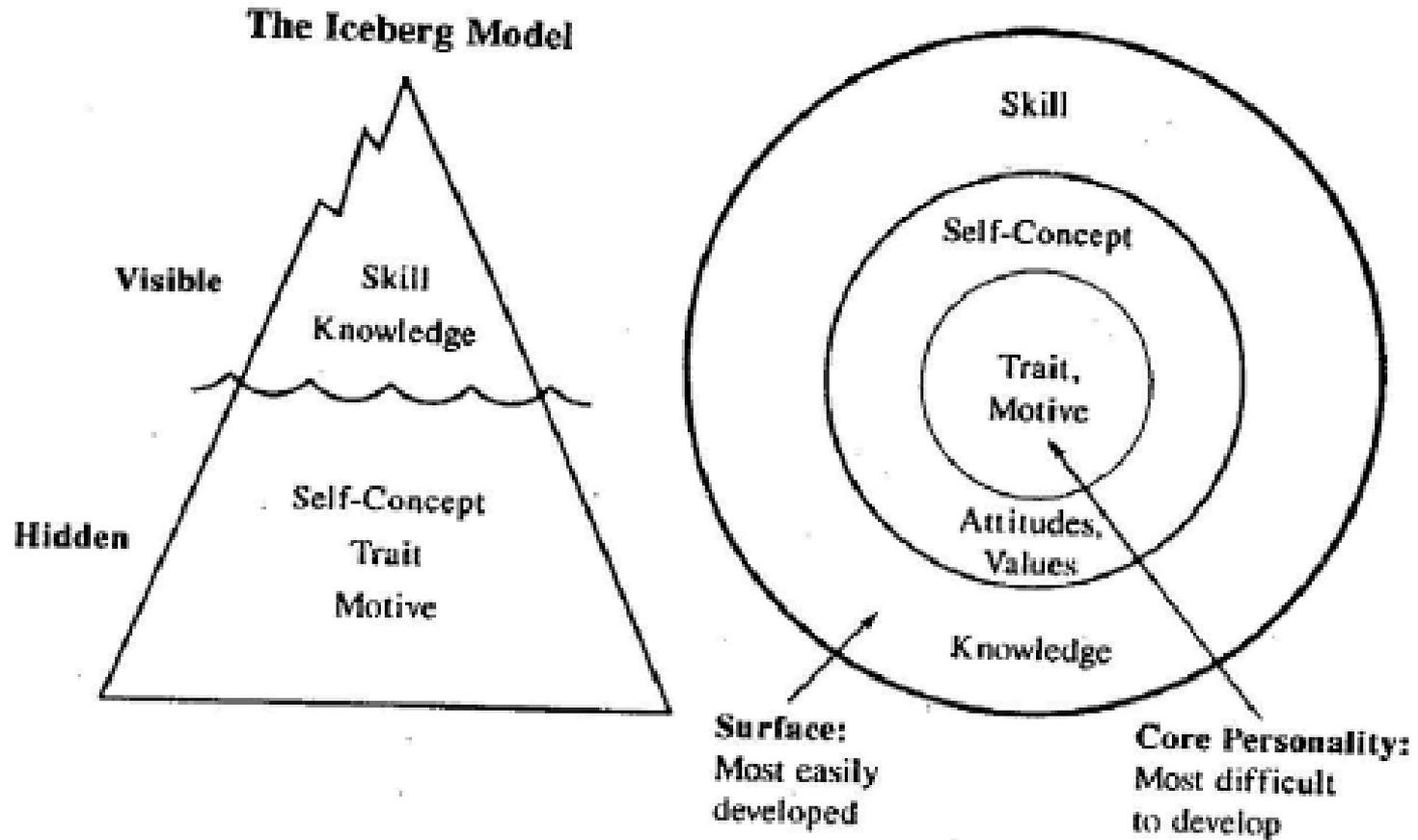


Figure 2-1 Central and Surface Competencies

Entrepreneurial competencies

- there are different taxonomies of entrepreneurial competencies in literature
- when defining ESE – entrepreneurial, managerial and technical-functional role:
 - ▣ competency of opportunity recognition
 - ▣ drive to bring the company from conceptualization to realization
 - ▣ leadership and organizational skills
 - ▣ political competencies for ensuring support of the social network
 - ▣ possessing expert knowledge in a specific sphere of activity

