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Transforming European Women's Entrepreneurship: The Education and Training for Success Programme

Project acronym: *women entrepreneurs*

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Abstract

The main objective of the project is to get a better understanding of the fundamental entrepreneurial competences of early stage women entrepreneurs and – based on this understanding – to increase their performance by developing a training programme.

The entrepreneurial identity, competence and performance depicted in the developed model to examine the needed capacities of early stage women entrepreneurs are highly complex constructs. To get a better understanding of the fundamental entrepreneurial competence and performance of early stage women entrepreneurs, the model set up in the previous reporting period has been adjusted in terms of attention to details. This technical report focuses on the selection of the specific items to measure the chosen constructs of the model and on the final design of the questionnaire.



Second Technical Report – Work package 2

Identification and Assessment of Fundamental Entrepreneurial Competences and Development of a Competence Matrix and Policy Goals

The main objective of this work package is to develop a model of the fundamental competences of early-stage women entrepreneurs in Germany and Ireland, including individual and the environmental factors affecting the entrepreneurial success. In this second reporting period, from month four to month six, the model, which was set up in the first three months was specified and improved.

In cooperation with Universidad del Desarrollo, UDD, a secondment from FSU (3 person-months) was involved for this period.

1 Work Progress

In the first three months of the project the entrepreneurial success of early stage women and education for Europe, Germany and Ireland has been contextualized (Task 2.1). A theoretical framework of the fundamental competences and the entrepreneurial success of women entrepreneurs including an identity approach has been developed (Task 2.2).

We suppose a connection between a keen entrepreneurial identity and the entrepreneurial success. In the developed model based on these theoretical assumptions the Identity Centrality takes the full effect on the success via entrepreneurial competences.

In this reporting period the focus was on the development of the questionnaire and on itemizing and testing the chosen methods (Task 2.3 & 2.4). The specific items to measure the constructs have been chosen and the model has been slightly adjusted (see Fig. 1). The model shows the three main entrepreneurial constructs in this survey: The Identity Centrality, the Competences and the Performance.

The positive influence of managerial skills on entrepreneurial success is mediated by entrepreneurial skills, which are defined by an entrepreneurial orientation and entrepreneurial self-efficacy.

