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Leveraging Entrepreneurship Training and the Impact on SMEs Performance, A Case of Lombardy Region (Italy) and the State of Berlin (Germany)

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Abstract:

Given the fact that SMEs constitute 99% of all companies in the EU, the skills, productivity and innovation of SMEs employees are crucial prerequisites for the sustainable success. However, the training status of SMEs is characterised by a paradox.

On the one hand, continuous/lifelong learning among staff are considered as vital elements of competitiveness and on the other hand, statistics show that continuous training and qualification are less likely to be available to employees working in SMEs than to those in large enterprises.

The theoretical inquiry in this thesis was driven by the primary research question: how can SMEs managers direct specific forms of training namely entrepreneurship training to promote economic performance of their enterprises? Moreover, the thesis illustrates how training and skills development could successfully be developed and implemented in small and medium-sized companies despite both the internal and external barriers SMEs face in this context.

The first chapter attempts to analyse the training structure of small and medium sized enterprises in Italy and Germany, drawing on official statistics of CVET survey at Eurostat. In the second and third chapter, the thesis set out with the concept of entrepreneurship explaining entrepreneurship training (activities) in SMEs. Subsequently based on the collected primary data it explored the status of training in each country discussing strategies concerning content and the methods of training used in each country.

The main results of the thesis indicate that, while German SMEs more rely on in-house and informal learning approach, Italian SMEs predominantly tend to provide formal training, which is offered by external providers. Consequently, the present research study, by outlining some guidelines and a comparative analysis of the results obtained, tries to help Italian SMEs to achieve a better competitive performance.

Chapter 1

Training:
Structure and the Impact on Skills Development in SMEs

Summary: 1.1. Introduction – 1.2. Areas of Training in SMEs – 1.2.1. Entrepreneurial Skills– 1.2.2. Management Skills – 1.2.3. Technical Skills – 1.3. Methods of Training Provision – 1.3.1. Formal Set of Training – 1.3.2. Informal Set of Training – 1.3.2.1. On-the-Job Training – 1.3.3. In-house Training – 1.3.4. External Training – 1.4(a). Process of Training Provision in SMEs – 1.4. Outcomes from Participating in Training – 1.4.1. The Impact of Training on SMEs Performance – 1.5. Barriers to Training Provision in SMEs – 1.5.1. Access to Finance: Equity Capital, Venture Capital.

1.1. Introduction

This chapter attempts to analyse the training structure of small and medium sized enterprises in Italy and Germany, drawing on official statistics of CVET survey at Eurostat. Given that training activities, especially those activities leading to formal qualifications are easier to be captured by official statistical collections, this chapter concentrates more closely on them. The advantage of using Eurostat data is that the statistics are harmonised and comparable across both countries, despite the fact that in some cases the data may be different from those published by national authorities.
Moreover, this chapter by employing CVET survey not only monitors the structure of training provision in SMEs for the reference years of 2005 and 2010 but creates first ideas and broad picture that allows to estimate the operation of entrepreneurship training activities in small and medium sized enterprises (namely the areas of management, technical and entrepreneurial skills) see e.g: CEDEFOP, 2009. *Potential use of existing international surveys: Continuous Vocational Training Survey,* available online at: http://www.cedefop.europa.eu/files/4497-att1-1-Jouhette_Potential_use_of_existing_international_surveys.pdf(accessed December 31, 2014).
It is worth to mention that the integration of entrepreneurship training in CVET programs has already increased over the last decade in the European Union. In the United States and Canada many approaches to entrepreneurship training are embedded in CVET programs. Therefore, this training structure analysis can be used as a proxy to predict the future status of entrepreneurship training in small and medium sized enterprises in both Italy and Germany, see e.g: CEDEFOP, 2009. *Potential use of existing international surveys: Continuous Vocational Training Survey,* available online at: http://www.cedefop.europa.eu/files/4497-att1-1-Jouhette_Potential_use_of_existing_international_surveys.pdf(accessed December 31, 2014).
Further analysis on the status of entrepreneurship training in small and medium sized enterprises in Italy and Germany is provided in detail by primary data in the next chapter.

1.1.1 Benefits of CVET for enterprises

According to numerous reports (e.g. see: Cedefop 2011a; 2011b; 2012b) CVET has a positive impact on the economic performance of enterprises (Cedefop 2011a; 2011b;

2012b). Majority of these studies put productivity in the limelight denoting enterprises that do not invest in training report lower productivity and profitability than those that do. There are different justifications for this; for instance, CVET increases job satisfaction, which, in turn, leads to productivity-enhancing behavior by reducing employer costs (such as lowering recruitment costs through improved labour retention) and increasing output (for example, by workers putting in more effort)' (Cedefop, 2012b, p. 9). It is worth noting that positive effects of CVET are not limited to increased productivity, but also persist across other performance indicators such as quality, innovation and employment growth (Cedefop, 2011b) which are measured in detail in the next chapter.

1.1.2. Definition: CVET and Other Forms of CVET in SMEs

According to Cedefop (European Centre for the Development of Vocational Training) and Tissot (2004), Continuing VET (CVET/CVT) is the main pillar of lifelong learning that can be defined as all 'education or training after initial education and training – or after entry into working life – aimed at helping individuals to: (a) improve or update their knowledge and/or skills; (b) acquire new skills for a career move or retraining; (c) continue their professional development'.
Therefore, people employed holding an apprenticeship or training contract should not be taken into consideration for CVET. Random learning and initial vocational training (IVT) are explicitly excluded. CVET measures and activities cover both CVET courses and other forms of CVET.
CVET courses (formal set of training) typically clearly separated from the active workplace taking place in locations specially assigned for learning like a classroom or training centre and clearly separated from the active workplace. They show a high degree of organisation (time, space and content) by a trainer or a training institution. Two distinct types of CVET courses are identified: ***internal*** and ***external***, taking place in the company or outside but it is usually the company that pays for provision and it usually takes place during regular working hours. CVET courses are promoted by the "Career Advancement Training Promotion Act" (AFBG, known as "Meister-BaföG") in Germany and in Italy by Laws 236 and 53.
The content is designed for a group of learners (e.g. a curriculum exists) and mainly includes all the three areas of entrepreneurship training namely technical, management and entrepreneurial skills, despite the fact that the program does not label them as ET activities. The audience of CVET courses are not only people who have recently lost their jobs, but also to employed workers under certain circumstances. Table 1.1 for instance illustrates the different CVET providers and the relevant audience for each in Germany.
Other forms of CVET (informal set of training) on the other hand are typically connected to the active work and the active workplace, but they can also include participation (instruction) in conferences, trade fairs etc. for the purpose of learning. These other forms of CVET are often characterised by a degree of self-organisation (time, space and content) by the individual learner or by a group of learners. The content is often tailored according to the learners' individual needs in the workplace. The following types of other forms of CVET are identified: Planned training through guided-on-the-job training; Planned training through job rotation, exchanges, secondments or study visits; Planned training through participation (instruction received) in conferences, workshops, trade fairs and lectures; Planned training

through participation in learning or quality circles; Planned training through self-directed learning/e-learning (http://ec.europa.eu/eurostat/cache/metadata/en/trng_cvts_esms.htm). CVET can be further developed and classified based on ways training courses are funded by **individuals**, by **public authorities**, or by **enterprises**.
This chapter is centred on the third category of Continuing VET aiming at enterprises training which is partially or wholly funded by companies, and/or undertaken by staff as part of their paid employment. To have a better insight on the topic, the thesis focuses on one of the main references in this area providing data on Continuing VET in enterprises in Europe, called "**Continuing Vocational Training Survey**", **CVTS** for short. In this chapter, we try to get advantage of the available data in order to provide a comprehensive analysis and understand better the ET status in SMEs in both Italy and Germany.

Table 1.1: Providers of CVET in Germany

CVET Providers	Type of Occupation (Audience)
State CVET institutions, i.e., colleges of continuing education sponsored directly by the state, which offer provision for public employees. The most significant of these are the in-service training courses for teachers run by the Länder.	Teachers
Community adult education centres (Volkshochschulen): these exist throughout the country.	• Unpaid volunteers, • People that teach a few hours aside from their normal job (often school teachers), • Freelance workers that sell their courses on a commercial basis.
Chambers of industry and commerce, and of craft trades and agriculture, which offer a broad range of CVET and contribute particularly to the professionalisation and training of the workforce by recognising qualifications.	Subject specialist with varied specific educational qualification (full-time, part-time, freelance)
Company-based CVET. Many large companies have built up their own internal training centres.	Company employees (full-time, part-time or volunteer 1. Certified educators/trainers in initial and continuing vocational education, Certified educators/trainers in professional education
The German Federation of Trade Unions (DGB) maintains the largest institutions of vocational continuing education.	Subject specialists with varied specific educational qualification (full-time, part-time, freelance)
Commercial CVET institutions, whose number and range of provision have grown considerably. They target those who can pay, particularly in the areas of foreign language teaching and data processing, and take an active part in competing for public funds, notably under the Employment Promotion Act.	Employees and freelance subject specialist
Institutes of distance education.	Employees and freelance subject specialist
Training organisations of the various economic sectors, which organise vocational and industrial continuing education, especially in SMEs.	Employees and freelance subject specialist
Higher education institutions, which have an obligation to CVET under the Basic Higher Education Act. Some 30 higher education institutions and vocational higher education institutions have their own CVET centres. Many offer CVET in cooperation with other providers, trade unions and employers.	Teachers

Source: https://www.deqa-vet.de/_media/PDF_allgemein/DE_Country_Report_2012.pdf

Given the definitions of continuing vocational training (formal set of training) and other forms of continuing vocational training (informal set of training) provide a better understand on the following sections.

1.1.3. Main Statistical Findings

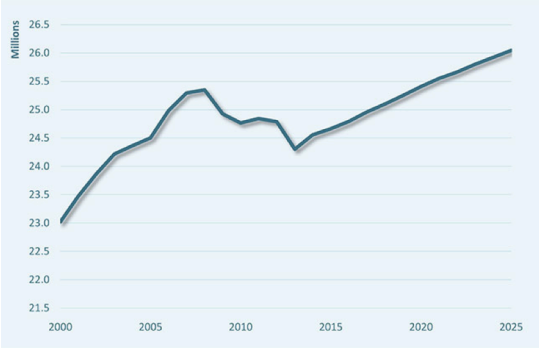
1.1.3.1. Company Size and Training Activities in SMEs

One of the main determinants of the participation level in workforce development such as training and skills upgrading activities is company size. SMEs across OECD member countries persistently participate 50% less in training coureses than large enterprises but instead, they are more willing to participate in knowledge intensive activities so that learning new techniques or new methods to operate. The latter includes learning through interaction with experts, consultants and clients; or participation in conferences, meetings and internal activities such as quality control activities. These activities although do not offer standard training certificates or formal recognised qualifications but tend to benefit the higher educated staff members as well as managers and business owners.

According to Cedefop's skills supply and demand forecasts roughly seven million jobs net, especially marketed services will be generated in Europe by 2020. Figure 1.1a shows the past and forecast employment 2000-2025 in Italy and Germany. The great majority of these new jobs are going to be in knowledge and skills intensive professions, denoting that the demand and need for skills (including formal training and qualifications) will keep on growing (Cedefop, 2010). Acknowledging the growing significance of more and more skills is in contrast to the fact that firms with less than 50 employees provide considerably less employee training than larger enterprises (OECD, 2013). T his is even the case for countries such as Denmark, the Netherlands, Norway and Sweden, which are recognised for their strong training cultures.

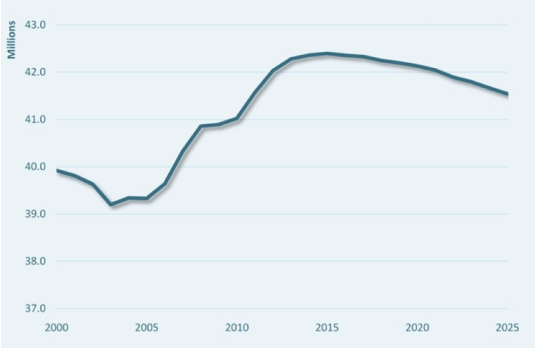
Figure 1.1a: Past and forecast employment up to 2025 in Italy and Germany, 2000-2025

Past and forecast employment, Italy (Millions)



Source: Cedefop (2015), Italy: Skills forecasts up to 2025,http://www.cedefop.europa.eu/printpdf/publications-and-resources/country-reports/italy-skills-forecasts-2025

Past and forecast employment, Germany (Millions)



Source: Cedefop (2015), Germany: Skills forecasts up to 2025,http://www.cedefop.europa.eu/printpdf/publications-and-resources/country-reports/germany-skills-forecasts-2025

1.1.3.2. Employees Participation

1.1.3.2.1. Employees Participation in Continuing Vocational Training CVET

(All enterprises - Formal Set of training)

This section looks at the percentage of **employees** *(all enterprises)* participating in CVET courses, by size class in Italy and Germany. The data presents in this section looks at the participation rate regardless of training location. Table 2.1 demonstrates, there is up to 7% gap in both countries in the percentage of participation in 2010. In addition, the participation rate *depends on firm size*, as the gap is bigger in small firms than medium sized enterprises in both countries (see e.g. Figure 1.1).

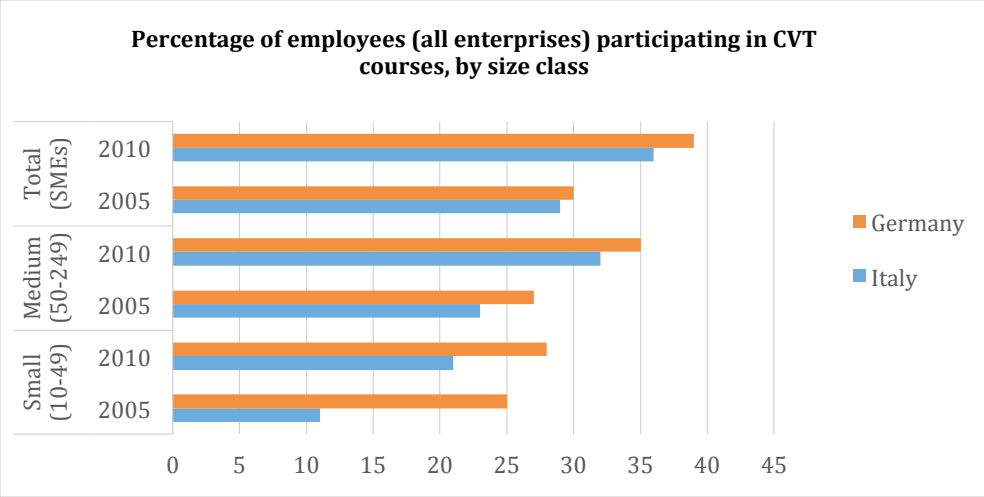
Table 2.1: Percentage of employees (all enterprises) participating in CVET courses, by size class

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	11	21	23	32	29	36
Germany	25	28	27	35	30	39

Source: Own elaboration on Eurostat data [trng_cvts42], Update 25-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

In both countries, the employees' participation rate regardless of the size of firms is approximately less than 40%.
To compare Italy and Germany in terms of employees' *(all enterprises)* participation in CVET courses, it should be mentioned at all level, Germany performs better than Italy while the gap is wider for small enterprises in both countries in 2005 and 2010.

Figure 1.1: Percentage of employees (all enterprises) participating in CVET courses, by size class



Source: Own elaboration on Eurostat data [trng_cvts42], Update 25-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

1.1.3.2.2. Employees Participation in Continuing Vocational Training CVET

(Only enterprises with CVET courses- In-house training)

Having looked at the participation rate of employees at CVET courses, it is worth to take a look at the percentage of employees *(only enterprises with CVET courses)*

participating in **in-house training**, by size class in Italy and Germany. Figure 2.1 demonstrates, despite the national differences in the percentage of participation, the gap is very small, generally less than 5%. In addition, the participation rate *does not depend on firm size*, as it is more or less the same either in small or medium sized enterprises in both countries. In both countries, the employees' participation rates regardless of the size of firms is approximately less than 50% and above 40%, see Table 3.1.