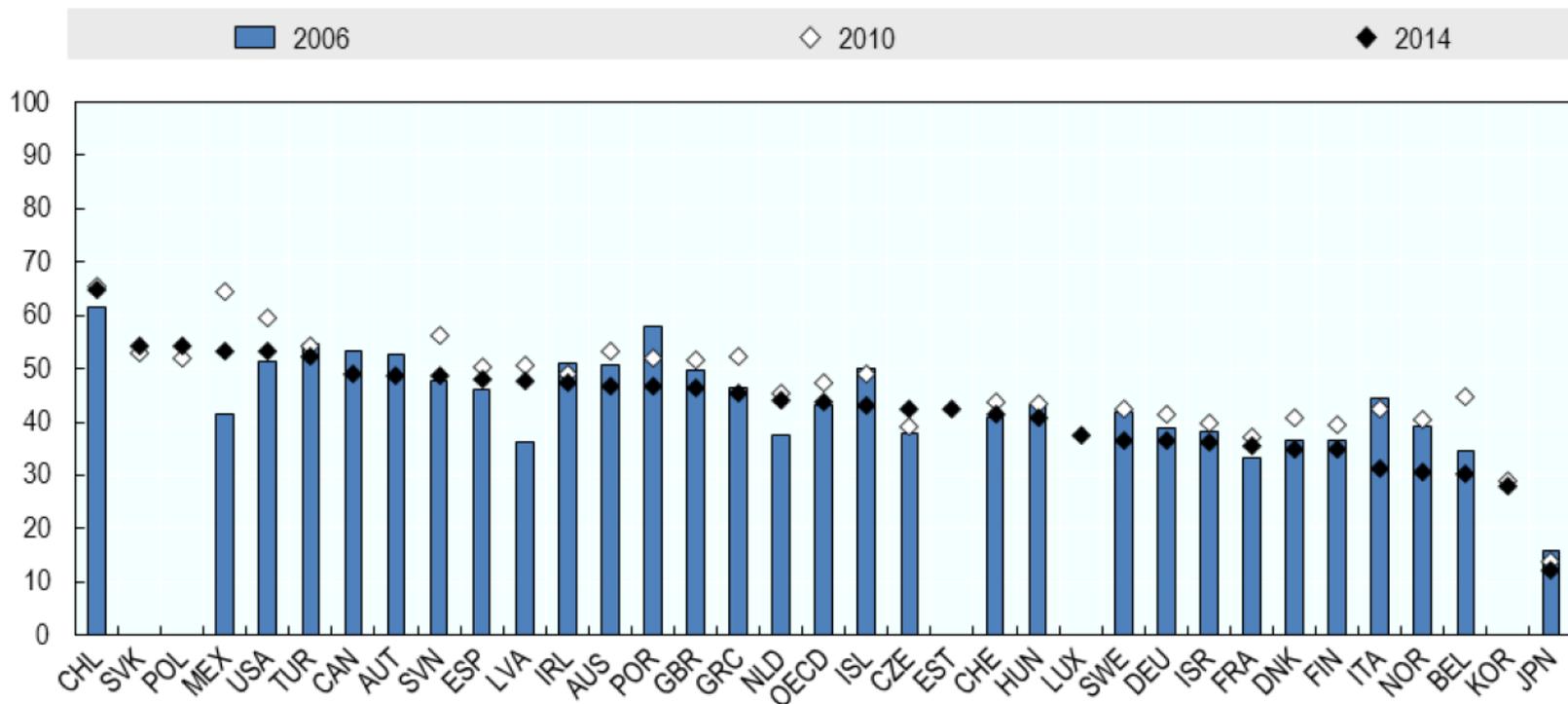
Entrepreneurial competencies

- competencies of other authors who have developed measures of ESE:
 - ▣ organizational and leadership skills, feel for the needs and wishes of buyers (identifying opportunities), readiness for effort and sacrifice (drive), specific technical or functional expertise, political competencies for obtaining social support of “key people”
 - ▣ marketing, innovations, management, risk and finance
 - ▣ searching, planning, collecting, managing people and managing finances
 - ▣ development of a new product or market opportunities, building an innovative environment, initiating relationships with investors, defining the fundamental purpose, coping with unexpected challenges and development of key human resources

Capabilities for entrepreneurship

Perceived capabilities for entrepreneurship, 2006, 2010 and 2014

Percentage of 18-64 year-old population, who believes they have the required skills and knowledge to start a business



Note: New Zealand refer to 2005 instead of 2006; Austria, Israel, Portugal and Switzerland refer to 2007 instead of 2006; Czech Republic, Poland and Slovak Republic refer to 2011 instead of 2010; Czech Republic, Israel, Korea, Latvia and Turkey refer to 2013 instead of 2014.

Source: OECD (2017b), based on data from the Global Entrepreneurship Monitor.

5. CAREER AND DEVELOPMENT OF ENTREPRENEURS



Entrepreneurial career

- emergence and implementation of complex entrepreneurial behavior is the result of interaction of various personal and environmental variables
- definition of career:
 - ▣ individually perceived
 - ▣ sequence of attitudes and behaviors
 - ▣ connected with events and activities
 - ▣ related to the world of work
 - ▣ throughout the entire life
- formation of specific career orientation, development of career role and identity of self as entrepreneur
- there is not just one orientation towards entrepreneurial career
- many entrepreneurs do not define themselves professionally in this manner, but through the profession they perform
 - ▣ they see entrepreneurship just as a way of practicing their work (e.g. attorneys or dentists with private practices)

Criteria of career success

- different people have different criteria for determining success
- professional anchors (Schein)
 - ▣ technical competence
 - ▣ managerial competence
 - ▣ security
 - ▣ autonomy
 - ▣ creativity
- typology of personalities and occupations (Holland):
 - ▣ realistic, investigative, social, conventional, entrepreneurial and artistic

Criteria of career success

- entrepreneurial type is characterized by: high self-confidence, ambition, energy and domination
 - ▣ more focused on people than on things or ideas
 - ▣ persons who like to dominate, especially when they want to achieve some goal
 - ▣ good in coordinating the work of others
 - ▣ able to persuade others to accept their opinions and views
 - ▣ prefer verbal activities in which they can assert power and influence over others, and they choose professions such as:
 - attorney, realtor, public relations expert or director of a small company
- generally weak confirmation of Holland's typology
- the described profile does not apply to all kinds or types of entrepreneurs

Individual career decisions

- personal variables
 - ▣ personality, goals, desires, motives, needs, interests
- variables related to the labor market
 - ▣ current position, expectations of the organization
- social variables
 - ▣ family, friends, religion