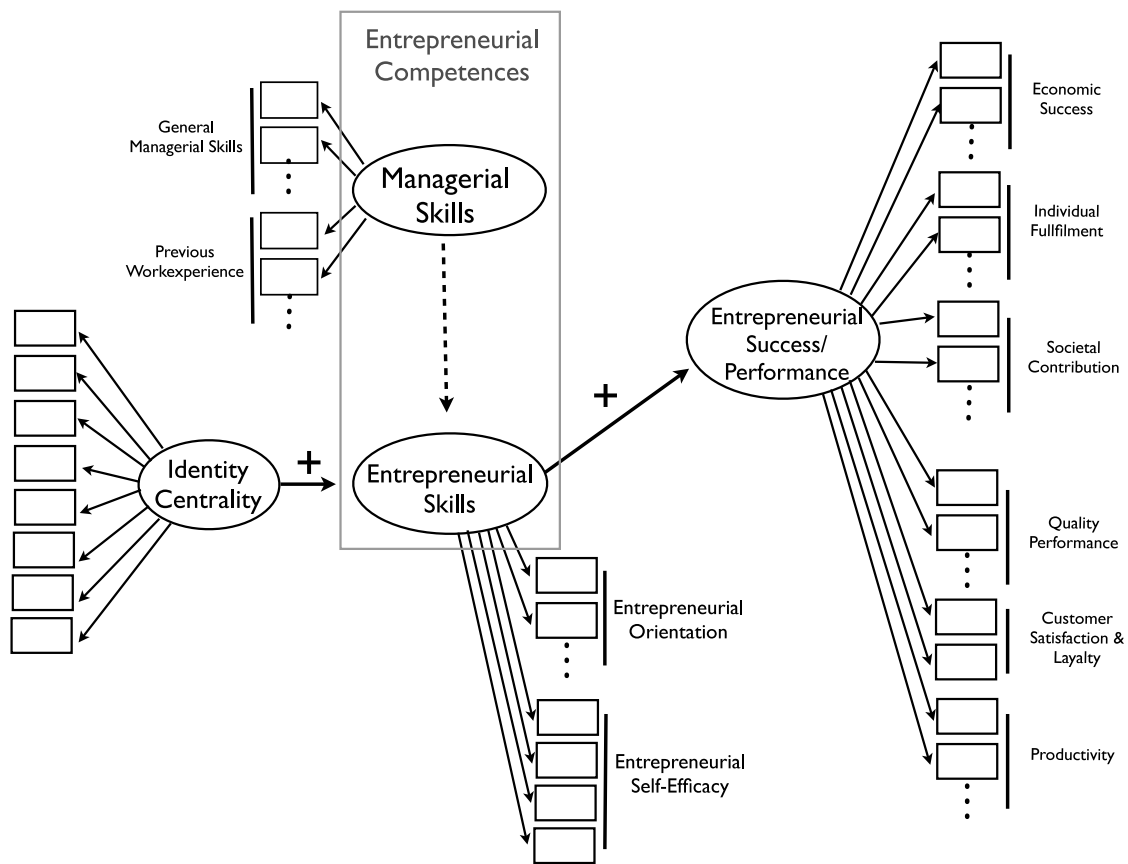


Figure 1 Developed Model for Entrepreneurial Performance.

In the following sections the specifications of the three parts of the model describing the main constructs will be explained. The measurements of the Identity centrality, the entrepreneurial competences and the entrepreneurial success as well as the control variables will be shown. Thereupon the pretest of the developed questionnaire will be explained.

1.1 The Entrepreneurial Identity

Regarding the entrepreneurial identity there were two different constructs supposed to be integrated in the model of entrepreneurial success (Interim Report No. 1).

It is theoretically shown that a high entrepreneurial *identity centrality* and *complexity* strengthen the attachment to the founder's role, which increases the motivation to realize challenging entrepreneurial activities (Hoang & Gimeno, 2010).

Regarding the identity complexity some problems occurred concerning a proper measurement of this construct. Identity complexity is measured by a card-sorting task, which is difficult to realize within the online survey.

Furthermore it is challenging to extend the model of identity complexity to the entrepreneurial context (Hoang & Gimeno, 2010). Regarding the possibilities and resources of our project we did not find yet a solution to measure the Identity Complexity in a proper manner using a quantitative approach¹.

Due to this the decision has been made to focus on the measurement of the Entrepreneurial Identity Centrality and try to measure the Centrality as accurate as possible.

Instead of measuring the identity centrality with the four-item scale used by Murnieks et al. (2014) as proposed in the first report, the centrality will be measured with a more detailed eight-item scale. This scale is adapted from Sellers et al. (1997), who invented a multidimensional inventory of black identity².

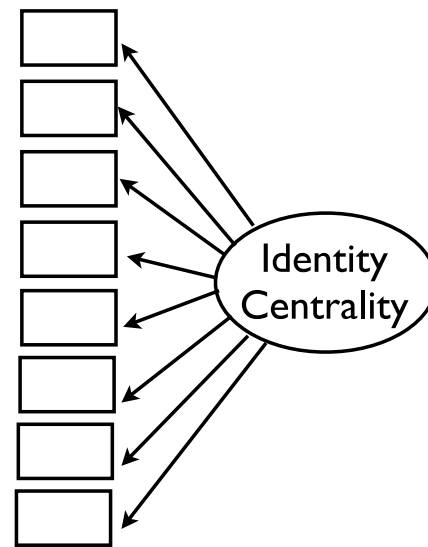


Figure 2 Measurement Identity Centrality

1.2 The Entrepreneurial Competences

To define the measurements for the entrepreneurial competences the construct itself has to be defined first. Generally competences can be defined as dispositions of self-organized action which include cognitive, emotional, motivational and social components which allow to react to a range of situations by using skills, knowledge and abilities (Weinert, 2001).