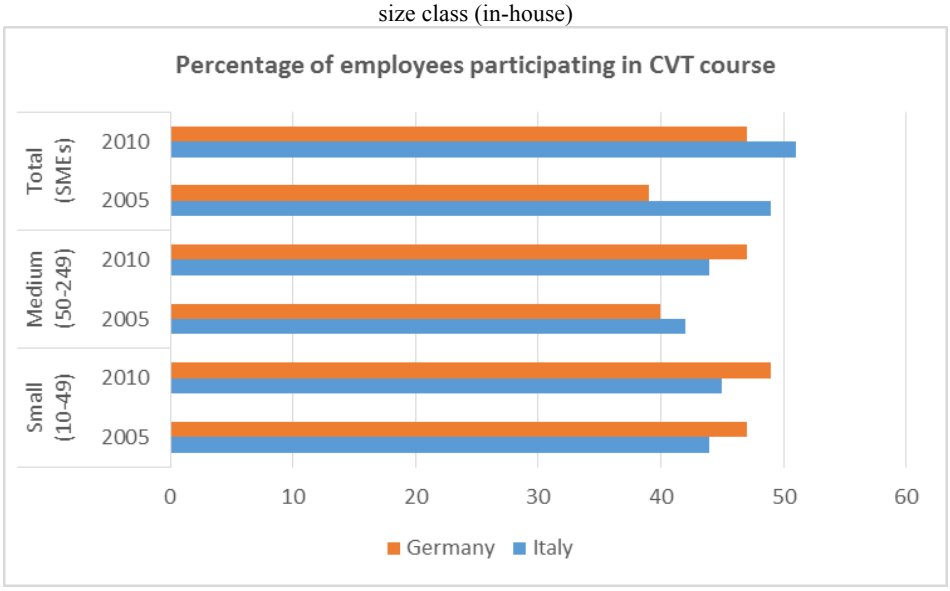
Table 3.1: Percentage of employees (only enterprises with CVET courses) participating in CVET courses, by size class (in-house)

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	44	45	42	44	49	51
Germany	47	49	40	47	39	47

Source: Own elaboration on Eurostat data [trng_cvts46], Update 25-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

To compare Italy and Germany in terms of employees' participation in CVET courses (in-house training) it should be mentioned at the small and medium-ranged enterprises, Germany performs slightly better while the employees' participation rate in average in Italian SMEs is better than German counterpart in 2010.
Increasing the participation rate of in-house training remains a challenge in both countries that will be focused later on the recommendation section.
In is worth to note that employees' participation at other forms of training (informal set of training) and external CVET training are among the other interesting charts that are not covered by the current status of CVET survey data at Eurostat.

Figure 2.1: Percentage of employees (only enterprises with CVET courses) participating in CVET courses, by size class (in-house)



Source: Own elaboration on Eurostat data [trng_cvts46], Update 25-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

1.1.3.2.3. Employees Participation in Other Forms of Continuing Vocational Training CVET

(All enterprises – Informal set of training (On-the-job training))

This section looks at the percentage of **employees** *(all enterprises)* participating in other forms of CVET courses, namely "**guided on-the-job training**" by size class in Italy and Germany. Table 4.1 demonstrates that the participation rate of employees in "guided on-the-job training" at all size of enterprises in Germany is at least two times more than Italy for the reference year of 2005 and 2010. In addition, the participation rate *depends on firm size*, as the gap is bigger in small firms than medium sized enterprises in both countries (see e.g. Figure 3.1). In both countries, the employees' participation rate regardless of the size of firms is approximately less than 30%.

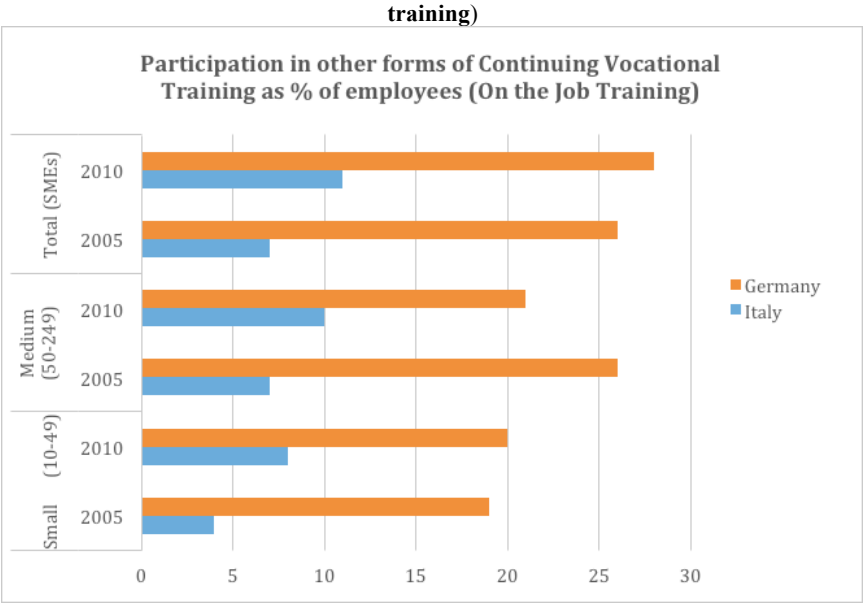
Table 4.1: Participants in other forms of CVT as a percentage of employees in all enterprises (**on-the-job training**)

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	4	8	7	10	7	11
Germany	19	20	26	21	26	28

Source: Own elaboration on Eurostat data [trng_cvts50], Update 03-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Given the classification of training in the literature review, a range of skills from entrepreneurial skills to technical and management skills need to be assessed in SMEs. The next section does not classify the areas of training and only reviews the available data on training in Italy and Germany, as it is not possible to draw on the official statistics of CVT survey 2005 and 2010 such classification. Further details on the categories of training will be provided in the next chapter as we analyse the result of primary data on entrepreneurship training in SMEs in both countries.

Figure 3.1: Participants in other form of CVT as a percentage of employees in all enterprises (**on the job training**)

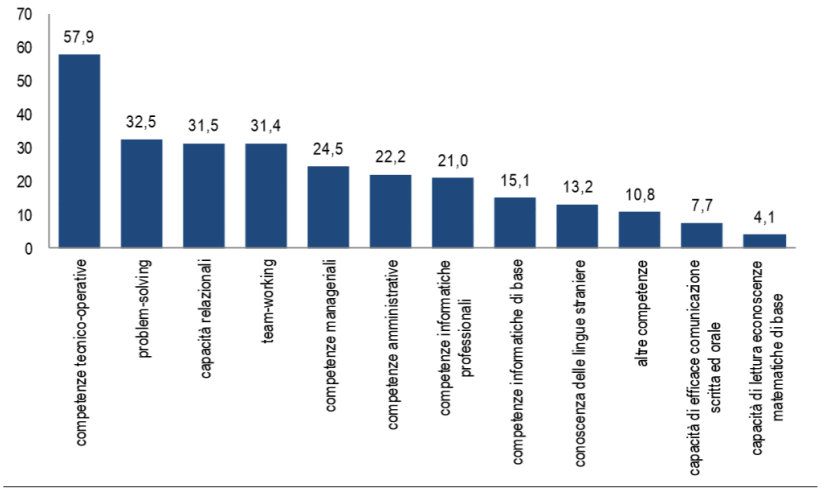


Source: Own elaboration on Eurostat data [trng_cvts50], Update 03-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

1.2. Areas of Training in SMEs

According to ISTAT (2013) report on training in small medium sized enterprises in Italy, majority of enterprises in the reference year of 2010 explained that they felt a duty to develop or improve their operations through staff training. The data collected show the common areas of training despite a partial gap between the answers, as they give different order and degree of importance to different competences. The responses from enterprises reward the strengthening of "**technical and operational skills**" (57.9%) followed by managerial skills, which relate to specific tasks that individual employees are asked to perform.
Figure 4.1 lists the other areas of training provision including problem solving skills (32.5 %), relational (interpersonal) skills (31.5%), team working (31.4%) and managerial skills (24.5%). The basic computer skills ranked in seventh place, indicated by approximately 15% of the companies. There has been, ultimately, different behaviours between macro-economic activities in which SMEs operate. In the industrial and construction sectors for instance, skills that the majority of companies provide includes technical-operational skills (respectively 59.6% and 68.3%) followed by the skills related to problem solving (32.0% and 27.1%). Even in the service sector the most appropriate skill is technical and operational (52.5%), but the second most important are social skills (41.2%). The latter, the majority indicated in the banking sector (69.6%), followed by the operational capabilities (56.8%).

Figure 4.1: Skills in the process of development for enterprises with at least 10 employees. Year 2010 (%),



Source: ISTAT, 2013, Anno 2010 la formazione nelle imprese in Italia
http://www.istat.it/it/files/2013/08/La-formazione-nelle-imprese.pdf?title=Formazione+nelle+imprese+-+01%2Fago%2F2013+-+Testo+integrale.pdf

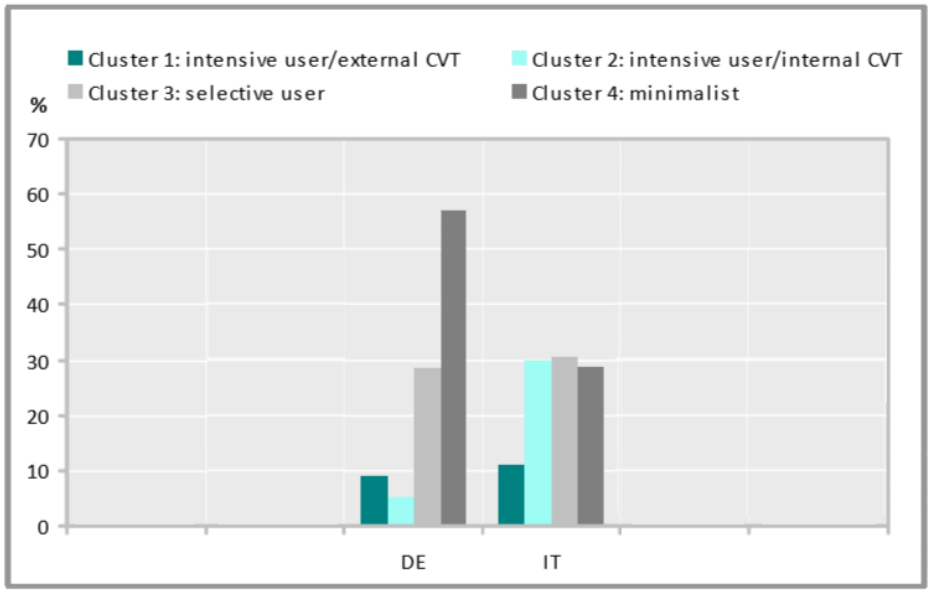
Given the classification of training in the literature review, Italy focus on two sets of skills namely technical and managerial skills, however there is no focus on the development of entrepreneurial skills for instance creativity, innovation; risk taking; proactivenss; inner control, self-discipline, and autonomy of employees.
In Germany instead, the "dual" system of training, which is mainly driven by small and medium-sized companies, has proven its worth. The system creates four out of every five training places in Germany with covering all three sets of skills. German SMEs are also supported in this task by the chambers.

1.2.1. Entrepreneurial skills (Classification is not applicable to the CVET survey data)
1.2.2. Management Skills (Classification is not applicable to the CVET survey data)
1.2.3. Technical Skills (Classification is not applicable to the CVET survey data)

1.3. Methods of Training Provision

According to CEDEFOP (2010)[1] the provision of training is divided to four subgroups describing the methods of CVET provision at enterprise level:
Cluster 1: enterprises with highly formalised CVET provision and a focus on external training (**intensive users with external training**);
Cluster 2: enterprises with highly formalised CVET provision and a focus on internal training (**intensive users with internal training**);
Cluster 3: predominantly output-oriented evaluators (**selective users**);
Cluster 4: the minimalists in formalisation.
Figure 5.1 shows that the clusters 3 and almost 4 are the largest in both countries when the shares of all training enterprises are between 29 % (Germany) and 31 % (Italy) for cluster 3 and 29 % (Italy) and 57 % (Germany) for cluster 4. Together, selective users and minimalists represent a total 59 % (Italy) and 86 % (Germany) of training enterprises.

Figure 5.1: Cluster distributions of methods of CVET provision by country in 2005



Source: CEDEFOP (2010), Employer-provided vocational training in Europe
http://www.cedefop.europa.eu/files/5502_en.pdf
NB: Values used for the cluster analysis refer to the summation of the two answers 'always' and 'often' of a fourpoint-scale or the answer 'yes' of binary scales for questions D1 to D11.

Using external CVET (Cluster 1) in the reference year 2005 in both countries is not significant as they are 9% (Italy) and 11% (Germany). On the other hand, when in Germany, there is a lack of internal CVET (5%) - Cluster 2- Italy enjoys a moderate rate of 30%.

[1] CEDEFOP (2010), Employer-provided vocational training in Europe

Furthermore, given the methods of training provision in the literature review, the four main methods in small and medium sized enterprises include formal set of training; informal set of training; in-house and external training. The following sections discuss the rates of training provision by these methods in SMEs in both Germany and Italy. The following results draw on the official statistics of CVET survey at Eurostat.

1.3.1. Formal Set of Training (SMEs Participation in Continuing Vocational Training)

1.3.1.1. Off-the-Job Training

This section looks at the percentage of *all enterprises providing CVET courses*, by type of course and size class. Table 5.1 illustrates the provision of CVET courses for both CVTS surveys in 2005 and 2010. There is gap between the overall rate of provision in both Italy and Germany for SMEs between the two surveys. The CVTS survey in 2010 indicates how this trend evolved and what the financial crisis' impact on provision rates was.[2]
Figure 6.1 depicts that in general both countries experience an increase in the provision of CVET courses (formal set of training) from 2005 to 2010 at all size class. Besides, in Germany a higher percentage of enterprises offer CVET courses compared Italy and the number of courses approximately are more broaden than Italy. The CVTS survey in 2010 indicates how this trend evolved and the financial crises influenced participation rates.[3] Small firms have the lowest participation rates in CVET across both countries.

Table 5.1: Percentage of all enterprises providing CVET courses, by size class

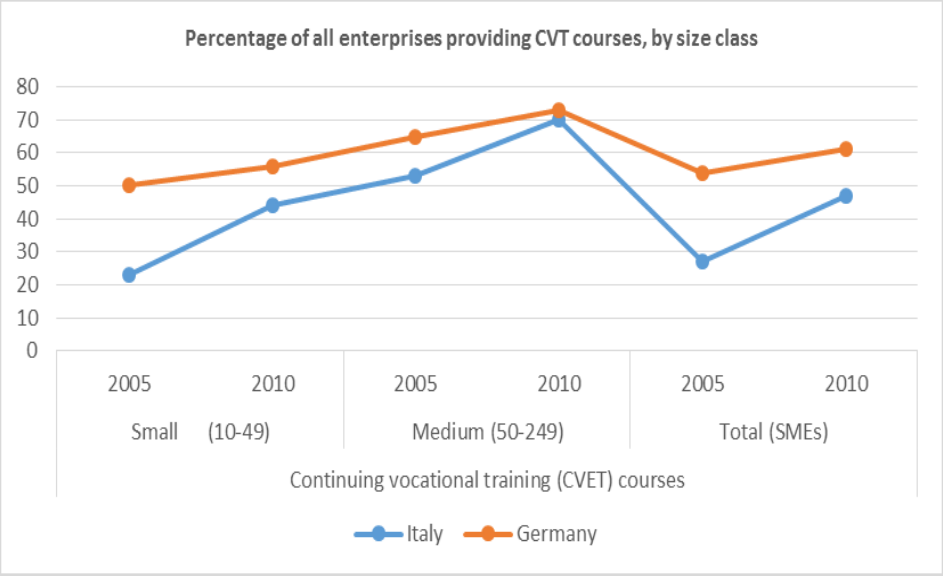
Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	23	44	53	70	27	47
Germany	50	56	65	73	54	61

Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

There exist significant disparities between the CVET participation rates of enterprises depending on the size of the enterprise in both countries.
Furthermore, the results of the analysis of the CVTS3 data (see Table 5.1 and Figure 6.1) show in Italy small enterprises offering CVET courses, almost doubled from 23% in 2005 to 44% in 2010. Instead, in Germany 56% of small enterprises in 2010 listed as undertaking CVET courses compared to 50% in 2005. The results also highlight the gap between medium and small sized enterprises in undertaking CVET courses. In 2010, Italy has the moderate rate of 70% of medium ranged enterprises providing CVET, when Germany had slightly better rate of 73%. These rates in 2005 were 53% and 65% respectively. Finally, the total rate of CVET in SMEs in both countries display a higher level of participation in Germany with 61% respect to 47% in Italy.