Individual factors

- traits, cognitions, motivation, abilities, skills
- genetic predispositions
 - ▣ genes affect the chemical mechanisms in the brain
 - physiological reactions in uncertain, ambiguous and risky circumstances
 - ▣ genes can affect personality traits that make people predisposed to entrepreneurship
 - internal locus of control, motive for achievement, extraversion and social skills
 - ▣ genes can make people more sensitive to certain environmental stimuli, which increases the probability of entrepreneurial behaviour
 - genetic predisposition for recognizing business opportunities?
 - ▣ genes can affect the tendency of individuals to choose those environments that are more favorable for entrepreneurship
 - genes affect the abilities and skills, which influence the selection of profession and industry in which it is easier or harder to pursue entrepreneurial activity

Individual factors

- early work experiences
- gender
 - ▣ share of women in entrepreneurship is 25%
 - ▣ women express a lower level of entrepreneurial intention
 - ▣ motivation for entrepreneurship in women
 - more control (same as men), but also
 - uncertainty in the labor market, low salaries, rejection of gender stereotypes, desire for greater flexibility in work, “glass ceiling” effect, conflict between business and family roles
 - ▣ they have lower expectations of own success, especially in traditionally male professions
 - ▣ balance between personal and business life
- education

Social factors

- socialization of entrepreneurs begins in the family at the earliest age
- career identity begins to form in childhood
- adolescents assume and imitate dedication and work habits of their parents
- families of entrepreneurs create entrepreneurs (not only successors)
- other entrepreneurs in the environment increase chance for entrepreneurship
- social capital
 - social structures, social networks, memberships

Economic factors

- general economic situation affects entrepreneurship
 - ▣ rate of (un)employment and self-employment
 - ▣ in societies with lower economic power, there are more women entrepreneurs and more self-employment “out of necessity”
 - ▣ Croatia is rare in that there are normally more of those who enter entrepreneurship “owing to circumstances” in relation than those who recognize opportunities
 - ▣ legislation and institutional support
 - ▣ market situation
 - ▣ availability of funds
 - ▣ availability of education
 - ▣ technological development
 - ▣ ...

Push and Pull motivational factors

Factor	Push	Pull
What trigger the entrepreneurial intention?	Environment	Individual
Main purpose	away from current situation	future orientation
Motives	<ul style="list-style-type: none"> ▪ unemployment ▪ avoiding unemployment ▪ emergency situation ▪ dissatisfaction with own vocational situation ▪ dissatisfaction with working conditions, contents and time 	<ul style="list-style-type: none"> ▪ recognition, prestige, reputation ▪ free time ▪ work-life balance ▪ decision attitude ▪ to be own boss ▪ risk taking, independence ▪ initiative ▪ implementation of own ideas ▪ good income ▪ success ▪ interesting tasks ▪ self realization and development ▪ opportunity ▪ positive examples

Career factors in individual phases

- opportunity recognition and business idea formation phase
 - human capital (individual differences)
- phase of business establishment
 - social capital (support from environment, social system)
- phase of further exploitation and development of business
 - specific aspects of human (knowledge) and social capital (access to certain groups of people)

Development of entrepreneurs: education

- education can positively influence the propensity for entrepreneurship
- duration of education of entrepreneurs is linked to company profits
- entrepreneurs in Croatia mainly have secondary school qualifications
- type of education is more important than duration
- Council of Europe has included entrepreneurship competence (sense of initiative and entrepreneurship) in its strategic objectives among 8 competences for lifelong learning
 - ▣ *includes the tendency to induce changes and the ability to accept, support and adapt innovations of external factors*
 - ▣ *implies taking responsibility for one's actions, both positive and negative, developing strategic vision, setting goals and meeting them, and motivation for their success*
 - wider: adopting entrepreneurial characteristics, attitudes and skills
 - narrower: training for successful starting and managing companies (entrepreneurial knowledge)

Development of entrepreneurs: education

- national curriculum of the Republic of Croatia
 - ▣ transition to a competence system and learning outcomes (student achievement) in relation to the current educational system (content-focused)
- In many countries there is a lack of entrepreneurship education activities in lower levels of education (GEM, 2017).

Entrepreneurial education

Table 1 Difference between traditional and entrepreneurial way of learning and teaching (Jones and Iredale, 2006)

Traditional way of learning	Entrepreneurial way of learning
Content-oriented	Process-oriented
Adapted to teachers	Adapted to students
Teacher is an expert	Teacher is a facilitator
Knows WHAT	Knows WHY
Passive-reactive student	Generating knowledge
Programmed lessons	Flexibility of planning
Imposed learning goals	Agreed learning goals
Emphasis on theory	Importance of application of theory
One subject	Interdisciplinary approach
Fear of mistakes	Learning from mistakes
Infallible teacher	Learning teacher
One-way communication	Interactive teaching