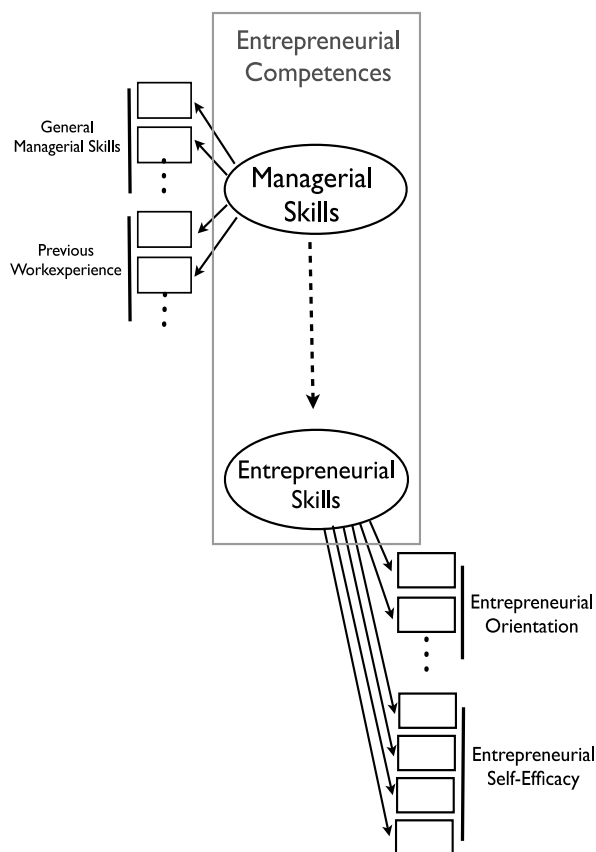
There is a distinction between competences which are subject-centered, internal, non-testable conditions and qualification which is testable knowledge and performance which are used by persons in specific actions (Weinert, 2001).

¹ We are considering a qualitative approach, after some evaluations in the fieldwork.

² All items of the questionnaire can be found in the appendix.

In the *Key Competence Framework of Lifelong Learning* the EC names the “Sense of initiative and entrepreneurship” as one main competence in the context of Lifelong Learning. The given definition is as follows:

“Sense of initiative and entrepreneurship refers to an individual's ability to **turn ideas into action**. It includes **creativity, innovation and risk-taking**, as well as the **ability to plan and manage projects in order to achieve objectives**. This supports individuals, not only in their everyday lives at home and in society, but also in the workplace in being aware of the context of their work and **being able to seize opportunities**, and is a foundation for more specific skills and knowledge needed by those establishing or contributing to social or commercial activity. This should include awareness of ethical values and promote good governance.” (EC, 2006).



Regarding this very complex definition of entrepreneurial competences the construct includes competences in the manner of cognitive dispositions as well as qualifications. On the one hand abilities “to plan and manage projects in order to achieve objectives” and on the other hand abilities like “creativity, innovation and risk-taking” as well as the ability to “seize opportunities” are mentioned in this definition.

We assume that all these abilities are needed to become a successful entrepreneur. Hence, we integrated two latent variables in the model to measure the competences. The managerial skills are covering the abilities to manage a business in general.

Figure 3 Measurement - entrepreneurial Competences

The entrepreneurial skills are covering abilities linked directly to entrepreneurship, that in the extended entrepreneurship literature are related to the concepts of Entrepreneurship Orientation (EO) and Entrepreneurial Self-Efficacy (ESE). The managerial skills are going to be measured with a scale

adapted from EU Project *Entrepreneurial learning Training Needs Analysis for SMEs* (Heder & Ljubic, 2013) next to measurements about the previous work experience in management (Baum et al., 2001; Cassar, 2014).