[2] At the time of developing the thesis, data from the 2015 CVTS is not available. However, data illustrated here is still a valid source of trends in SMEs' participation in training.
[3] At the time of developing the thesis, data from the 2015 CVTS, is not available. However, data illustrated here is still a valid source of trends in SMEs' participation in training

Figure 6.1: Percentage of all enterprises providing CVET courses, by size class



Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

1.3.2. **Informal Set of Training** (SMEs Participation in Other Forms of Continuing Vocational Training)

The analysis of CVTS survey about the other forms of continuing vocational training by size of firm in Italy and Germany shows the detail of informal training provision in small and medium sized enterprises during the reference years 2005 and 2010. Figure 7.1 illustrates the percentage rate of firms participating in "other forms of continuing vocational training (CVET)" by size of firm in Italy and Germany. Small firms have the lowest participation rates across both countries. There is, however, significant difference between the "other forms of continuing vocational training (CVET)" participation rates of firms depending on the size of the firm in both countries. From analysis of the CVTS3 data (see Table 6.1 and Figure 7.1), in the small firm category, however, Italy almost doubled the participation in informal set of training (other forms of CVET) from 2005 to 2010 but still it had recorded a very low level of "other forms of continuing vocational training (CVET)" participation, with only 38% of small firms engaging in informal set of training in 2010 with respect to 17% in 2005. Germany recorded a very small change from 63% in 2010 of small firms listed as undertaking other forms of CVET compared to 62% in 2005.

Table 6.1: Participation in any type of other forms of continuing vocational training (CVET)

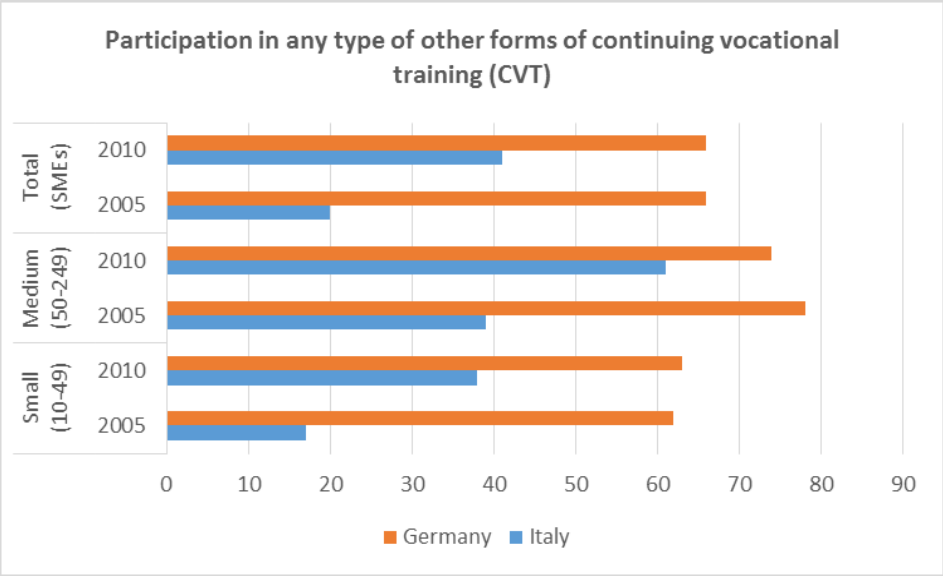
Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	17	38	39	61	20	41
Germany	62	63	78	74	66	66

Source: Own elaboration on Eurostat data [trng_cvts02], Update 03-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

For medium sized firms, the rate of participation in other forms of CVET increases. In 2010, Italy had the moderate rate of participation with only 61% of medium sized firms in the CVTS nominating that they participated in other forms of CVET, when

Germany had better rate of (74%). These rates in 2005 were 39% and 78% respectively. Finally, the total rate of other forms of CVET in SMEs in both countries display a higher level of participation in Germany with 66% respect to 41% in Italy. These results suggest two main findings.

Figure 7.1: CVET Training course by Size of company



Source: Own elaboration on Eurostat data [trng_cvts02], Update 03-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

First of all, the CVET participation rates in small firms are affected strongly by country specific variables, potentially policy mechanisms. However, this is more significant in Italy than Germany. Furthermore, the higher participation of medium-sized enterprises in undertaking CVET courses emphasises the impact of organisation size and country specific variables. For instance, once firms become a certain size (more than 50 employees), trigger increased participation in CVET. It is noteworthy that the continuing vocational training survey did not investigates micro-firms, or firms with less than ten employees. Therefore, our conclusion might be the result of non-standardised source of data without assessing micro-firms' participation in training in both Italy and Germany.

1.3.2.1. On-the-Job Training

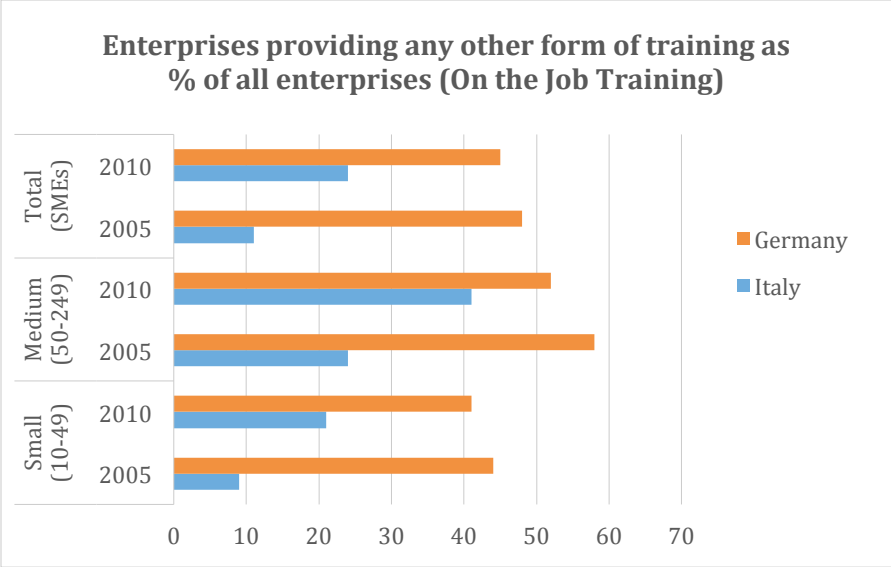
Figure 8.1 illustrates the percentage rate of all enterprises providing **"guided on-the-job training",** by size class in Italy and Germany. Small firms have the lowest participation rates across both countries. There is, however, significant difference between the small and medium sized firms in terms of providing on-the-job training in both countries. From analysis of the CVTS3 data (see Table 7.1 and Figure 8.1), It can be concluded that German SMEs in terms of providing "guided on-the-job training" at all sizes perform significantly better than their Italian counterparts.

Table 7.1: Enterprises providing any other form of training as % of all enterprises (**On the Job Training**)

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	9	21	24	41	11	24
Germany	44	41	58	52	48	45

Source: Own elaboration on Eurostat data [trng_cvts04], Update 20-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Figure 8.1: Enterprises providing any other forms of training as % of all enterprises (**On the Job Training**)



Source: Own elaboration on Eurostat data [trng_cvts04], Update 20-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

For instance, German small sized enterprises providing on the job training almost double (Germany 41%, Italy 21%) the Italian small firms in the reference year of 2010. However, at medium sized the gap is much lower but still exists (Germany 52%, Italy 41%). Further, it is worth noting when Germany records a small decline in the rate of guided on the job training from 2005 to 2010, Italy experiences an almost 100% growth in the same period.
It is worth to mention, above sections only looked at the overall participation rates of SMEs in informal set of training and on-the-job training in both countries but not the details of methods. To this aim, the following section looks at the detail of the methods of informal set of training provision.

1.3.2.1.1. **Informal Set of Training** (methods)

The analysis of CVTS survey indicates the informal set of training is provided by activities such as: training at workstations (on the job training); job rotations and secondments[4]; learning and quality circles[5]; self-learning[6]; and attending conferences, workshops, lectures and seminars;[7] see e.g. Table 8.1.

[4] "Job rotation and exchanges with other enterprises are only CVET if these measures are planned with the specific purpose of developing or improving the skills of employees involved" (Eurostat, 1999).

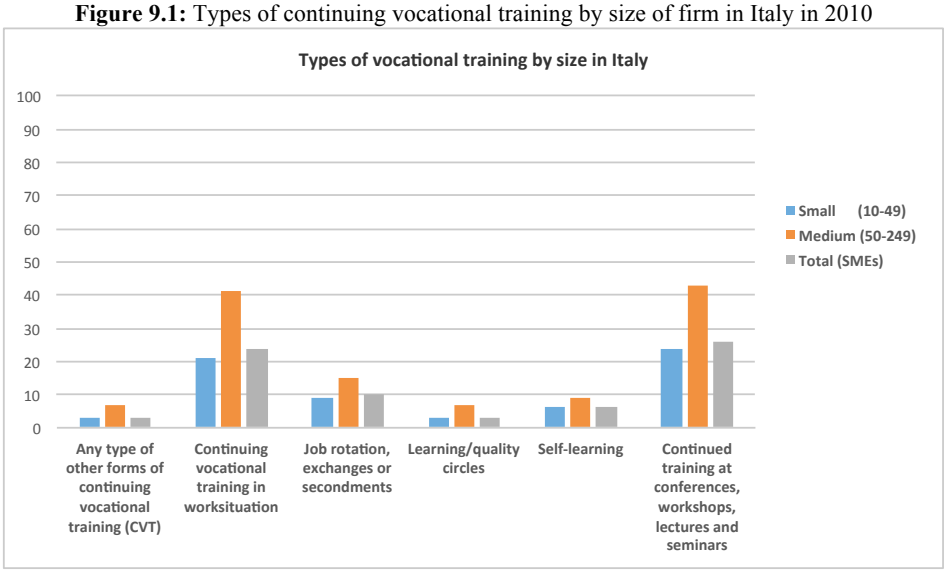
Table 8.1: Types of other forms of training (informal set of training) by size of firm in Italy and Germany in 2010

			Any type of other forms of continuing vocational training (CVT)	Continuing vocational training in worksituation	Job rotation, exchanges or secondments	Learning/quality circles	Self-learning	Continued training at conferences, workshops, lectures and seminars
Italy	Small	(10-49)	3	21	9	3	6	24
	Medium (50-249)		7	41	15	7	9	43
	Total (SMEs)		3	24	10	3	6	26
Germany	Small	(10-49)	10	41	4	10	11	51
	Medium (50-249)		15	52	13	15	12	68
	Total (SMEs)		12	45	7	12	15	56

Source: Own elaboration on Eurostat data [trng_cvts04], Update: 20-10-2014

Figures 9.1 and 10.1 show that providing the continued vocational training courses at "**the workstation (on the job training)**" and "**conference, workshop, lectures and seminars**" were the most popular types of CVET by firms of all sizes in both countries. More than 40% of medium sized firms in Italy and 68% in Germany used conferences, workshops, lectures and seminars to provide CVET to employees. These numbers were more than 40% and 50% for training at workstations in Italy and Germany respectively. SMEs in average also favoured these methods, although at lower usage levels in both countries.

Figure 9.1: Types of continuing vocational training by size of firm in Italy in 2010



Source: Own elaboration on Eurostat data [trng_cvts04], Update: 20-10-2014

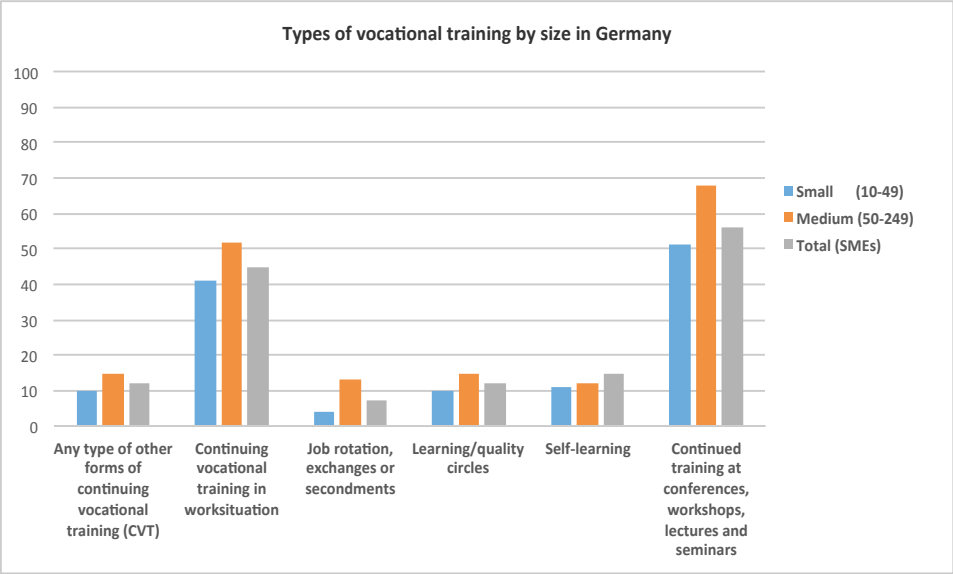
[5] "Learning circles are groups of employees who come together on a regular basis with the primary aim of learning about the requirements of workplace organisation, work performance and the workplace itself. It is a form of individual learning within groups. Quality circles are working groups with the aim of discussing and solving problems regarding production and the workplace. Participants have to be integrated within the planning and controlling procedures of the enterprise" (Eurostat, 1999).

[6] "Self-learning through open and distance learning courses, video/audio tapes, correspondence courses, computer-based methods (including the Internet) or the use of a Learning Resources Centre is only continuing vocational training if it is the trainee/learner who manages the training time and the place at which the learning takes place" (CVTS2, 1999).

[7] "Attendance at conferences, workshops, lectures and seminars are only counted as vocational training actions if the primary purpose of an employee attending is training/learning" (Eurostat, 1999).

Regarding the more internally focused and organised CVET such as job rotations, learning / quality circles and self-learning, however, previous data shows an extensive usage in larger firms, but not often used in SMEs (less than 15%) either in Italy or in Germany. This implies that with these forms of CVET there may be a need for a certain critical mass of employees in order to make it viable.

Figure 10.1: Types of vocational training by size of firm in Germany in 2010



Source: Own elaboration on Eurostat data [trng_cvts04], Update: 20-10-2014

1.3.3. **In-house Training** (SMEs Participation in In-house Continuing Vocational Training)

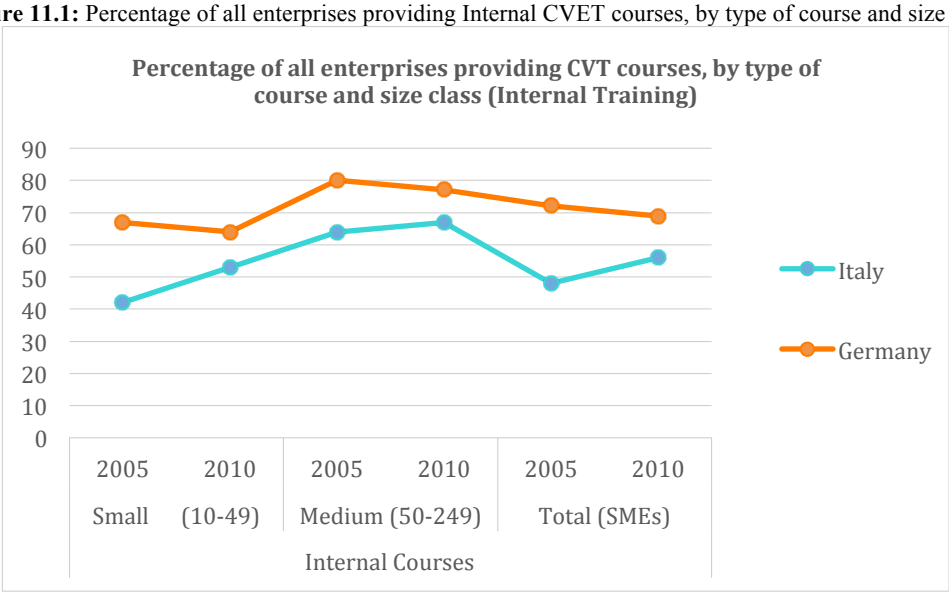
Figure 11.1 illustrates the percentage rate of all enterprises providing Internal CVET courses, by type of course and size class in Italy and Germany. Small firms have the lowest participation rates across both countries. There is, however, significant difference between the small and medium sized firms in terms of providing in-house CVET training in both countries. From analysis of the CVTS3 data (see Table 9.1 and Figure 11.1), It can be deduced that German SMEs in terms of providing internal training at all sizes perform slightly better than Italian counterparts. Despite the fact that Germany recorded a very small decline in the rate of internal CVET courses from 2005 to 2010 compare to Italy when experience a growth in the same period.