Evaluation of entrepreneurial education

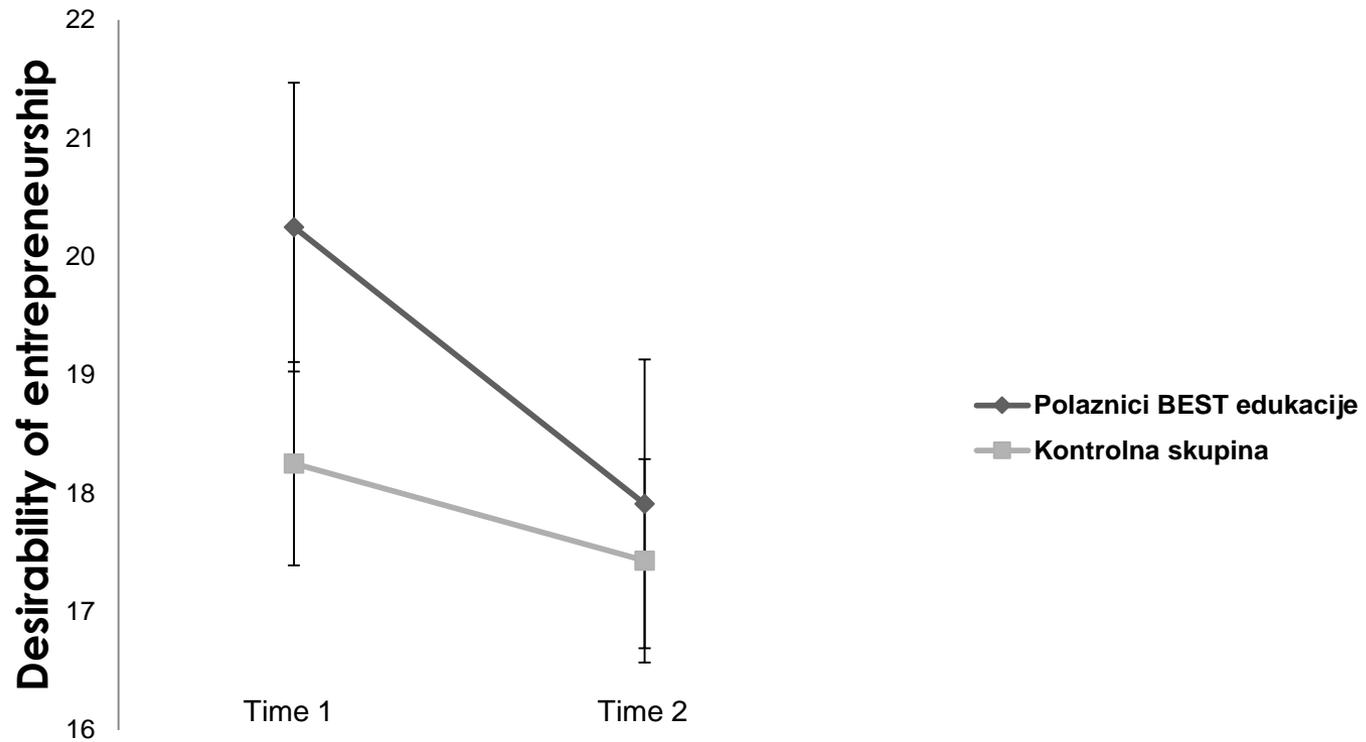
- considering the large number of educational programs for entrepreneurship, there is a relatively small number of studies of their effectiveness
- some studies confirm the positive effect of entrepreneurial education in:
 - ▣ knowledge related to business and market in general
 - ▣ knowledge on how to assess potential business opportunities
 - ▣ knowledge about the finances necessary to conduct business
 - ▣ knowledge about the elements of the business plan
 - ▣ social skills – work in a team, networking, contacting new people and organizations
 - ▣ desirability of working in a smaller team that develops and markets a product / service
 - ▣ problem-solving skills
 - ▣ and on the measure of ESE
- but not on the measure of entrepreneurial intentions

Criteria of evaluation of education

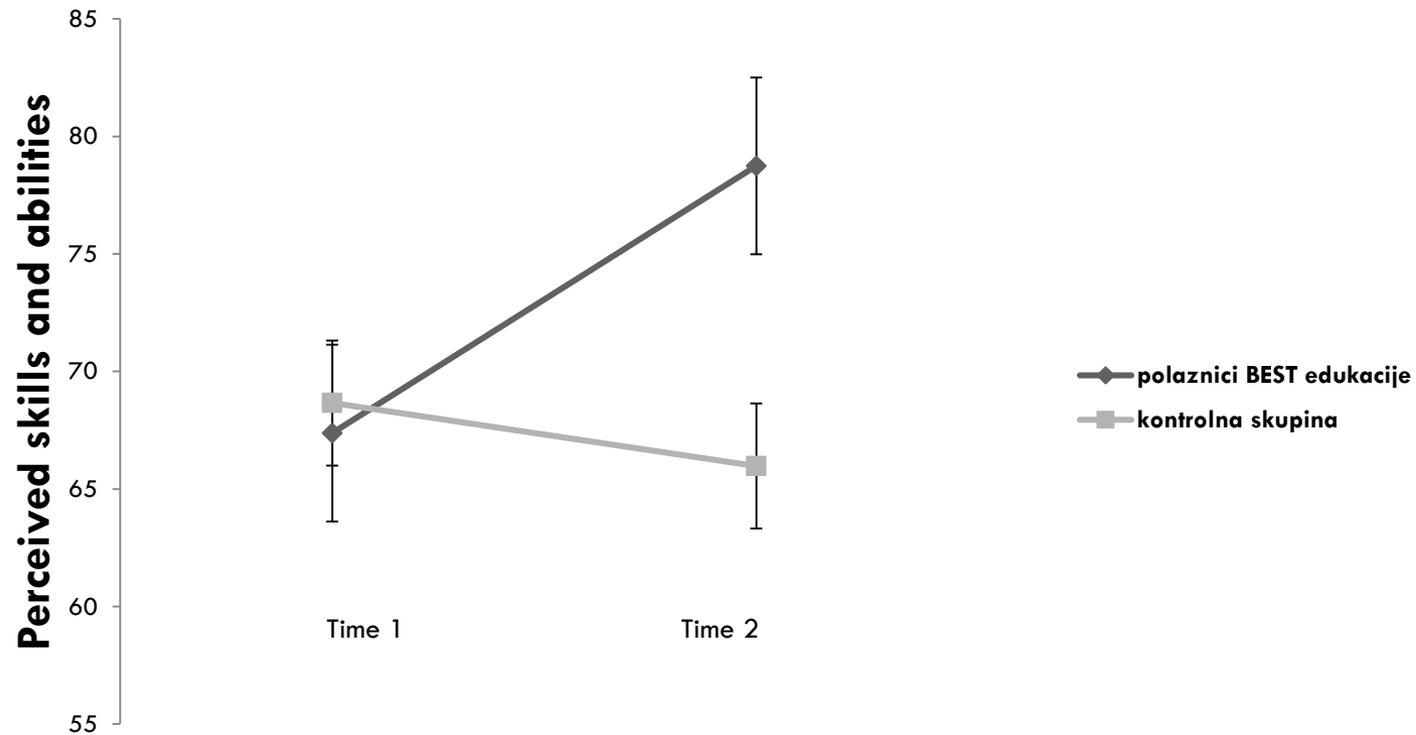
TIME OF MEASUREMENT	RELEVANT EVALUATION CRITERIA
During education	Number of involved attendees Number of courses General awareness or interest in entrepreneurship
Shortly after education	Entrepreneurial intentions Acquiring knowledge and skills Possibility of self-assessment of entrepreneurial abilities
0 to 5 years after education	Number of founded companies Number of takeovers Number of researched and secured entrepreneurial positions
Between 3 and 5 years after education	Sustainability and reputation of the company Level of innovations and flexibility of the company
More than 10 years after education	Contribution of the company to society and economy Business success Level of satisfaction with the career