The implementation of a learning needs assessment, which was supposed in the last report, would have enlarged the questionnaire immensely. Even though assessments are a far more objective way to measure actual qualifications, we decided to use the self-rating scale adapted by Heder & Ljubic (2013), examining the competences from two perspectives, asking if the given competences are needed to run the business and how the women rate their own abilities. The entrepreneurial skills mentioned in the definition, like creativity, innovativeness and risk-taking are covered by the measurements of EO including market proactiveness, competitive aggressiveness, firm risk-taking and firm innovativeness (Wang, 2008) and ESE also including opportunity recognition (Zhao et al., 2005). Only the combination of “hard” managerial skills and “soft” skills like an entrepreneurial orientation can cover the complex construct of Entrepreneurial Competences.

1.3 The Entrepreneurial Success and Performance

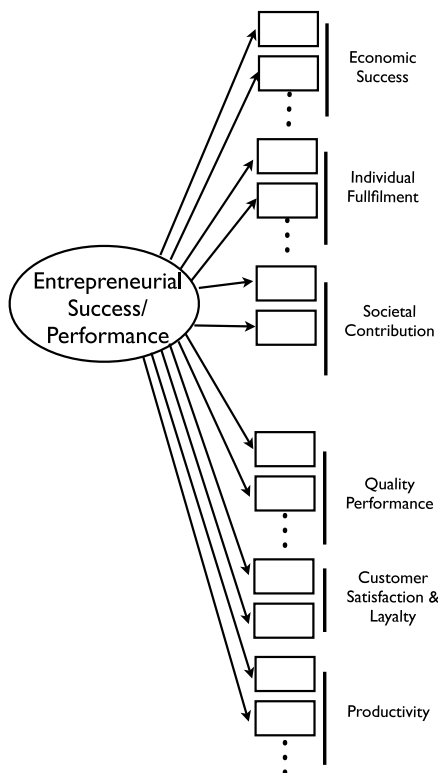


Figure 4 Measurement – Performance

The entrepreneurial success was supposed to be measured in three dimensions: An economic dimension, a dimension of individual fulfillment and a societal dimension. In order to measure the performance as detailed as possible and regarding the following surveys on the learning transfer the dimension of Organizational Effectiveness has been added to the model.

The items concerning the organizational effectiveness have been adapted from Constantine Kontoghiorghe's Organizational Effectiveness Survey. To maintain a parsimonious model that doesn't overlap some measures of EO that are predictors of performance we only include on Organizational Effectiveness items on: Quality Performance, Customer Satisfaction and Loyalty, and Productivity.



The dimensions of economic success, individual fulfillment and societal contribution will be measured with items validated by Valencia-Silva (2014). We also introduce some objective measures related the global performance of the firms in terms of employees, sales and profit growth.

1.4 Other Important Variables

The Meaning Making (Hy & Loevinger, 1996) is supposed to deliver findings for the education unit with the goal to further mental complexity. Due to its partly qualitative character it is not possible to integrate the measurement of Ego Development in a statistical model.

Differences in the performance and in the competence scores across the different stages of ego development can be identified with an Anova analysis next to other statistical operations.

The other variables not depicted in the model are the control variables. These include firm characteristics, environmental factors and individual characteristics. To measure these socio demographic variables items based on the GEM Survey have been chosen.

1.5 Survey evaluation and Pre-test

We decided to perform the data collection via web survey using Qualtrics system, a well-known stable platform used by many universities and researchers around the world.

We will perform the survey evaluation following a multiple-step protocol (Dillman et al., 2009) that included initially a full review by six key informants consisting of two scholars, two women owners and two professionals not direct involved in any entrepreneurship activity to gain an “outsider” objective evaluation. With this feedback we are incorporating an improvement and simplification of the questionnaire. Following this step, we will use a group of women small businesses owners in Chile to make a pilot-tested of the survey to assess the on-line platform that facilitated the conduct of the study. After this pilot test, we can refine some questions. This procedure will be in the first week of September.



We will follow recommendations to avoid the potential common method variance bias to the survey approach (Hair, Anderson, Tatham, & Black, 1995) and we will follow the suggestions by Podsakoff, Mackenzie, Lee, and Podsakoff (2003), changing the independent and dependent variables in different sections of the questionnaire.