Table 9.1: Percentage of all enterprises providing Internal CVET courses, by size class

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	42	53	64	67	48	56
Germany	67	64	80	77	72	69

Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

Figure 11.1: Percentage of all enterprises providing Internal CVET courses, by type of course and size class

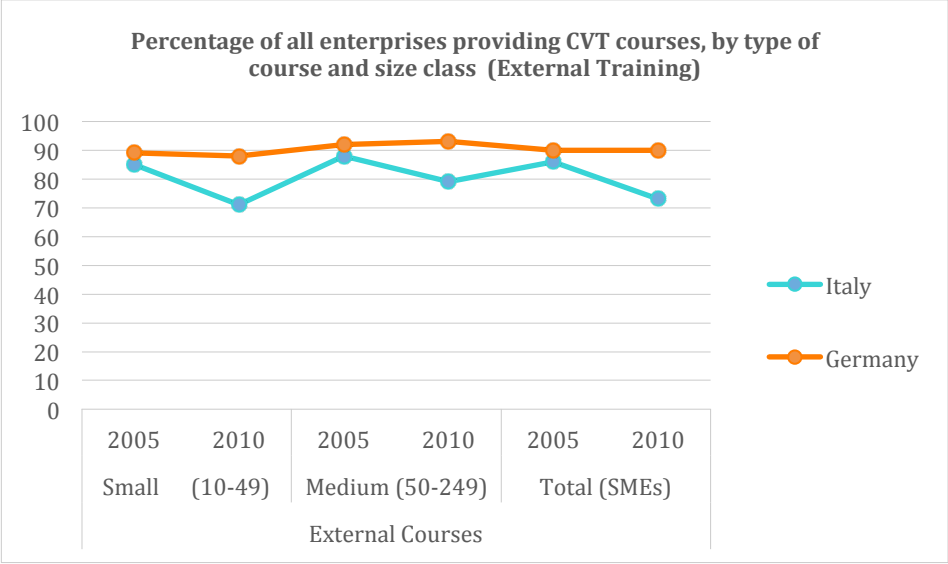


Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

1.3.4. **External Training** (SMEs Participation in External Continuing Vocational Training)

This section looks at the percentage of *all enterprises providing External CVET courses*, by type of course and size class. Table 10.1 shows the provision of CVET courses for both CVTS surveys in 2005 and 2010. There is gap between the overall rate of provision in both Italy and Germany for SMEs between the two surveys. The CVTS survey in 2010 indicates how this trend evolved and what the financial crisis' impact on provision rates was.

Figure 12.1: Percentage of all enterprises providing External CVET courses, by type of course and size class



Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

Table 10.1: Percentage of all enterprises providing External CVET courses, by size class

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	85	71	88	79	86	73
Germany	89	88	92	93	90	90

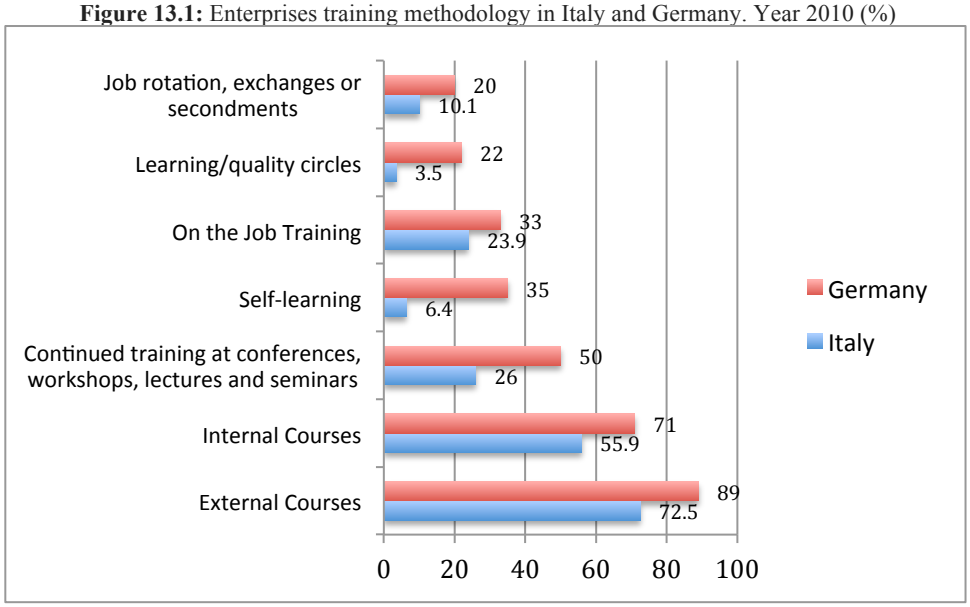
Source: Own elaboration on Eurostat data [trng_cvts06], Update 04-09-2014

Figure 12.1 depicts that while the rate of external CVET in Italy decreases from 2005 to 2010, Germany experience a constant rate of 88% to 93% at small and medium sized enterprises. The CVTS survey in 2010 indicates how this trend evolved and the financial crises influenced participation rates in Italy while had no impact on German SMEs.[8]

1.3.5. Methods of Training Provision in Italian and German Enterprises

The reports by ISTAT (2013) and BIBB (2014) say that in the reference year 2010, the main methods of providing training courses in Italian and German enterprises, were **"external courses"** – forms of learning that are more institutionalized / formalized – followed by **"internal courses"** (72.5%) and (55.9%) in Italy; (89%) and (71%) in Germany respectively (see Figure 13.1). These two approaches were the most popular models in 2005 as well. The next most prevalent method in both countries was training through participation in "**conferences, seminars, and workshops**" (26%) in Italy and and (50%) in Germany.

Figure 13.1: Enterprises training methodology in Italy and Germany. Year 2010 (%)



Source: ISTAT, 2013, Anno 2010 la formazione nelle imprese in Italia http://www.istat.it/it/files/2013/08/La-formazione-nelle-imprese.pdf?title=Formazione+nelle+imprese+-+01%2Fago%2F2013+-+Testo+integrale.pdf**;** Bibb, 2014. CVTS4-ZUSATZERHEBUNG– Mehrfachnennungen **(**Übersicht 32**)** https://www2.bibb.de/bibbtools/tools/fodb/data/documents/pdf/eb_23304.pdf

[8] At the time of preparing this report, data from the 2015 CVTS, for which data is collected across 2015-16, was not available. However, data presented here is still a valid source of trends in SMEs' participation in training

In is worth to note that there is a big gap in all three popular methods of training between German enterprises respect to their Italian counterparts. German enterprises are considerably more active in these methods than their Italian counterparts. Moreover, (35%) of German enterprises are active in "**self directed learning"** – occurs when an individual engages in a planned learning initiative where he or she manages the training time and the place at which the learning takes place – compare to only (6.4%) of Italian enterprises. "**On the job training"**, "**learning circle"** – groups of persons employed who come together on a regular basis with the primary aim of learning more about the requirements of the work organisation, work procedures and work places – and "**quality circle"** – working groups with the objective of solving production and work place problems through discussion – and **"job rotations"** are among other underutilized methods of training provision in both countries that can be seen in detail in Table 11.1 and Figure 13.1.

Table 11.1: Enterprises training methodology in Italy and Germany. Year 2010 (%)

Country	Size	External Courses	Internal Courses	Continued training at conferences, workshops, lectures and seminars	Self-learning	On the Job Training	Learning/quality circles	Job rotation, exchanges or secondments
Italy	Total (SMEs)	72.5	55.9	26	6.4	23.9	3.5	10.1
Germany	Total (SMEs)	89	71	50	35	33	22	20

Source: ISTAT, 2013, Anno 2010 la formazione nelle imprese in Italia http://www.istat.it/it/files/2013/08/La-formazione-nelle-imprese.pdf?title=Formazione+nelle+imprese+-+01%2Fago%2F2013+-+Testo+integrale.pdf

1.4.a. Process of Training Provision in SMEs

1.4.a.1. Training Planning and/or Budget in SMEs

This section looks in detail at the processes of training provision in firms that did provide CVET. It assesses the use of training plans and the types of resources provided within the firm (training budgets and dedicated personnel) for CVET, see Tables 12.1 and 13.1. The results show there are clear differences in firms' use of a training plan based on company size, with 23% of small firms, 50% of medium firms using training plans to guide their provision of CVET training (formal set of training) to their employees in Italy compared to 20% of small firms, 43% of medium firms in Germany (see Figures 14.1 and 15.1). Policy instruments that facilitate the development of this role in SMEs could offset the lack of dedicated resources to training management.

Table 12.1: Percentage of training enterprises having a training planning and/or budget, by size class in Italy

	Small (10-49)	Medium (50-249)	Total (SMEs)
Continuing vocational training (CVT) courses	23	50	26
Any type of vocational training	25	52	28
Any type of other forms of continuing vocational training (CVT)	19	43	22

Source: Own elaboration on Eurostat data [trng_cvts96], Update: 31-03-2015

Across Italian SMEs, 19% of small firms, 43% of medium firms had dedicated plan within their organisation to manage other forms of CVET (informal set of training). These rates were 20% and 44% respectively in small and medium sized enterprises in Germany. Small and medium sized enterprises in Italy showed slightly higher levels of dedicated HR plan for CVET training activities than Germany. However, in the

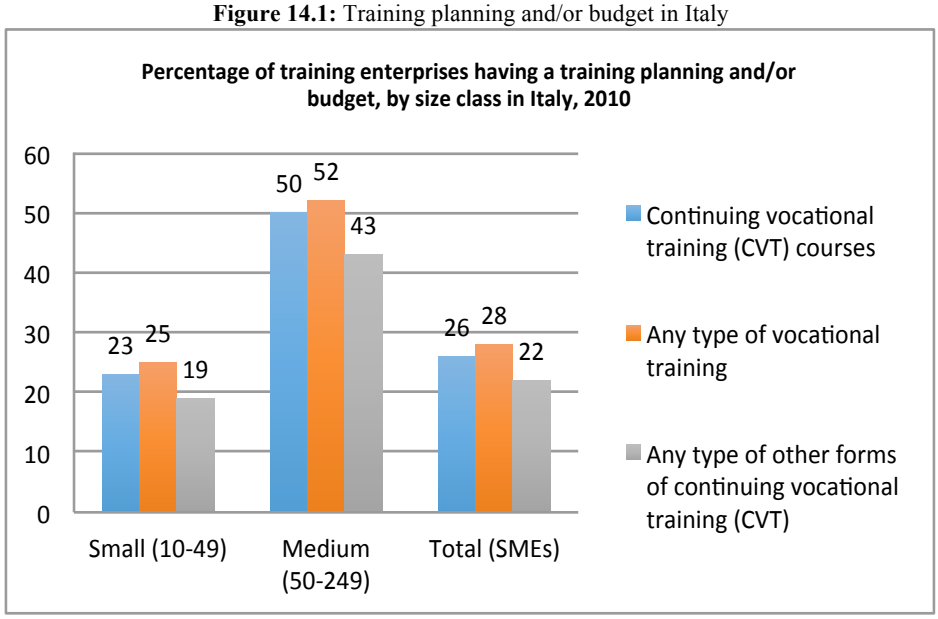
case of Italy, this should be viewed within the context of low SME training rates reported earlier.

Table 13.1: Percentage of training enterprises having a training planning and/or budget, by size class in Germany

	Small (10-49)	Medium (50-249)	Total (SMEs)
Continuing vocational training (CVT) courses	20	43	28
Any type of vocational training	21	47	30
Any type of other forms of continuing vocational training (CVT)	20	44	28

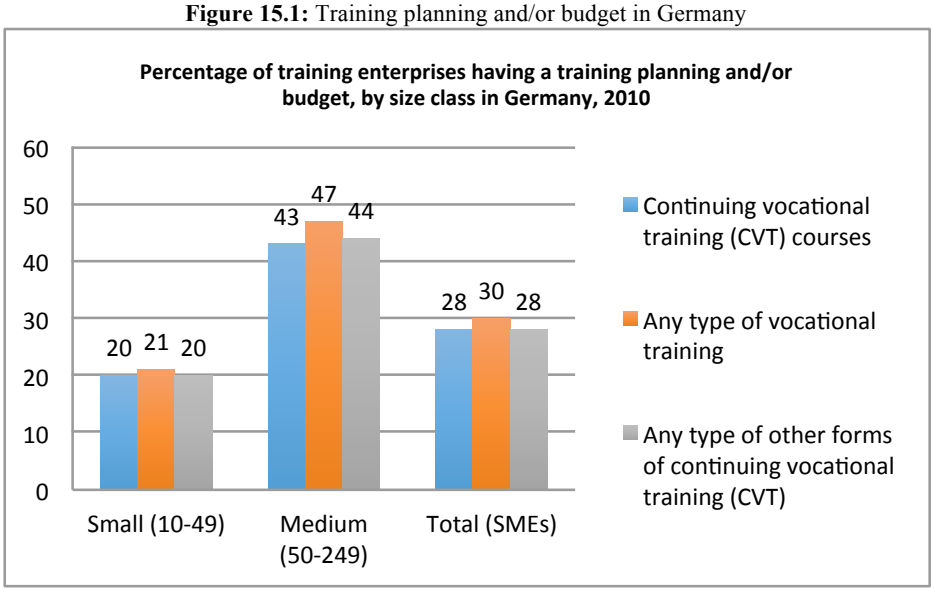
Source: Own elaboration on Eurostat data [trng_cvts96], Update: 31-03-2015

Figure 14.1: Training planning and/or budget in Italy



Source: Own elaboration on Eurostat data [trng_cvts96], Update: 31-03-2015

Figure 15.1: Training planning and/or budget in Germany



Source: Own elaboration on Eurostat data [trng_cvts96], Update: 31-03-2015

The result of the elaboration is in line with the previous research studies suggesting that small enterprises are improbable to have either dedicated training staff (Hawke,

1998) or training plan (Vallence, 1997), and it mainly offers informal and company specific set of training (Seagraves and Osborne, 1997). According to OECD (2009) company-based training needs to be advantageous escalating benefits to employers in order to encourage them to offer adequate training positions. Moreover, it should not be so specific to inhibit future professional mobility.

1.4.a.2. SMEs Time Expenditure in Continuing Vocational Training (CVET)

This section elaborates the percentage of total spent hours in CVET courses, by type of course and size class in Italian and German small and medium sized enterprises. The process includes both 'internal" and "external" courses of training within firms with the different sizes.

Taking the number of hours small and medium sized enterprises spend on CVET courses namely external courses providing all or part of CVET, or the use of external advisory services concerning CVET, into account highlights the same attributes related to size of existing firms, but not to the same degree (see Table 14.1).

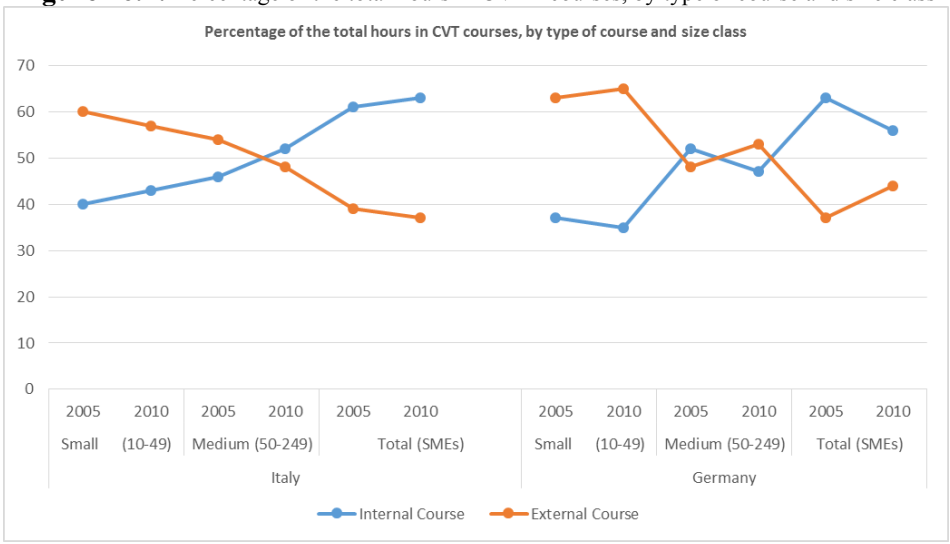
Concerning "external courses", SMEs are expected to look for using external resources to address the challenges of critical mass/size liabilities, which possibly restrict their capacity of offering training to their staff. This remains true for 57% of small enterprises that provided CVET in Italy and 48% of medium sized enterprises using of "external courses" for part or full provision of this training in 2010, compared with 65% and 53% of small and medium sized firms in Germany (see Table 14.1 and Figure 16. 1).