Criteria of evaluation of entrepreneurial programs of training/education, with regard to time of measurement (Block and Stumpf, 1992)

Effects of EE at UNIRI (Zubić i Sušanji, 2016)



Effects of EE at UNIRI (Zubić i Sušanji, 2016)



6. MEASURING ENTREPRENEURIAL PROPENSITIES



Methodological questions

- Davidsson (2007) provides an overview of methodological questions in research of psychology of entrepreneurship and distinguishes perspective in which the focus is on the measurement of:
 - entrepreneur (starting own business)
 - traits, emotions, cognition, motivation...
 - entrepreneurship (new economic activity)
 - entrepreneurial role in the process
- question of the level of analysis (individual, team and organizational) in research of entrepreneurship

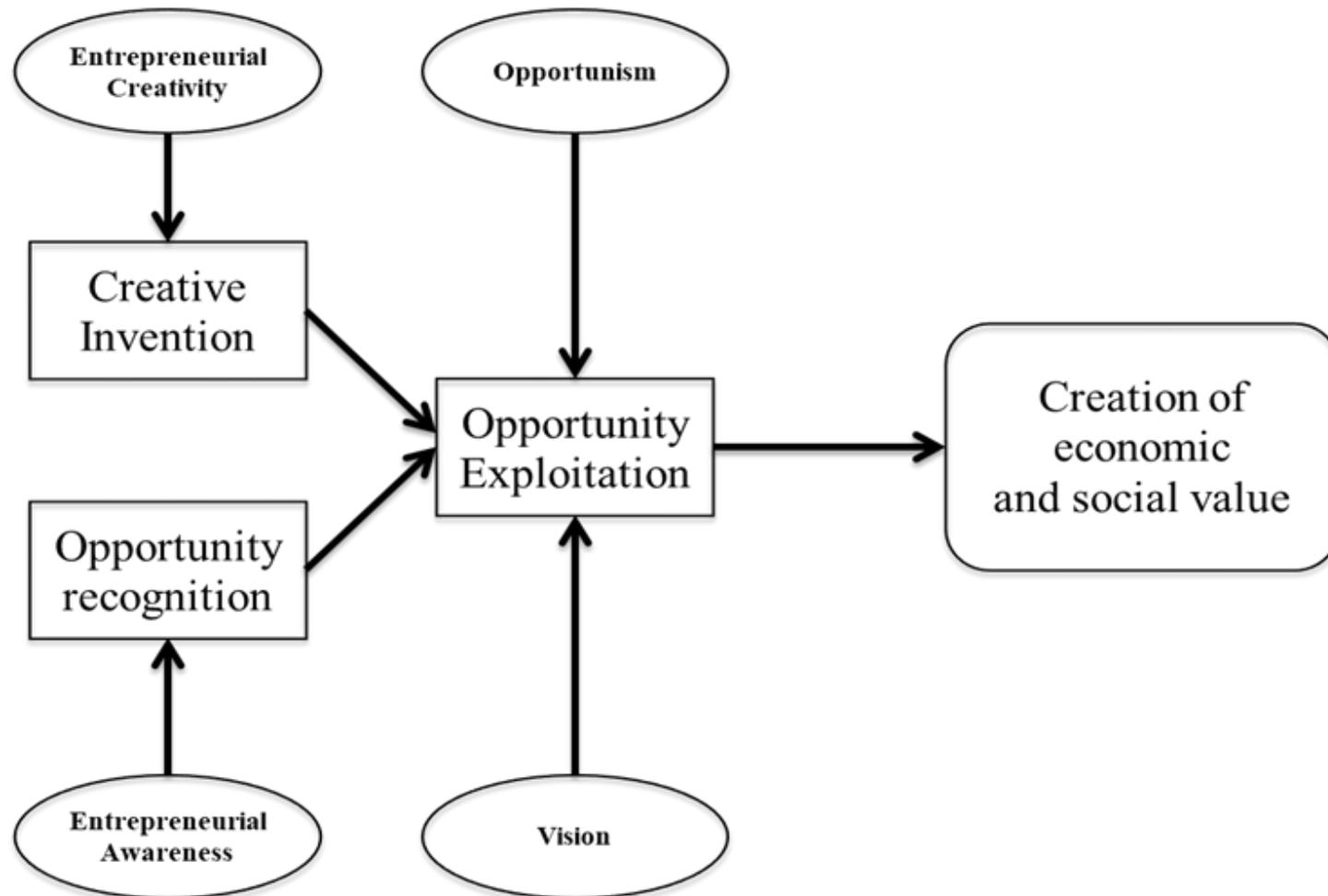
Methodological challenges and opportunities