The Questionnaire has been translated to German and back translated to English. In the following days the original items will be compared with the back-translated version to finalize the German translation. We expect to have the final validated instrument at the end of September ready to use a German version.

2 Further Steps

The further steps to be taken are concerning the following tasks:

Task 2.6: Implement the online survey and collect primary data

Task 2.7: Collect the secondary data from GEM Data and GEM related sources

Task 2.8: Analyze the data, discuss and integrate the results

Task 2.9: Develop the competence matrix

Task 2.10: Develop the political policy goals

We will implement the online questionnaire and it will be distributed to women entrepreneurs in Germany and Ireland by our associated partners. The collection of secondary data from GEM has already started and the data is prepared to be evaluated in terms of our survey.

In the following months several secondments by UDD (11 secondment months in total) and 3s (1,25 secondment months) to FSU will take place to analyze and discuss the data, to write papers (Deliverable 2.2) and to develop the competence matrix and the political policy goals.

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Appendix – The Questionnaire

Socio-Demographics Variables

Individual characteristics:

- Age
- Education Level
- In what country were you born?
- What is your nationality?
- What is your civil status?

Single

Cohabiting / living in a committed relationship

Married

Widowed

Divorced

Firm Characteristics

Year of foundation

How many people, including yourself, founded the firm? (owners and manager this business)

How many people, including yourself, are current owners and manager of this business.

Not counting the owners, how many people start working for this business? Please include all exclusive subcontractors, meaning people or firms working ONLY for this business and not working for others as well

Not counting the owners, how many people are currently working for this business? Please include all exclusive subcontractors, meaning people or firms working ONLY for this business and not working for others as well.



What kind of business is this? What is it selling? How would it be listed in a business directory, such as the phone book yellow pages? (WRITE THE MOST COMPLETE POSSIBLE DESCRIPTION OF THE BUSINESS.)

Did you become involved in this firm to take advantage of a business opportunity or because you had no better choices for work?

- Take full advantage of business opportunity (ask the next question)
- No better choices like employee
- Combination of both
- I have a job but I am seeking better opportunities
- Other
- Don't know
- Refused

Which one of the following motives was the most important for pursuing this opportunity?

- Greater independence
- Increase personal income
- Just to maintain income
- None of these (SPECIFY)
- Don't know
- Refused



Entrepreneurial Identity

Identity centrality

Scale: 1-5 (strongly disagree to strongly agree)

- Overall, being an entrepreneur has very little to do with how I feel about myself
- In general, being an entrepreneur is an important part of my self-image.
- My destiny is tied to the destiny of other entrepreneurs.
- Being an entrepreneur is unimportant to my sense of what kind of person I am.
- I have a strong sense of belonging to entrepreneurial people.
- I have a strong attachment to other entrepreneurial people.
- Being an entrepreneur is an important reflection of who I am.
- Being an entrepreneur is not a major feature in my social relationships.



Ego Development

Sentence Completion Test (For Women)

Instructions: complete the following sentences.

- When a child will not join in group activities...
- Raising a family....
- When I am criticized...
- A man's job...
- Being with other people...
- The thing I like about myself is...
- My mother and I...
- What gets me into trouble is...
- Education...
- When people are helpless...
- Women are lucky because...
- A good father...
- A girl has a right to...
- When they talked about sex, I...
- A wife should...
- I feel sorry...
- A man feels good when...
- Rules are...



Entrepreneurial Competences

Managerial Skills

Next is a list of managerial skills that you need to evaluate in two dimensions:

1. What is the degree of relevance that you consider for your actual business?
2. Are you competent to carry out these activities properly?