Table 14.1: Percentage of the total hours in CVET courses, by type of course and size class in Italy and Germany

	Italy							Germany					
	Small (10-49)		Medium (50-249)		Total (SMEs)			Small (10-49)		Medium (50-249)		Total (SMEs)	
	2005	2010	2005	2010	2005	2010		2005	2010	2005	2010	2005	2010
Internal Course	40	43	46	52	61	63		37	35	52	47	63	56
External Course	60	57	54	48	39	37		63	65	48	53	37	44

Source: Own elaboration on Eurostat data [trng_cvts70], Update: 22-07-2014

Figure 16.1: Percentage of the total hours in CVET courses, by type of course and size class



Source: Own elaboration on Eurostat data [trng_cvts70], Update: 22-07-2014

There were some notable differences as in Italy from 2005 to 2010 total hours of internal course for CVET, experience an upward trend regardless of the company size (a vice versa for external course) compared to non-uniform trend of German counterpart. In Germany in 2010, 35% of small and 47% of medium firms used internal courses when in Italy, the figures were 43% of small firms and 52% of medium firms utilising internal training. This suggests that internal courses for CVET are viable tools for SMEs in providing CVET (see Table 14.1 and Figure 16.1).

1.4.a.3. Assessing skills requirements and the future skills

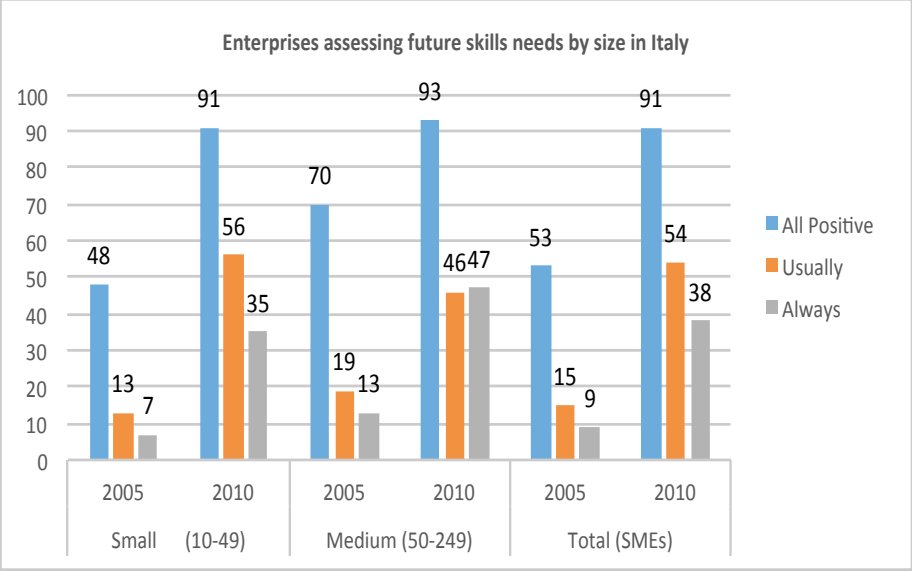
This section illustrates data concerning how enterprises evaluate their training needs, and plan for workplace training and skills upgrading in the future. Figures 17.1 and 18.1 show the percentages of enterprises assessing the training needs of their staff for the future skills needs, and the prevalence of the assessment in Italy and Germany. Enterprise size characteristics again seem to be a determinant factor on the future training and skills assessments. However, the role of size of company is more significant in Germany than Italy (see Table 15.1). Both graphs show the awareness about assessing future skills in both countries has been increased from 2005 to 2010; however, the numbers are more significant in Italy. For example in 2010 in Italy, 38% of enterprises "always" assess the future skills need where the number in Germany is only 26%. These numbers in 2005 were 9% and 12% respectively for Italy and Germany (see Table 15.1 and Table 16.1).
Despite the fact that most enterprises (of all sizes) assess their future skills needs, but the frequencies with which these assessments are being made are different and rely on firm size disparities. In Italy, SMEs are more likely "usually" to assess their future skills requirements while in medium-sized enterprises, these assessments are routine and occur with regular frequency or "always" status (see Table 15.1). In Germany instead, for both SMEs and medium-sized enterprises, these assessments are more likely to be non-routine and "usual" (see Table 16.1). The assessment of future skills needs shows the level of preparedness that firms have to deal with industrial evolution and changing patterns of knowledge. Ad-hoc or incidental skills assessments put SMEs in a weakened position for dealing with such changes.

Table 15.1: Enterprises assessing future skills needs in Italy

Size	**Small (10-49)**		**Medium (50-249)**		**Total (SMEs)**	
Year	2005	2010	2005	2010	2005	2010
All Positive	48	91	70	93	53	91
Usually	13	56	19	46	15	54
Always	7	35	13	47	9	38

Source: Own elaboration on Eurostat data [trng_cvts24], Update 05-09-2014

Figure 17.1: Enterprises assessing the future skills needs of the enterprise as a % of training enterprises by size



Source: Own elaboration on Eurostat data [trng_cvts24], Update 05-09-2014

Table 16.1: Enterprises assessing future skills needs in Germany

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
All Positive	28	69	40	81	33	73
Usually	3	48	7	48	4	47
Always	10	21	11	34	12	26

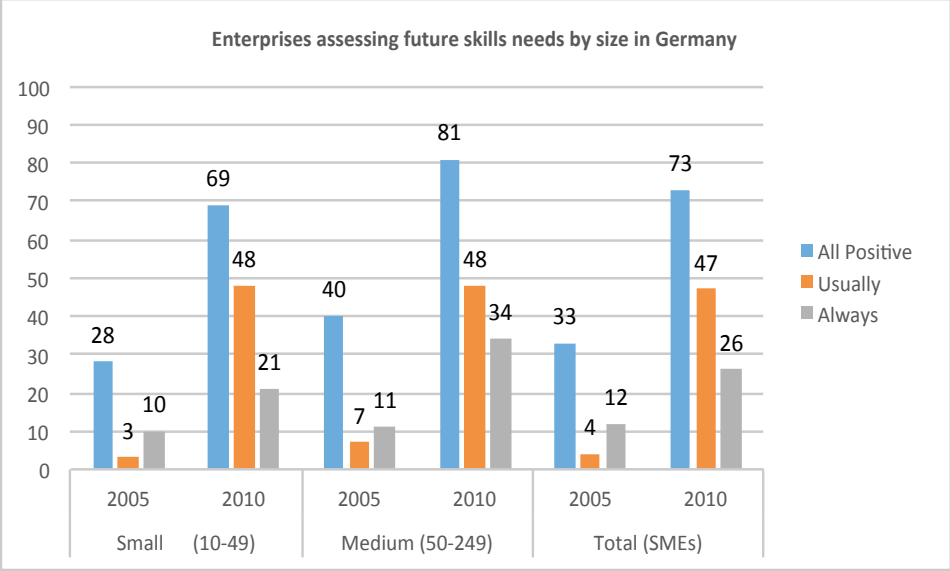
Source: Own elaboration on Eurostat data [trng_cvts24], Update 05-09-2014

Regarding the reasons affecting the scope of assessing future skills needs in SMEs in both countries, difficulties in assessing the skills needs was the least priority while the size of the enterprise has little impact on the factors explained by firms.

The twin motives of "no time" and "no need" rated the most among various enterprises of all sizes, followed by "too expensive". The latter option selected with more large enterprises than smaller sized, while "lack of suitable training" was listed by more than 20% of enterprises in each of the size categories.

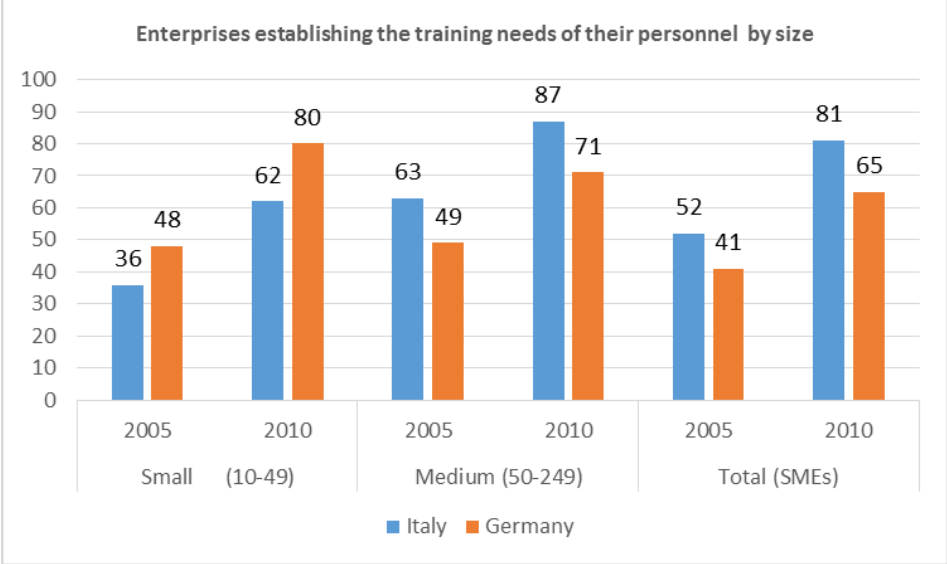
Given the fact that SMEs need to assess their training needs, Table 17.1 presents data regarding how frequently did firms conduct structured interviews with its employees with the objective of establishing the specific training needs of persons employed. The results point to the fact that for the reference years of 2005 and 2010 the likelihood of this assessment in firms of all sizes has been increased in both countries. However, the assessment rate for small sized enterprises in 2010 in Germany was more significant than Italy while Italy placed more attention to the frequency of the incidence at medium-ranged enterprises (see Figure 19.1).

Figure 18.1: Enterprises assessing the future skills needs of the enterprise as a % of training enterprises by size



Source: Own elaboration on Eurostat data [trng_cvts24], Update 05-09-2014

Figure 19.1: Enterprises establishing the training needs of their personnel as % of training enterprises by size class



Source: Own elaboration on Eurostat data [trng_cvts26], Update 05-09-2014

Table 17.1: Enterprises establishing the training needs of their personnel as % of training enterprises by size class

Size	Small (10-49)		Medium (50-249)		Total (SMEs)	
Year	2005	2010	2005	2010	2005	2010
Italy	36	62	63	87	52	81
Germany	48	80	49	71	41	65

Source: Own elaboration on Eurostat data [trng_cvts26], Update 05-09-2014

1.4. Outcomes from participating in Training activities

1.4.1. The Impact of Training on SMEs Performance

The section is not applicable to the panel data of the CVTS survey, so there is no data to analyse. As a result we looked at other secondary data resources to develop

the section, which is accomplished by the further analysis of our primary data in the next chapter.

Given that, a wide range of impacts associated with training in SMEs (see: LR P.40) namely in terms of performance, productivity, innovation and competitiveness have discussed in a number of reports in both Germany and Italy. At European level a series of annual reports by European commission e.g. "Small Business Act (SBA)" and "Annual Report on European SMEs" have compared the results in both countries. The reports contextualize the performance reviews attempting to provide a comprehensive SMEs policy framework, promote entrepreneurship and anchors the "Think Small First" principle in law and policy making to strengthen SMEs' competitiveness. For instance, SMEs performance in these reports is measured based on the three indicators of number of employees, number of enterprises and the value added. It is worth noting however, the mentioned reports in both countries do not directly recognize and/or identify training as the root cause of variations in SMEs performance but the reason are discussed here is to help building the hypotheses, which are tested in the next chapter when we analyze the primary data. Therefore this section only aims to present the significant different performance of SMEs in Italy and Germany.

Figure 20.1: Performance of SMEs, value added and employment growth, 2008-2013

Source: Eurostat, National Statistical Offices, DIW, DIW econ, London Economics

http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2014/annual-report-smes-2014_en.pdf

Given that, figure 20.1 demonstrates the overall position of SMEs in Italy and Germany between 2008 and 2013 across the EU. It shows SMEs provided most jobs and generated the highest value added in Germany in the period when their Italian counterparts, in contrary performed significantly lower than them and even underperformed with respect to the EU average.

Table 18.1 depicts some of the detailed information presented in Figure 20.1. It denotes that SMEs in Germany and Italy as in the rest of the EU represent the highest share of enterprises. It also indicates that the average company size in Germany is bigger than in the EU. This means that there are fewer microenterprises than in the rest of the EU. By the same token the average company size in Italy is rather smaller than in the EU as it has the bigger share of microenterprises than the EU average.

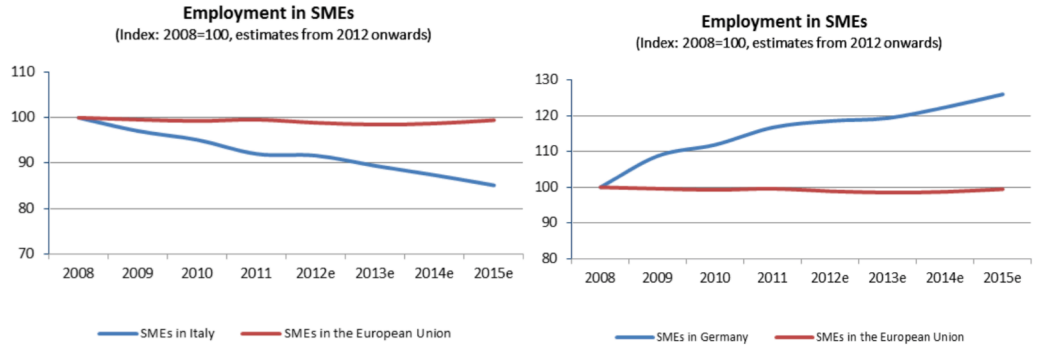
Italian SMEs also contribute roughly 80% of national employment and 69.5% of value added, the third and fifth highest shares in the OECD area respectively in 2013 (see e.g. SBA2014-Italy).
According to table 18.1 the employment share of microenterprises is only two thirds of what it is in the rest of the EU while the share in Italy is almost 1.5 times higher than the EU average. At SMEs level, the employment share in Germany is about 4 percentage points below that of the rest of the EU while Italy account for 12.7 percent higher than the EU average.

Table 18.1: SMEs in German and Italy – Basic Figures, Reference Years 2008–11

	Number of enterprises			Number of employees			Value added		
	Italy	Germany	EU-28	Italy	Germany	EU-28	Italy	Germany	EU-28
Micro	94.80%	81.80%	92.40%	45.80%	18.70%	29.10%	30.40%	15.10%	21.60%
Small	4.60%	15.20%	6.40%	21.10%	23.60%	20.60%	21.30%	18.90%	18.20%
Medium-sized	0.50%	2.50%	1.00%	12.70%	20.40%	17.20%	17.80%	20.40%	18.30%
SMEs	99.90%	99.50%	99.80%	79.60%	62.70%	66.90%	69.50%	54.40%	58.10%

Source: DIW Econ (2013), based on 2008–11 figures from the Structural Business Statistics Database (Eurostat).

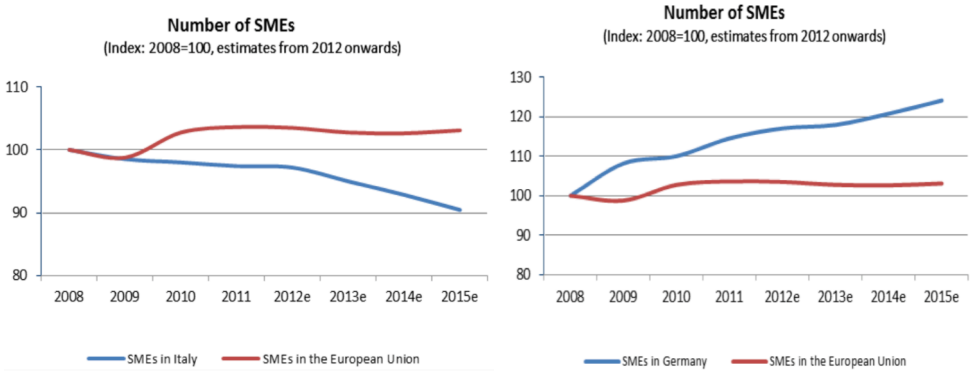
Figure 21.1: Performance of SMEs, employment growth in Italy and Germany, 2008-2011



Source: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf ; EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf

Figure 21.1 presents the employment growth in Italy and Germany between 2008 and 2013. Moreover, as the difficult economic circumstances made it harder for Italian SMEs to obtain financing from banks, capital markets or other credit suppliers, the number of SMEs in the business economy had fallen by 5 percent from 2008 to 2013. Figure 22.1 presents the changes in number of SMEs in Italy and Germany from 2008 through 2013.