- sample selection
- archival research
- questionnaire surveys
- case studies
- laboratory research

Exercise 3. Self-assessment

- individually fill out the questionnaire
- META-L61 (Ahmetoglu, Chamorro-Premuzic, 2010)
- a measure of entrepreneurial tendencies and abilities
- interpretation of results: homework
- you will receive:
 - a questionnaire
 - scoring-key
 - feedback for meta-scores

The model underlying META-L61



Measuring entrepreneurial inclination

- Miljković Krečar (2008)
- goal: development of a questionnaire for measuring entrepreneurial inclination (QEI)
- preliminary testing on students of Vern (N=271)
- testing on 127 equivalent pairs of entrepreneurs and non-entrepreneurs
- instrument:
 - ▣ combination of various measures of personality traits
 - ▣ 7 scales with a total of 91 items

Measuring entrepreneurial inclination

Table 1 List of scales of the Questionnaire on entrepreneurial intentions with examples of positive and negative claims

Name and definition of characteristic /scale	Example of positive (+) and negative claim (-)
Need for achievement Setting demanding goals, proactivity, perseverance, taking responsibility for the task, planning and controlling events, seeking specific feedback about performance and thinking about improving it (McClelland and Burnham, 2003).	I get up early, go to bed late and I skip meals when I have to perform a special task. (+) I would accept an unchallenging, routine job if the salary was good. (-)
Need for independence Need to do and say what we want, despite conventional expectations. It is related to the wish to autonomously run our own lives (Caird, 1988).	I like to do things my own way, without worrying what others think about that. (+) When I work in a group, I usually let others take the lead. (-)

Measuring entrepreneurial inclination

Innovativeness

Inclination (not the ability) for imaginativeness, innovativeness, curiosity and versatility (Caird, 1988).

I like to find out about things even if that will get me into trouble. (+)

I find it hard to deal with new, offbeat or even crazy ideas. (-)

Readiness to take (moderate) risk

Preference of behaviors that bring higher profit and have more severe consequences of failure over behaviors that lead to lower profit and have less severe consequences of failure (Brockhaus, 1980a).

If I had a good idea for earning, I would be willing to borrow money in order to implement the idea. (+)

I do not like to take up jobs that carry risk. (-)

(Internal) locus of control

Level of belief in the possibility to control events in one's life (Rotter, 1996; according to Caird, 1988).

I can't sit around and wait for things to happen, I want to influence them. (+)

I believe that what happens to me in life is mostly determined by other people. (-)

Measuring entrepreneurial inclination

Self-confidence

Belief that we are able to think, learn, choose, make decisions, overcome challenges and changes (Miljković and Rijavec, 2001).

At the very least, I am able to do things as well as the majority of other people. (+)

I have weaknesses and fears that I find difficult to overcome. (-)

Tolerance to uncertainty

Ability to effectively (without feeling of unease or threat) deal with situations about which we have incomplete, unclear or uncertain information (Norton, 1975).

I like to assume leadership and make decisions in unclear situations. (+)

A good job is the one with clear instructions on what should be done and how it should be done. (-)

Measuring entrepreneurial inclination

- factor and item analysis: 69 items isolated
- results indicate that QEI measures 3 factors:
 - acceptance of risk and unconventionality
 - propensity for risk taking, tolerance to uncertainty and creativity
 - focus on achievement
 - self-confidence and motive for achievement
 - confidence in own capabilities
 - locus of control and self-confidence
- QEI successfully distinguishes the population of entrepreneurs from the population of non-entrepreneurs in the total score and in the particular factors ($r=.69$)