	Relevant for your actual business	Do you have this competence
Know and manage technological changes		
Develop innovative product/service		
Manage changes in production or market needs		
Increase production/service request		
Decrease production costs		
Manage general marketing strategies		
Manage sales strategies		
Access to finance and capital		
Need to improve quality		
Manage the increase of customer/consumer complaints		
Understand government regulations changes		
Deal with the increase of competition		
Meeting international standards of production (products/services)		
Managing with the attitudes and working behavior of employees		
Hire skilled work force-competent and experienced employees		
Manage safety and health regulations		
Manage environmental/social factors		
Manage financial planning		



Administrative accounting		
Managing ICTs		

Previous professional-entrepreneurial experience.

- Do you have experience in management?
 - o Number of years of experience in management positions prior to the creation of your company?
- Do you have experience in the same industry in which your company is?
 - o Number of years of experience in the same sector?
- Do you have previously founded a company?
 - o How many?
 - o In case if you have founded a company previously, it (they) is continue operating?
- Have you participated in an entrepreneurial process being advisor or employed (without ownership or partnership)?

Entrepreneurial Skills

Entrepreneurial Orientation

Respondents need to range from 1, “strongly disagree” to 5, “strongly agree”

- PR1 In general, my firm favors a strong emphasis on Research and Development, technological leadership, and innovations.
- PR2 In the past three years, my organization has marketed a large variety of new lines of products or services.
- PR3 In the past three years, changes in the products or service lines have been mostly of a minor nature. (Reverse coded)
- AG1 In dealing with competitors, my organization often leads the competition, initiating actions to which our competitors have to respond.



- AG2 In dealing with competitors, my organization typically adopts a very competitive posture aiming at overtaking the competitors.
- RK1 In general, my organization has a strong propensity for high risk projects (with chances of very high return).
- RK2 I believe owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve our organization objectives.
- RK3 When there is uncertainty, my organization typically adopts a “wait and see” posture in order to minimize the probability of making costly decisions. (Reverse coded)
- IN1 Management actively responds to the adoption of “new ways of doing things” by main competitors.
- IN2 I am willing to try new ways of doing things and seek unusual, novel solutions.
- IN3 I encourage people to think and behave in original and novel ways.

Entrepreneurial Self-Efficacy

Please evaluate your confidence in perform successfully these statements

Scale: Likert scales (1-7 wher 1 no confidence to 7 complete confidence)

- I can recognize business opportunities
- I can create and develop new products and services
- I can think in creative way to solve problems
- I can commercialize an idea or new development



Entrepreneurial Success/Performance

Organizational Effectiveness

Quality Performance

1. I am satisfied with how our processes contribute to producing quality products and/or services.
2. No rework is needed for the products or services we produce.
3. The products or services produced in my firm meet established specifications.
4. The products or services are delivered to our customers on-time.

Customer Satisfaction & Loyalty

5. Our customers are satisfied with the quality of the products/services we provide.
6. Our customers are loyal to our products or services.

Productivity

7. The amount of work produced by our collaborators always exceeds expectations.
8. In my firm the products or services are produced in a very cost effective manner.
9. Our operations are as efficient as they can be.
10. Overall, the productivity performance of my firm always exceeds expectations.

Overall Performance

How do you rate the performance of your firm performance over the last three years in the following indicators? (Scale: = 1 decreasing significantly to 5 increasing significantly)

- The sales
- The profits
- Market share
- The products or services offered
- Overall results
- Complacency and personal satisfaction
- Provide self-esteem, self-confidence to you.
- Provide Personal quality of life
- Enhance your family relationship
- Enhance your emotional-affective relationships
- Reconciling with your professional and personal life
- Enhance social relationships
- Provide public visibility
- Contribution to society

Economic performance: four items: 'sales', 'profit', 'market share' and 'global results'. The four items were averaged. Cronbach's alpha = 0.866.

Individual performance: We used six items: 'personal satisfaction', 'self-confidence, self-esteem', 'quality of personal life', 'relation with the family', 'affective relation' and 'professional and personal life conciliation'. The items were averaged. Cronbach's alpha = 0.871.

Social performance: 'Quality of products and services', 'social relations', 'public visibility' and 'contribution to society'. The four items were averaged. Cronbach's alpha = 0.703.

Alphas reported by original source.