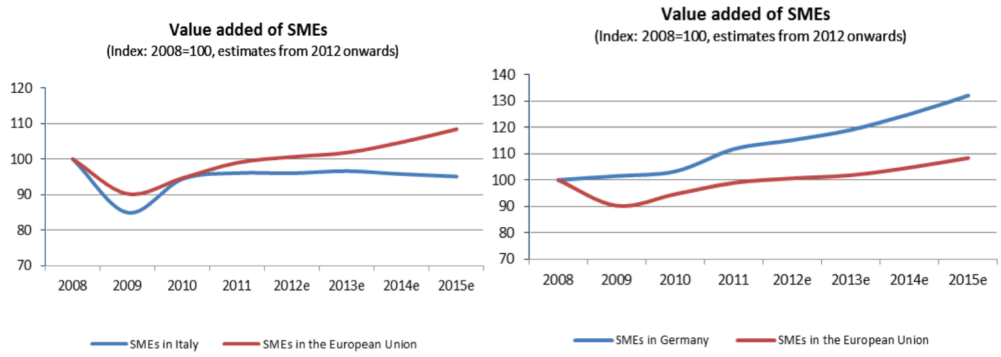
Figure 22.1: Performance of SMEs, number of SMEs in Italy and Germany, 2008-2011



Source: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf ; EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf

Figure 23.1 illustrates in Italy the value added of SMEs decreased sharply, by 15 %, between 2008 and 2009, followed by a protracted recovery ever since. In 2013, SME value added was about 3% below its pre-crisis level. The recent data by ISTAT (2015) e.g. see: ISTAT, 2015. *Productivity statistics,* http://www.istat.it/en/files/2015/08/Rev_Productivity_Statistics_1995-2014.pdf?title=Productivity+statistics++-+3+Aug+2015+-+Full+text.pdf) also indicate between 2009 and 2014 value added decreased in Italy by 0.7%.

Figure 23.1: Performance of SMEs, value added growth in Italy and Germany, 2008-2011



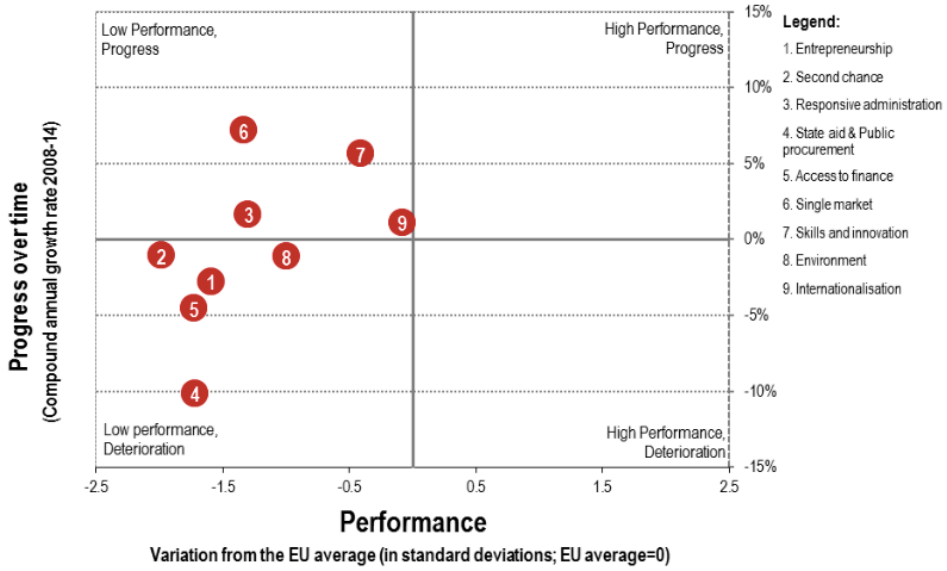
Source: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf ; EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf

In Germany SME-generated value added increased by 26% between 2008 and 2013 and German SMEs provided the highest value added in the EU. The importance of SMEs in the German business economy has also increased since 2008 when employment increased by 17 % and the growth rates for value added from 2010 to 2013 surpassed those of large businesses.

Having said that, a review of the three figures indicate Italy except for the value-

added of SMEs that stagnated between 2008 and 2013 in other values experiences a downward trend compared to the EU average. In contrary in Germany all three indicators explicitly present a good condition with an upward trend with respect to the EU average.
Additionally, Figures 24.1 and 25.1 portray the small business performance between 2008 and 2014 in terms of a number of policy measures namely "**entrepreneurship**", "**skills and innovation**", "**access to finance**" to **"environment"** and **"internationalisation"**.
In Italy, SBA performance remained below the EU average, with mixed progress across measures. Its strengths are the good export performance of its manufacturing SMEs in north-eastern regions which had effective export strategies (see no.9 in Figure 24.1). Having said that Italy needs to catch up and improve its performance in a number of areas namely making it easier for SMEs to access finance, participate in public procurement (see no.5 and no.4 in Figure 24.1). Further it needs to enhance the environment and entrepreneurship measures (see no.8 and 9 in Figure 24.1) for smaller enterprises.

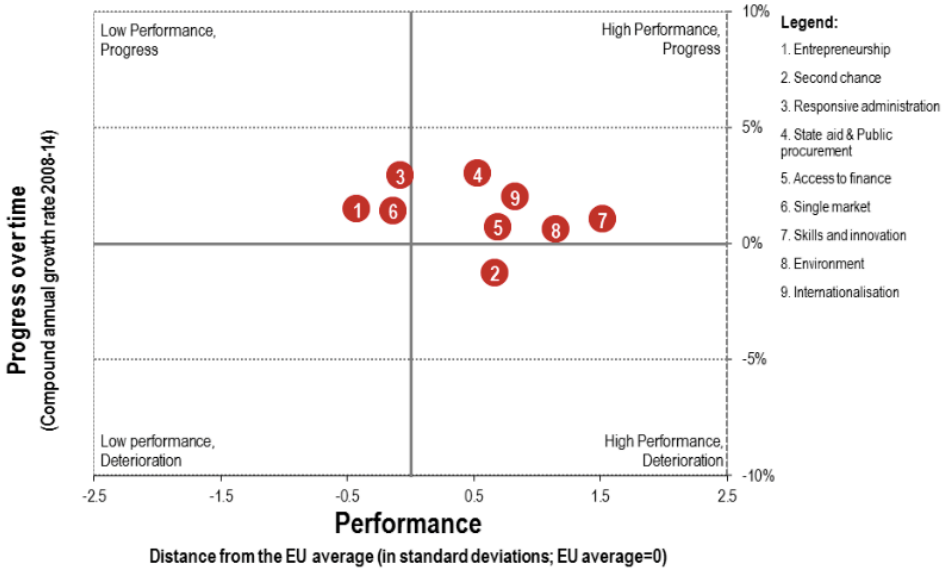
Figure 24.1: Italy's SBA performance: status quo and development, 2008 - 2014



Source: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf

In contrary, Germany's SBA performance between 2008 and 2014 remains one of the best performing among the EU member states, well above the EU average for five out of nine SBA areas. It is particularly strong in "skills and innovation" and the "environment" and "access to finance". It is in line with the EU average for "entrepreneurship", and "internationalisation". Of these, its performance is traditionally the weakest in relative terms in entrepreneurship. The fact that even there its score is close to the EU average is testimony to the strength of its overall SBA profile, e.g. see: Figure 25.1.

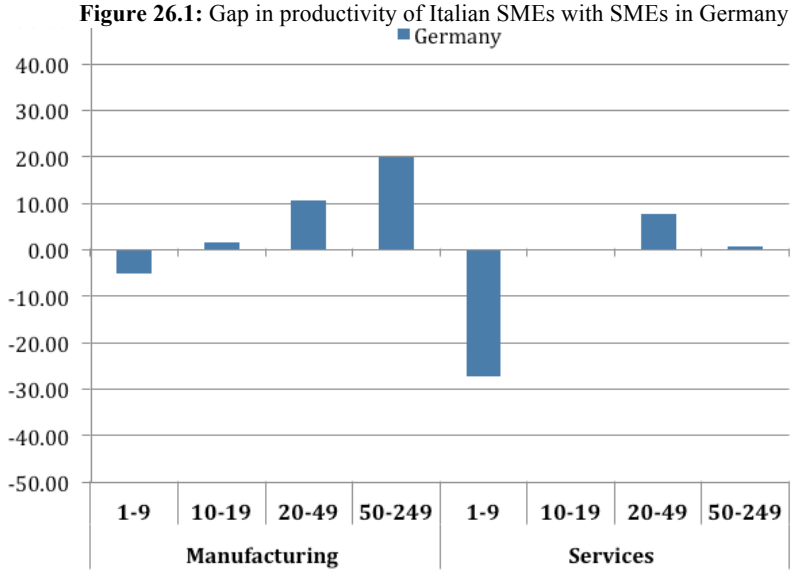
Figure 25.1: Germany's SBA performance: status quo and development, 2008 - 2014



Source: EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf

Concerning the productivity of SMEs, an OECD report (2013), "*Entrepreneurship at a Glance 2013*" painted the gap in both countries. Table 19.1 and Figure 26.1 portray the differences in the productivity of *"manufacturing"* and *"services"* SMEs in Italy and Germany. The biggest gap is between microenterprise in both countries however at SMEs level; medium sized manufacturing SMEs in both countries have the second biggest gap in productivity.

Figure 26.1: Gap in productivity of Italian SMEs with SMEs in Germany



Source: OECD based on OECD (2013a), *Entrepreneurship at a Glance 2013*, Paris. http://dx.doi.org/10.1787/entrepreneur_aag-2013-en

It is worth to note that Figure 26.1 displays gaps in productivity of Italian SMEs by sector and size compared to their peers in Germany and the reason Italy is not visually represented in the graph is that the bars point to how much behind or ahead

Italian firms are with respect to productivity per employee in German, same-sized firms.

Table 19.1: Gap in productivity of Italian SMEs in Manufacturing and Service sectors with SMEs in Germany

	Manufacturing				Services			
	1-9	10-19	20-49	50-249	1-9	10-19	20-49	50-249
Germany	-4.93	1.75	10.53	19.91	-27.14	0.16	7.82	0.73

Source: OECD based on OECD (2013a), *Entrepreneurship at a Glance 2013*, Paris.
http://dx.doi.org/10.1787/entrepreneur_aag-2013-en

1.5. Barriers to Training Provision in SMEs

This section tries to outline the percentage of *all non-training enterprises*, by reason for not providing CVET and size class in Italy and Germany. When companies that did not participate in training were asked the reasons why they did not, responses were similar across companies of all sizes.

Table 20.1: Percentage of all non-training enterprises, by reason for not providing CVET and size class

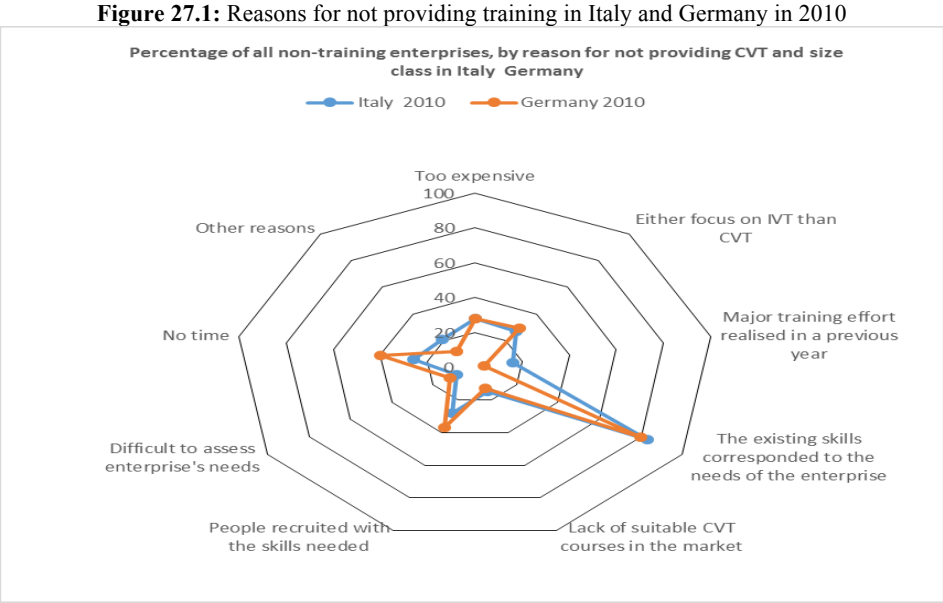
Total (SMEs)	**Italy**		**Germany**	
Year	2005	2010	2005	2010
Too expensive	16	28	40	28
Either focus on IVT than CVET	9	27	18	29
Major training effort realised in a previous year	16	16	6	4
The existing skills corresponded to the needs of the enterprise	73	83	77	80
Lack of suitable CVET courses in the market	17	15	14	13
People recruited with the skills needed	60	28	20	37
Difficult to assess enterprise's needs	10	9	9	12
No time	22	26	49	40
Other reasons	24	21	38	12

Source: Own elaboration on Eurostat data [trng_cvts08], Update: 04-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Table 20.1 depicts some of the foremost reasons given by small and medium- sized enterprises for not participating in CVET:

- The current skills and expertise of staff meet the current needs of firms.
- Workforce were recruited with the skills needed. The logic denotes that for non-training firms, recruitment process rather than training provides the skills set for the enterprises. The current strategy may remain true for industries with stable knowledge bases, but would not be suitable for industries with fast growing and/or dynamic knowledge bases.
- Among the top three reasons for SMEs for not providing CVET in 2010, cost of training is a major concern for Italian SMEs while it is not the case for the German counterpart but the lack of time for training is the case.

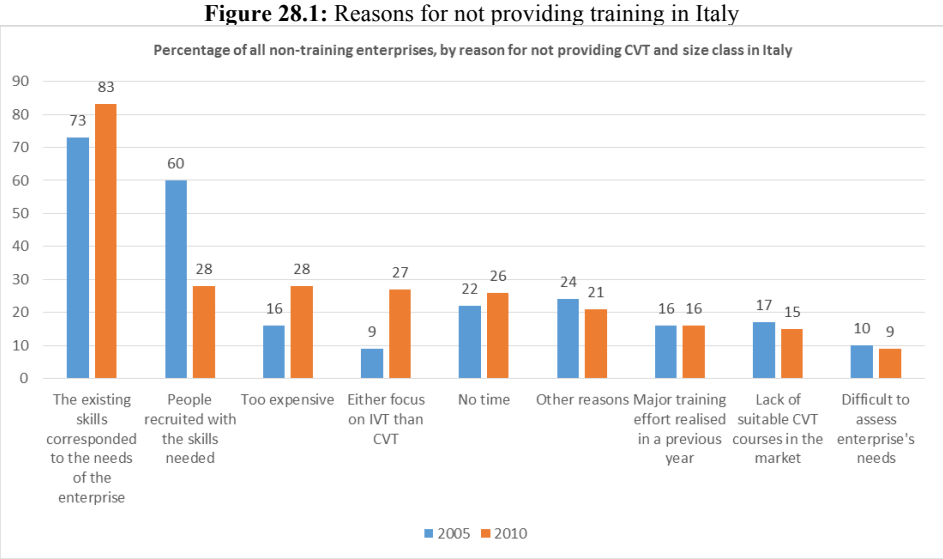
Figure 27.1: Reasons for not providing training in Italy and Germany in 2010



Source: Own elaboration on Eurostat data [trng_cvts08], Update: 04-09-2014
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Looking at Figures 28.1 and 29.1 highlights the following two motives given for not participating in CVET; "no time" and "too expensive". Some of the other reasons given for non-training include: difficulties in the assessment of the firm's training needs; the enterprise has more concentration on Initial VET (apprenticeships) compared to CVET; or that the enterprise has undertaken a significant training effort in the year prior to the survey reference period. In sum, these motives attracted less than 20% of responses in both countries.