INSTEAD OF A CONCLUSION



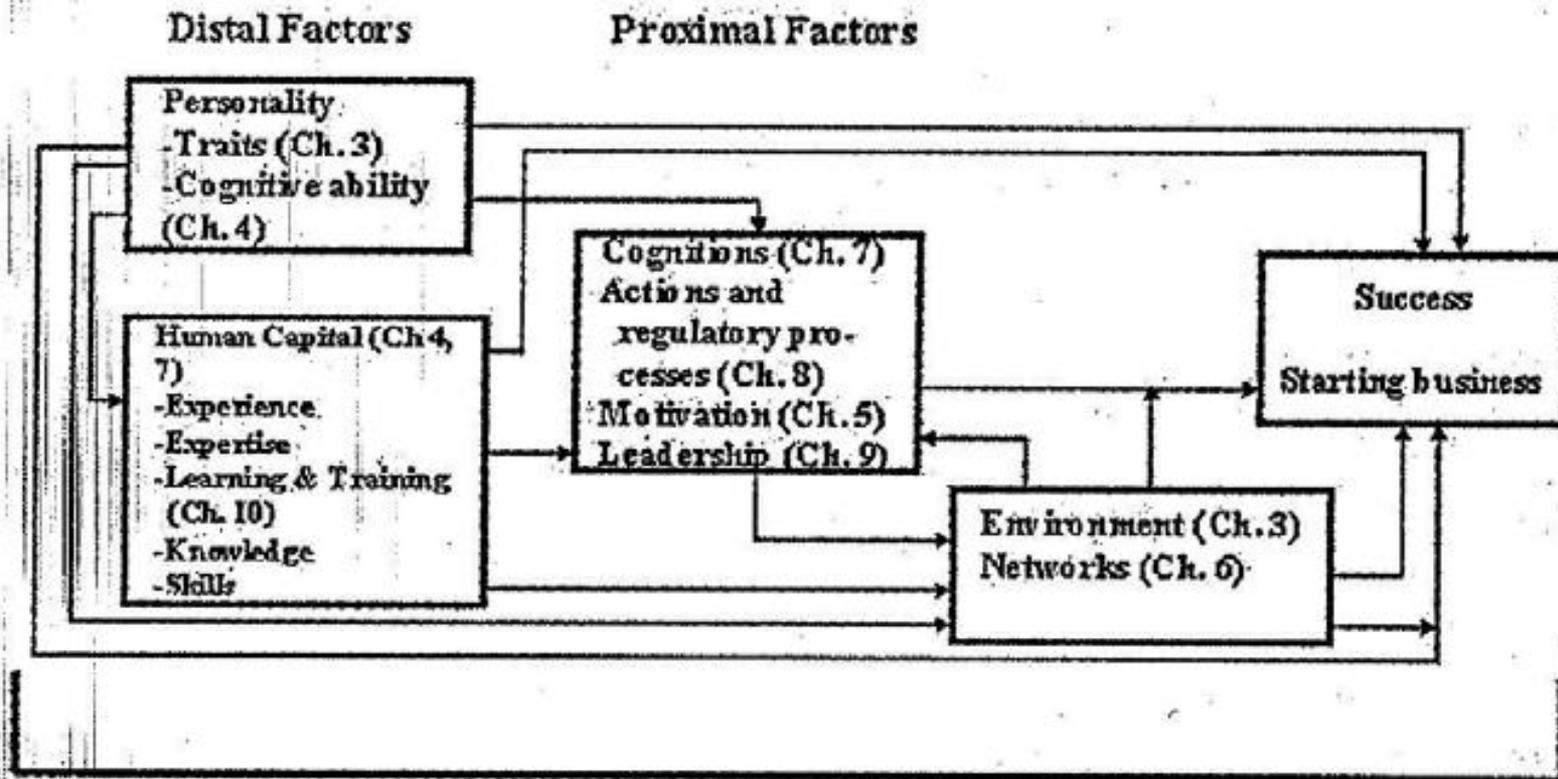
Psychology of entrepreneurship



1. Personality traits
2. Cognitions and abilities
3. Motivation
4. Competencies
5. Career and development
6. Measuring entrepreneurial propensities

Psychology of entrepreneurship

Entrepreneurship and Psychological Factors



General Issues:

- Entrepreneurship process (Ch. 2)
- Innovation (Ch. 11)
- National Culture (Ch. 12)
- Methodological issues (Ch. 13)

Integrative model

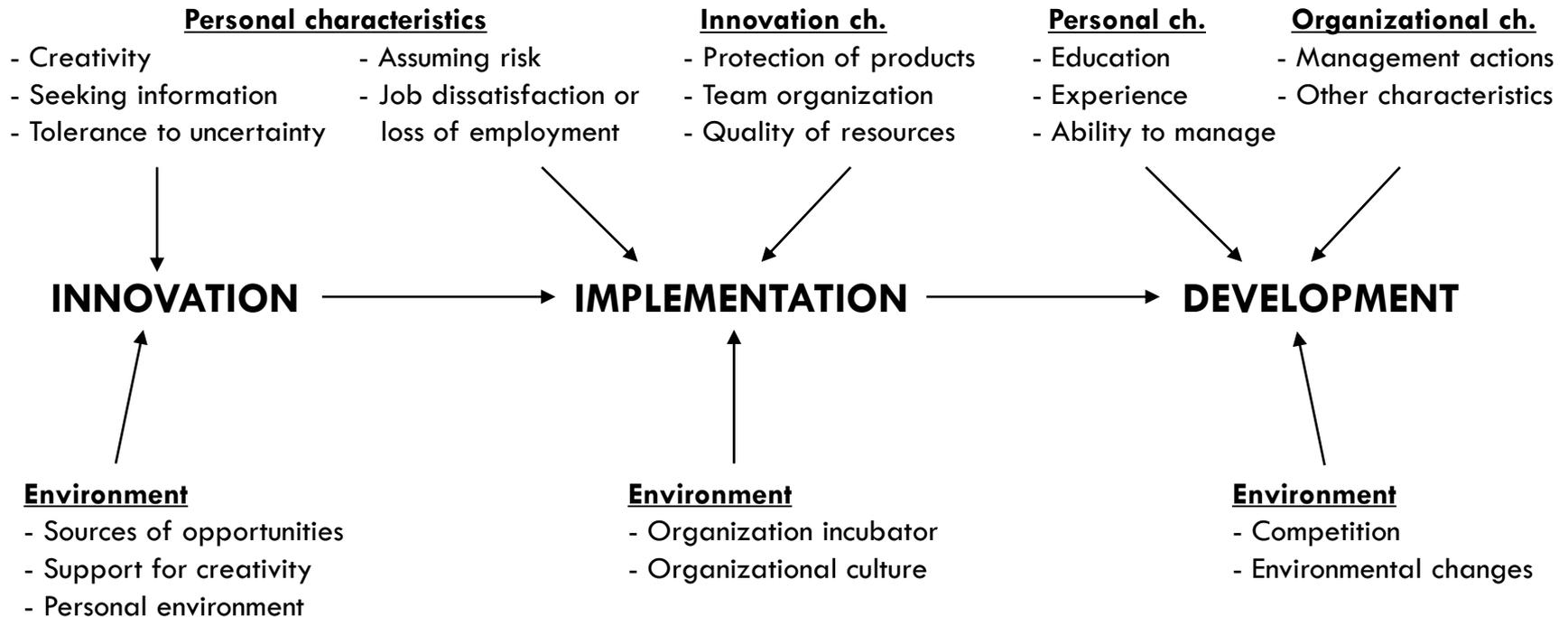


Image 1 Model of entrepreneurial behavior, according to Moore, 1986

Integrative model

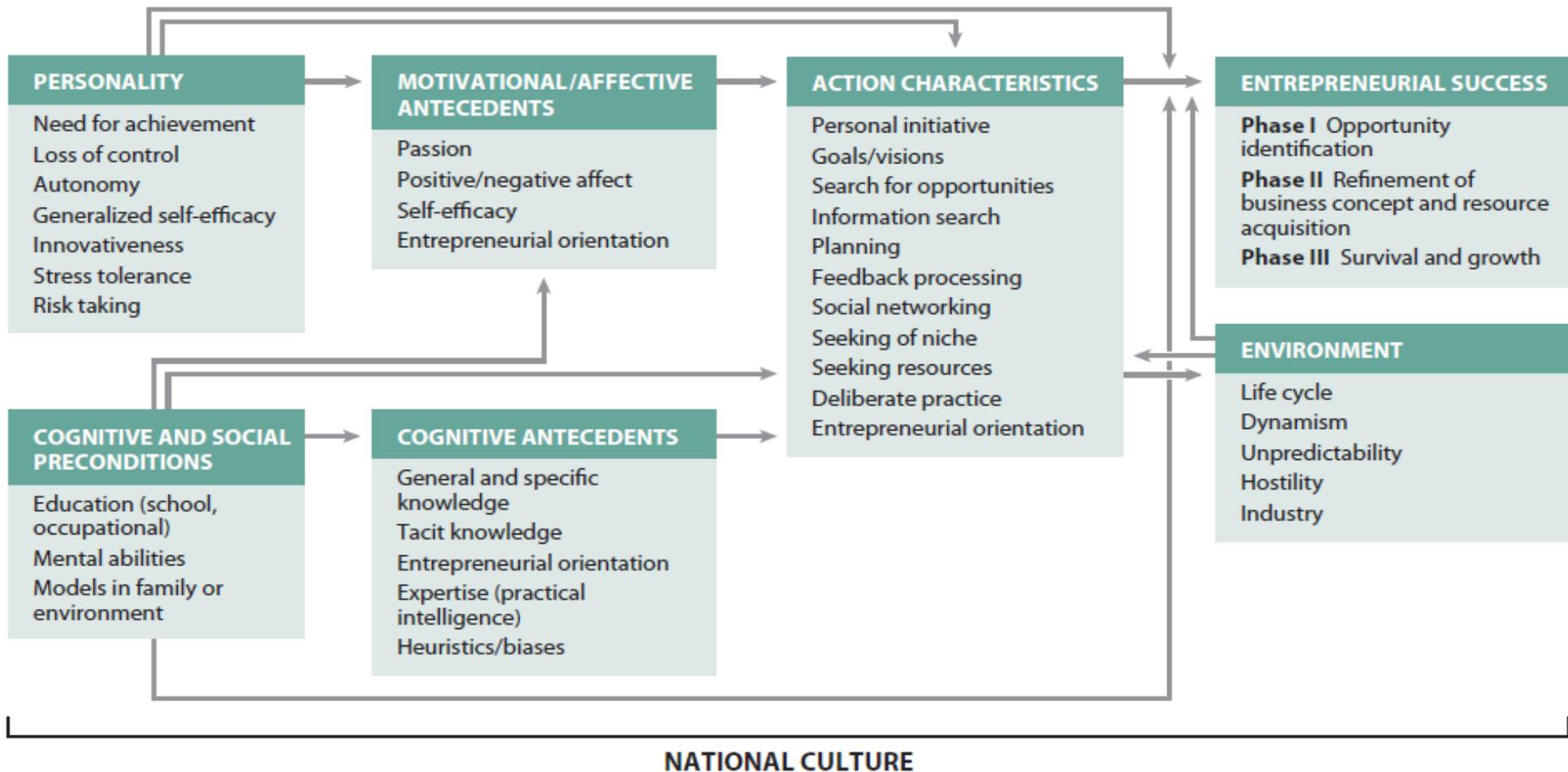


Figure 1

The action-characteristics model of entrepreneurship (Frese 2009).

Entrepreneurship in organization

- general convergence of fields of psychology of entrepreneurship and work and organizational psychology

Table 1. Similarities between start-up and corporate entrepreneurship
(Morris & Kuratko, 2002)

- Both involve opportunity recognition and definition.
- Both require a unique business concept that takes the form of a product, service, or process.
- Both are predicated on value creation and accountability to a consumer.
- Both find the entrepreneur encountering resistance and obstacles, necessitating both perseverance and an ability to formulate innovative solutions.
- Both require that the entrepreneur be able to balance vision with managerial skill, passion with pragmatism, and proactiveness with patience.
- Both entail risk and require risk-management strategies.
- Both require the entrepreneur to develop creative strategies for leveraging resources.
- Both involve significant ambiguity.

THANK YOU

Zoran Sušanj

Faculty of Humanities and Social Sciences Rijeka

Project assignment (exam)

- seminar paper in the field of psychology of entrepreneurship
 - ▣ choose a narrower area you are interested in
 - ▣ search for / study literature
 - ▣ at least two recent scientific papers in the narrower area
 - ▣ research papers are recommended (not only review papers)
- content of the seminar paper:
 - ▣ brief introduction into the narrower area of research (context)
 - ▣ overview of the research (objective and problem, method, results, discussion, conclusions)
 - ▣ what do the findings of research mean (critical review)
 - ▣ suggestions for further research
- form of the seminar paper:
 - ▣ between 5 and 10 pages of text
 - ▣ send by e-mail and attach the original research papers