Figure 28.1: Reasons for not providing training in Italy

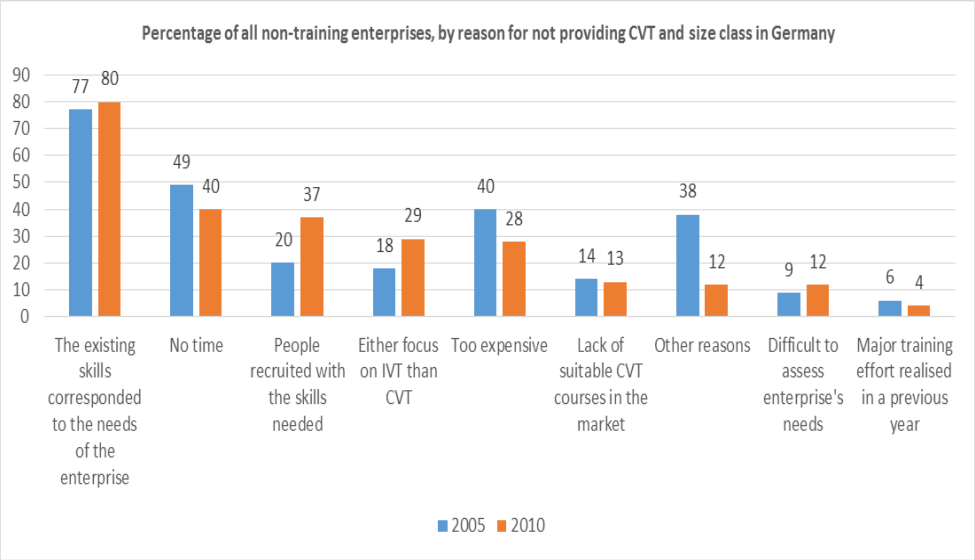


Source: Own elaboration on Eurostat data [trng_cvts08], Update: 04-09-2014

From these charts, a number of interpretations can be deduced. First of all, enterprises that do not take part in continuing vocational education if they believe that they either already have or can recruit key skills their enterprises need. In addition, the data illustrates the percentage response rates across the different size categories of firms, which are much the same in both countries.

Moreover, the over-reliance of SMEs on recruitment instead of skills procurement is rampant in both countries. This is a challenging strategy as the future projected jobs growing in areas such knowledge and skills intensive occupations. Thus small and medium sized enterprises will be implausible to rely on recruiting staff with required skills in the future, as there exist more competition for these high skilled people in the labour market.

Figure 29.1: Reasons for not providing training in Germany



Source: Own elaboration on Eurostat data [trng_cvts08], Update: 04-09-2014

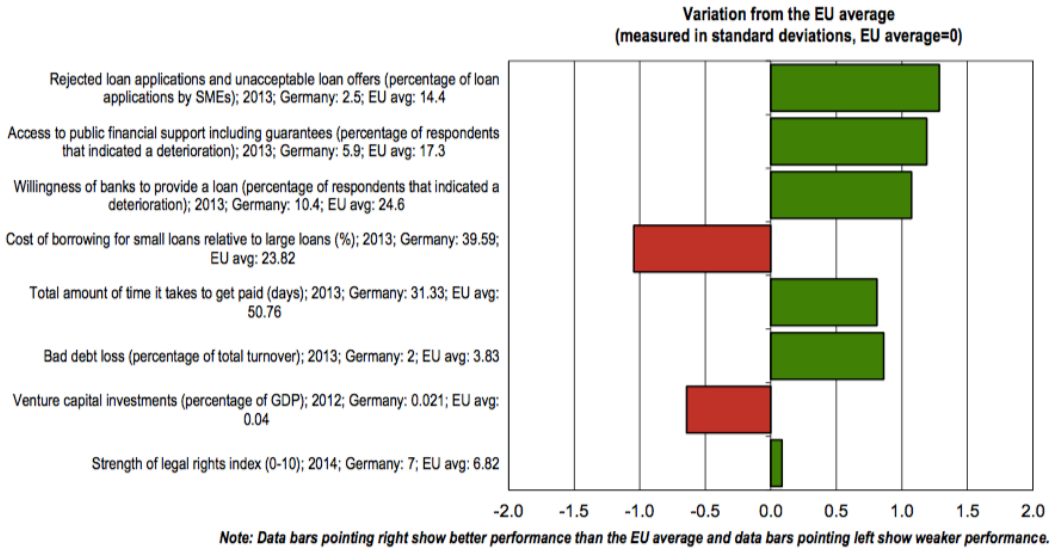
In 2010, less than 20% of respondents in both Germany and Italy indicated the option of "difficult to assess enterprise's need" as the main reason for not providing training. This could imply two different options that either small and medium-sized enterprises have the competence to evaluate their future skills needs or they do not offer CVET courses and instead rely on recruiting skilled people who have not had to assess their skills needs with regard to training. However, in a competitive labour market there are a growing number of firms looking for knowledge and skills intensive workforce, implying this scenario may not remain true in the future. It is noteworthy that evaluating future skills and providing CVET within an enterprise are not activities that SMEs can run overnight. It is essential for enterprises to develop skills and dedicate resources to CVET over an acceptable period of time to reap the benefits of CVET activities.
Last but not least the radar chart (see Figure 27.1) visualizes the reasons for not providing training in both countries in order to provide a better understanding about the issue.

1.5.1. Access to Finance: Equity Capital, Venture Capital

Figure 30.1 demonstrates the profile of German SMEs in terms of access to finance for the period of 2008 to 2014. In general, Germany's position is above the EU average and it is easier for German SMEs to access finance than it is for most of their EU counterparts. For some indicators there is quite a big difference from the EU average. This is especially the case for "**loan-based financing**". For instance in

2013, the proportion of rejected loan applications is only a sixth of the EU average (2.5 % versus 14.4 %) see Figure 30.1 Further Germany outperforms the EU average in a number of indicators namely "**access to public financial support**", "**willingness of banks to provide loan**". However, it lags behind the EU average for "**venture capital investments**" and the relative higher "**interest rate**" put German SMEs at a disadvantage compared to their EU counterparts.

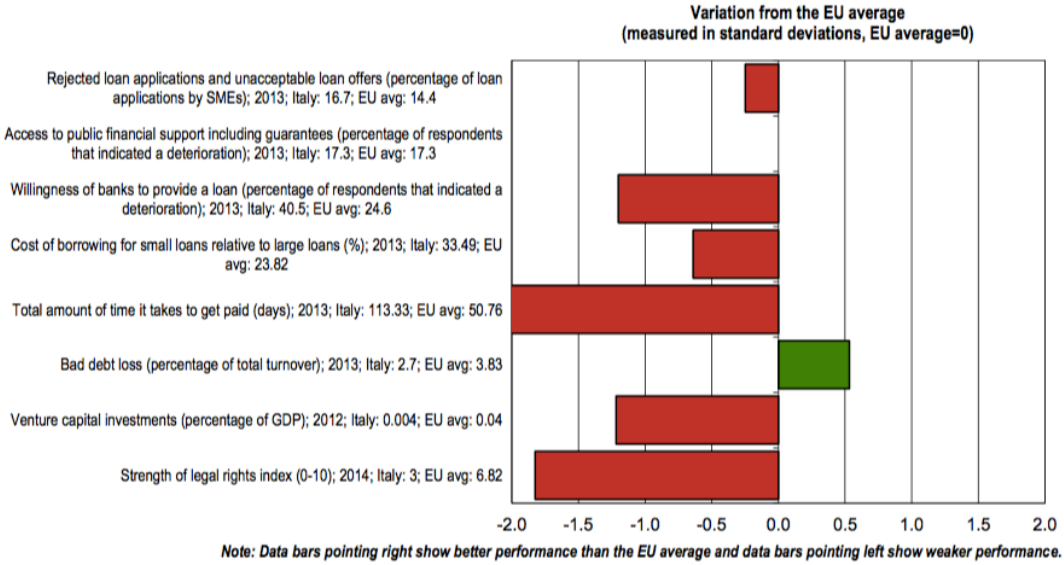
Figure 30.1: Access to finance in Germany, 2008 - 2014



Source: EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf

In Italy instead the credit crunch continued to affect Italian SMEs between 2008 and 2014, causing economic difficulties and deteriorating the prospects for promising growth.

Figure 31.1: Access to finance in Italy, 2008 - 2014



Source: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf

Although credit conditions stopped declining in 2013 and "**access to public financial support**" has slightly improved, this was not enough to unlock credit flows to the real economy.
Whereas a greater proportion of SMEs (16.7%) report that banks have rejected their loan applications mentioning the fact that the "**cost of borrowing**" for small businesses is about 30% higher than the interest rates on large corporate loans. It also takes a very long time for SMEs to get paid compared to other EU countries.
Further, during the period the government's main measures in terms of access to finance were paying "**public administration debts**", allowing tax payments to be rescheduled and further developing previously adopted measures, such as the Central Guarantee Fund. Given that in overall terms Italian SMEs underperform in all other indicators compared to the EU average, see Figure 31.1.

Conclusions Remarks

There is conclusive evidence that company size is an influential force in determining enterprise's behaviour with regard to its rate of participation in training and skills development. In 2010, the results of CVTS 3 implemented by the EU Commission, highlighted that only 50% of small enterprises had participated in formal CVET compared with 90% of large enterprises. Since 2005 the figures remained unchanged. Despite the fact that there exist national disparities in CVET participation across both countries, there is no considerable evidence of improvement compared to 2005. In 2010, 56% of Italian small enterprises reported that they had taken part in formal CVET highlighting an improvement compared to 2005, but it still lags behind the EU average of 66 %[9] and their German counterparts enjoying a roughly good rate of 73%.
This chapter delineated a number of determinants that small and medium-sized enterprises take into consideration when taking decisions on workforce development and training. To mention some:

● While in Italy, the common areas of training regardless of sector are organizational skills such as relational (interpersonal) skills, problem solving as well as team working and managerial skills, in Germany there is no clear answer to the question, and so far, the research is not resulted in a concrete answer.

● The provision of continuing vocational training in Germany and Italy highlights "**the workstation (on the job training)**" and "**conference, workshop, lectures and seminars**" as the most popular types of CVET by firms of all sizes.

● In Italy participation of SMEs in internal training programmes such as "learning circles", and "job rotation, exchanges or secondments" have been restricted perhaps because of their lack of critical mass. Looking into details of "**German Mittelstand**" or small and medium-sized enterprises in Germany suggests that SMEs in Italy could benefit from a network approach, making use of members of their skill ecosystem to create similar "economies of scale" for training activities available to larger

[9] European Commission, 2014, SBA Fact Sheet Italy

enterprises. For instance, a group SMEs could join their strengths to arrange learning circles or exchanges of personnel within a certain industry cluster or value-chain.

● To a large extent in Italy and a lesser extent in Germany the recruitment process is identified as the key process for skills development and skills upgrading of the labour force in SMEs. It is a great obstacle to internal innovation, progress and competitiveness of enterprises if the sector in which they operate evolves constantly and most knowledge becomes quickly outdated demanding to adjust the knowledge base. In 2015, a Cedefop report estimated that employment growth over the next 10-15 years will mainly be in knowledge and skills intensive professions, and that the labour market for these employees will be strong. Therefore, small and medium-sized enterprise will be less able in the future to recruit staff to fulfil their skills needs, so they should start planning for the development of their employees' skills need to sustain in the business.

● Future skills evaluation seems to be more casual in small and medium-sized enterprises in both countries compared to large enterprises where assessments are routine and take place with regular frequency. The results of CVTS3 denotes that In Italy this is crucial for SMEs as by failing to undertake skills needs regularly and systematically, they would endanger their competitiveness in the face of cumulative change in industry characteristics, notably "industry evolution" and changing patterns of knowledge. Accordingly, new market challenges may seriously jeopardize SMEs success in ever-changing markets as a result of their weak and vulnerable positions. There is overwhelming evidence emphasising the significance of the means and approaches of skills development and the future skills assessment for today's SMEs, as this is different from traditional measures of formal training participation.

● Italian SME policy priorities: access to finance, despite recent efforts, Italy needs to diversify funding options for companies and to bolster the banking sector's resilience. More effort on administrative simplification is necessary. Inefficiencies in public administration weigh heavily on Italian SMEs competitiveness. Payments and bankruptcy procedures take too much time. The management of EU funds needs to be improved, and corruption must be fought. Public procurement should be improved in a systematic way by applying central purchasing and e-procurement.

● German SME policy priorities: The dwindling number of start-ups needs to be addressed. The scaling-up of entrepreneurship support programmes for the unemployed is one example of actions needed to accompany the existing selective and quality-focused approach to entrepreneurship. The existing coordination of entrepreneurship education and training measures by all those involved, most notably the Länder, needs to be reinforced. This is to be complemented by the full implementation of measures to cut red tape and for better regulation, announced in December 2014, and by an extension of venture capital support, most notably as regards crowd-funding and crowdsourcing. Additional steps to preserve its innovative edge, including through support for a greater take-up of IT-tools among SMEs, are also a priority.

Chapter 2

Empirical Analysis on the Determinants of Entrepreneurship Training Development in SMEs in Italy

Summary: 2.1. Introduction – 2.1.1. Concept of Entrepreneurship – 2.1.2. Entrepreneurship Training in SMEs – 2.2. Required Skills for Entrepreneurship – 2.2.1 Conceptual Framework – 2.2.2. Research Hypotheses – 2.3. Control Variables – 2.3.1. Organization Size – 2.3.2. Access to Financial Capital (AFC) – 2.4. Methods of Entrepreneurship Training – 2.5. Entrepreneurship and SMEs Performance – 2.5.1. SMEs Performance Measurement – 2.6. Research Design – 2.7. Populations and Sample – 2.7.1. Population – 2.7.2. Sample – 2.7.3. Sampling Size – 2.8. Measurements and Instrumentation – 2.8.1. Questionnaire Design – 2.8.2. Reliability of the Scales – 2.9. Data Collection – 2.9.1. Self-Administered Questionnaire – 2.9.2. Email Questionnaire –2.10. Data Analysis – 2.10.1. Software – 2.10.2. Data Editing – 2.10.3. Data Entry and Coding – 2.11. Data analysis and results – 2.11.1. Demographic Profiles – 2.11.2. Exploratory factor analysis – 2.11.3. Reliability analysis – 2.12. Hypotheses testing – 2.13. Discussion – 2.14. Conclusions, limitations and future studies.

2.1. Introduction

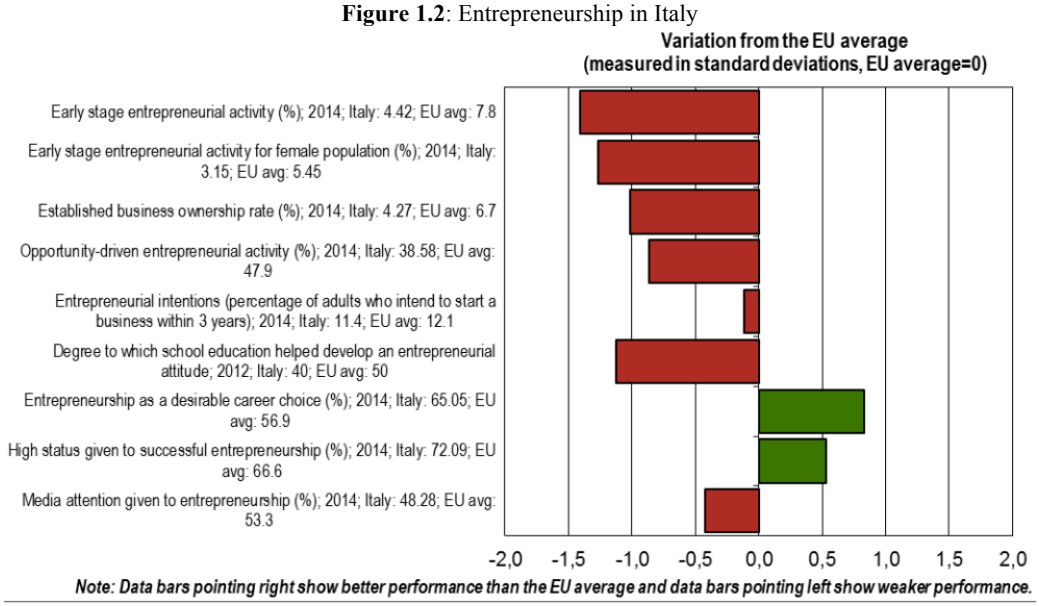
Researchers normally based on assumptions provide validity to their work rely on the chosen research methods appropriate for the development of knowledge, and carry out their projects. In order to carry on and evaluate any research, it is crucial to know what these assumptions are. In this chapter, we set out with the concept of entrepreneurship explaining briefly entrepreneurship training (activities) in SMEs. Subsequently we continue to debate some of these basic assumptions and discuss the design strategies used in this research study. For developing the study, assumptions were reviewed and established; the main paradigms were identified for the theoretical framework of the study. This chapter also discusses the research methodologies, the processes involved in the strategic and instrumental design and the data collection and analysis methods used in the study.
There are a number of definitions for methodology but the definition applicable to this research concentrates on the significance of a structural approach, which is useful in taking the researcher through all phases of the study in order to ensure that facts were not missed and the correct conclusion can be arrived at. This systematic approach follows a procedure to bring about accurate evaluations and deduce the right conclusions. The methodology selected in any research will be highly dependent on the research undertaken.

2.1.1. Concept of Entrepreneurship
2.1.2. Entrepreneurship Training in SMEs (activities)

Italian SMEs performance in entrepreneurship remains below the EU average in 2015. According to the SBA report (2015) there was considerable improvement compared with the situation in year 2014. The country is heading towards the right direction but further efforts need to be put into place. The report highlights from 2014 to 2015, early stage entrepreneurial activity rose from 3.4 % to 4.4 % — the

related indicator for female early stage entrepreneurial activity rose from 2 % to 3.1 % — and established business ownership increased from 3.7 % to 4.3 %.
The largest improvement, from 18.4 % to 38.6 %, was for opportunity-driven entrepreneurial activity. Entrepreneurial intentions also slightly improved from 9.8 % to 11.4 %. The rest of indicators remained more or less unchanged as compared with the year 2014.

Figure 1.2: Entrepreneurship in Italy



Source: European commission, 2015 SBA Fact Sheet Italy, available at: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/files/countries-sheets/2015/italy_en.pdf

Despite the fact that since 2008, Italy has been lagging a long way behind in terms of entrepreneurial activities and the relevant training, it has experienced a clearly perceivable jump in the scores from last year to this year (2015) encouraging policy actors to keep on escalating their commitment. Having said that, the following three new measures by Italian government in the reference period are expected to affect and promote entrepreneurship activities (training) and to deliver positive outcomes in the coming years:
1) **The Jobs Act** — a recent government measure to reform the labour market, in particular issues related to work, welfare, unemployment benefits, pensions and employee turnover. The measures contained in the Jobs Act aim at reducing segmentation in the labour market and encouraging permanent employment without increasing costs for small businesses.
2) **The Smart and Start measure** — a measure with a budget of EUR 200 million aiming to support the establishment of innovative start-ups with high technological content. The measure offers a 0 % interest rate to finance technical and management coaching services. The maximum eligible funding percentage increases if the start-up is composed exclusively of women or people less than 35 years of age, or if one of the participants is an Italian PhD working abroad.
3) **A sector-specific measure supports entrepreneurship** in agriculture through three different incentives. One provides a tax deduction of 19 % for the cost of renting farmland. Another offers an incentive equivalent to one third of the gross salary for a maximum period of 18 months to hire young workers on a permanent full-time contract. It also includes fixed-term contracts if they last at least three years.

The annual value of the incentive cannot exceed EUR 3 000 for fixed-term workers and EUR 5 000 for permanent ones. The third incentive envisages a tax deduction of 40 % for expenses incurred in the realisation of infrastructures to boost electronic commerce.

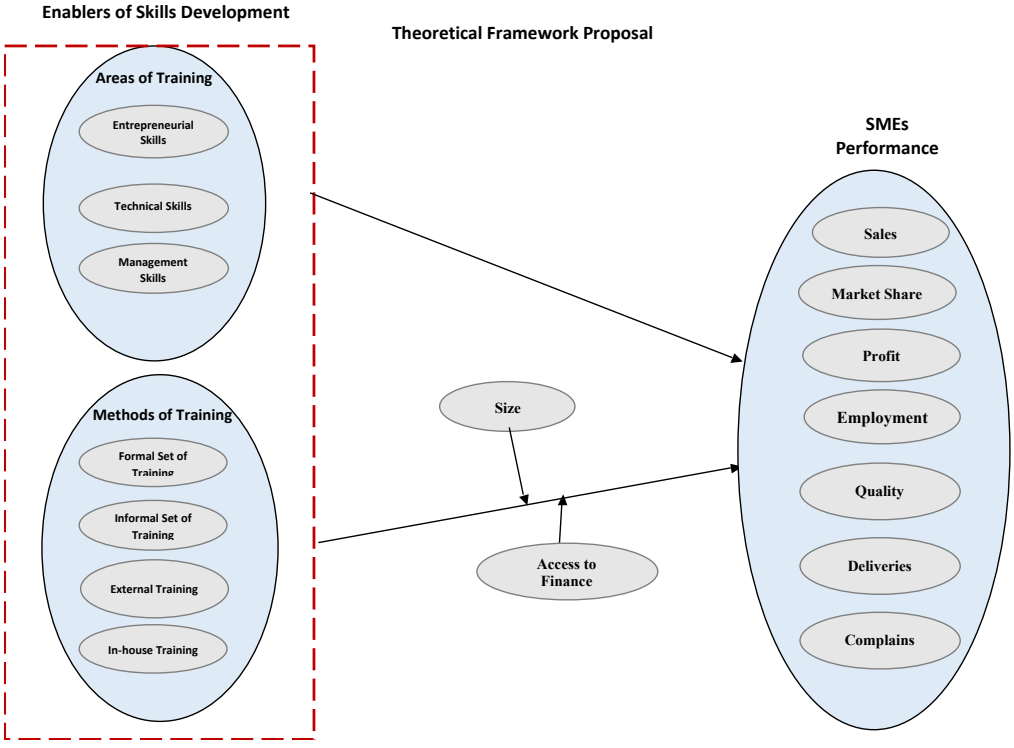
2.2. Required Skills for Entrepreneurship (Variables)

There are three types of variables used in this research: the dependent, independent and the moderator variables. It is critical to identify these two types of variables to develop a solid conceptual framework. In this research, there are seven different independent variables linked to the primary dependent variable, SMEs performance. Thus the variation in the performance of SMEs can be attributed to the change in either one or all of the seven independent variables. Based on the literature, the author categorises the independent variables as areas and methods of training. The independent variables used in the "areas of training" are: entrepreneurial skills, technical skills and management skills and in terms of the "methods of training" include: formal set of training, informal set of training, in-house training and external training. These seven independent variables would be tested to determine whether they have significant influences on the dependent variable or not.

2.2.1. Conceptual Framework

The conceptual framework comprises the basis for the entire research project. According to Sekaran (2003), it logically develops and explains the details of the network of associations among the variables assumed pertinent to the research.

Figure 2.2: Theoretical Framework



Source: Own elaboration based on literature

Figure 2.2 demonstrates a clear schematic framework for the relationships among the variables. When identification of these relationships is done, the hypotheses can be recognized and formed and the dynamics of the situation will be easy to understand.
With the comprehensive review of literature, a model relevant to development of the performance of SMEs is developed. The model involves the seven factors that are assumed to have an influence on SMEs performance.

2.2.2. Research Hypotheses

Hypothesis is the rational conjecture of relationship between two or more variables expressed in the form of testable statements. In the previous section, the conceptual framework indicated the intended relationships expected in the study. Testing of the hypotheses would assist to prove the theories introduced in the study. Having developed theories, conclusions will be formed to set a better direction for future researchers.
In this research, there were two types of hypotheses statements, the null and the alternate hypotheses. Generally, the null statements are stated as having no significant relationship or differences between the two variables; whereas the alternate hypothesis is, the opposite side of the null, and is a hypothesis stating relationship between two variables or refers to disparities between groups. The purpose of developing a null hypothesis is to formulate a test for possible rejection. Sekaran (2003) indicated that when null hypothesis is rejected, then all available alternative hypotheses concerned with the testing of that certain relationship could be supported. The null hypothesis is abbreviated as Ho, while H1 represents the alternative hypothesis.
Based on the objective and research questions of this research, a total of four main hypotheses are formulated. Accordingly, hypotheses are formulated to test whether there are significant relationships between the content and the methods of training to the performance of SMEs or not. For the areas of training, three sub-hypotheses have been formulated to test whether there are significant relationships between them and the performance of SMEs. The three determinants of areas of training are technical skills, management skills and entrepreneurial skills.

2.3. Control Variables

2.3.1. Organization Size

2.3.2. Access to Financial Capital (AFC)

For the methods of training, two main hypotheses have been designed to control the variables namely organization size and access to financial capital (AFC) and four sub-hypotheses are formulated to test whether the methods of training influences the performance of SMEs or not. These included formal set of training, informal set of training, in-house training and external training. The next four main hypotheses and seven sub-hypotheses are used to prove whether there is a relationship between SMEs performance and the seven determinants.
The orders of hypotheses for the areas of training in this research are as follow.

2.4. Methods of Entrepreneurship Training
2.5. Entrepreneurship and SMEs Performance
2.5.1. SMEs Performance Measurement

Hypotheses:
Enablers of Skills Development have positive effect on the SMEs Performance

Methods of training

H1. The association between methods of training (MT) and SMEs performance is moderated by organization size.
H2. The association between methods of training (MT) and SMEs performance is moderated by AFC.
H3. Methods of training (MT) positively affect SMEs performance.

- $H1_{3.1}$ Formal set of training has a positive effect on the SMEs performance.
- $Ho_{3.1}$ There is no significant relationship between formal set of training and SMEs performance.

- $H1_{3.2}$ Informal set of training has a positive effect on the SMEs performance.
- $Ho_{3.2}$ There is no significant relationship between informal set of training and SMEs performance.

- $H1_{3.3}$ In-house training has a positive effect on the SMEs performance.
- $Ho_{3.3}$ There is no significant relationship between in-house training and SMEs performance.

- $H1_{3.4}$ External training has a positive effect on the SMEs performance.
- $Ho_{3.4}$ There is no significant relationship between external training and SMEs performance.

Areas of training
H4. Areas of training (AT) has a direct and positive effect on SMEs performance.

- $H1_{4.1}$ Entrepreneurial skills have a positive effect on the SMEs performance.
- $Ho_{4.1}$ There is no significant relationship between entrepreneurial skills and SMEs performance.

- $H1_{4.2}$ Management skills have a positive effect on the SMEs performance.
- $Ho_{4.2}$ There is no significant relationship between management skills and SMEs performance.

- $H1_{4.3}$ Technical skills have a positive effect on the SMEs performance.
- $Ho_{4.3}$ There is no significant relationship between technical skills and SMEs performance.

2.6. Research Design

Research design is the logic or strategic plan of a research that demonstrates the

method by which the project is going to be conducted. It explains the method that all main components of the research, including the samples or groups, measures, treatments or programs, and so on, collaborate together in order to respond to the research questions. The research design is a practical outline that actualizes this logic with a range of processes to maximize the data validity for a certain research problem.
The research design of this project is based on descriptive design and hypothesis testing. According to Sekaran (2003), descriptive research is used to explain the characteristics or functions of the variables of interest. In order to conduct a descriptive research, first it starts by defining the structure and the processing of the actual data collected in order to explain the main variables. Knowing what to measure and selecting a proper survey method are critical for a good descriptive research. In this research, every respondent is motivated to cooperate and provide precise information.
The meaningful depiction of data in a descriptive research assists in the comprehension of group characteristics. It also helps the researcher to think critically about the different perspectives of the given situation, offer ideas for future researches as well as helping in decision-making.
Testing of hypothesis is for the purpose of defining the validity of certain relationships, or for drawing the distinctions between groups or the independency of two or more components in a situation. In this study, the situation is a better implementation of enablers of skills development in SMEs. Hypothesis testing is conducted to show the variation in the dependent variables or to predict outcomes.

2.7. Populations and Sample

2.7.1. Population

The population includes HR managers or employees who are more responsible for human resource issues namely in terms of training and skills development for staff, either as a major or all part of their roles in the surveyed SMEs. They were asked about their experience with the outcomes of certain content and methods of training within a questionnaire. The author selected them, as they were the most relevant people to the topic who could bring insight to the study. Subsequently based on the availability of emails on the website of targeted group of SMEs, they were contacted for email survey for example in Italy **Camera di Commercio** of Bergamo and Milan, available online at: http://www.registroimprese.it/?fromCCIAA=BG (accessed July 31, 2015) partly provided the necessary contact information. **Italian Trade Agency**, available online at: http://www.italtrade.com/countries/links/links31.htm (accessed January 12, 2015) and **IHK Berlin** - Industrie und Handelskammer zu Berlin, available online at: https://www.ihk-berlin.de/ (accessed December 17, 2014) were the other points of contact.

2.7.2. Sample

It was out of question to collect data from the entire population; as a result, a sample from a subgroup or subset of the population for this study was selected. The sampling frame was obtained from "the Made in Italy official portal". Overall, 1428 questionnaire forms were handed over to different small and medium sized

enterprises in both countries. The location of respondents was SMEs in Lombardy region in Italy and the state of Berlin. Findings from this sample could be drawn and generalized to the population of interest in Italy and Germany.

2.7.3. Sampling Size

Sample size sufficiency would rely on the responses returned from the research. However, it should be mentioned, it was not possible to deal with any larger sample size because of time and costs constraints. As a result, the selected sample size was believed to be adequate is a representative sample of the whole population and should provide a good perspective on the research.

2.8. Measurements and Instrumentation

2.8.1. Questionnaire Design

In order to improve the reliability and validity of data, much attention was given to choosing of questions for the questionnaire. This questionnaire will be used as a tool to confirm the coherence of the assessments provided by the study and truly reflects the real situation. The questionnaire has 15 structured questions to measure the five key identified constructs.

Each question pertains directly to a certain issue. Clarity of questions was ensured by the earlier studies. There was no bias in instrumentation, as the structured questionnaire was constructed on the basis of extensive literature review. As a result, the questions can be considered standard and pretested and there is no bias in them. The structured questionnaire consists of a set of close-ended questions with a fixed set of response alternatives. It was answered by respondents to ensure standardization among the respondents during the analyzing of data.

The structured questionnaire is a combined set of dichotomous, multiple-choice and Likert scaled questions. The questions were pertinent to the context and possible factors affecting entrepreneurship training and the performance of SMEs.

The first section of the four-part questionnaire, Section A, collects demographic information about the “firm characteristics”. Out of 15 questions and 85 items, nine questions and 18 items were related to the “demographic characteristics” and the remaining addressed the various constructs of the study. The second section, Section B, contained two questions and 16 items for the measurement of the “content and methods of training”. From these two sections, the researcher would analyze and predict the possible outcomes in SMEs in Italy and Germany. Section C has one question and 12 items covering the “outcomes of training” namely in terms of productivity, innovation, competitiveness and SMEs performance. Lastly, section D is about the “motivation and barriers for entrepreneurship training and skills development” factors, which is composed of three questions and 39 items concerning the incentives for collaboration and the reasons for not providing training.

In all, 12 items are used to measure the three dimensions of “areas of training” (entrepreneurial skills, management skills, technical skills). Responders are asked to indicate the provision of training to their employees in the past 12 months using a five-point Likert-type scale (where 1= Never, 2= Rarely, 3= Sometimes (Specific need), 4= Regularly (Weekly/Monthly), 5= Almost Always). Entrepreneurial skills consist of four items and HR managers are asked whether their company provides training concerning inner control/self-discipline/Autonomy; creativity/ innovation;

risk taking; proactiveness/ opportunity identification. Management skills comprise of four items. HR Managers are asked whether they provide training regarding the business planning (including management and leadership training); Accounting and finance; Marketing and promotion; Human Resources. Finally, HR managers are asked with four more items whether their firm provides technical skills to their employees in the past 12 months namely in Information Technology/ E-Commerce; Legal courses (IP, patents, etc.); Language courses; Communication/Social skills development.

In all, four items comprise the four dimensions of "methods of training" (formal set of training, informal set of training, in-house training, external training) and the responders are asked about the methods of providing training that are typically employed in their businesses using again, a five-point Likert-type scale (where 1= Never, 2= Rarely, 3= Sometimes, 4= Regularly, 5= Almost Always)

Formal set of training includes one item where HR managers are asked whether they offer off-the-job (training away from the individual's immediate work position) for their employees.

Informal set of training consists of one item again and the HR managers are asked whether they provide On-the-Job (during working hours) for employees.

In-house training again consists of one item and responders are asked whether they provide training within the firm or not.

The last dimension, external training, consists of one more item. The HR managers are asked whether: they offer training outside the firm e.g. at an external training provider.

The following two items contain the dimension of organization size and the respondents are asked to indicate the number of employees currently and last year using blank space to fill.

AFC is measured with two rather subjective items. In the first item respondents are asked to state their level of satisfaction concerning their firm's AFC last 12 months using a five-point Likert scale (where 1= Decreased Significantly; 2= Decreased Slightly; 3= Stayed the Same; 4= Increased Slightly; 5= Increased Significantly).

In the second item, the respondents are asked to estimate the average three-year profits in relation to their major competitors, using the same five-point Likert scale.

Given the literature, performance is multidimensional in nature. For instance, entrepreneurial activities or processes may, at times, lead to favourable outcomes on one performance dimension and unfavourable outcomes on a different performance dimension. Therefore, studies that only consider a single dimension of the performance variable can conclude in misleading descriptive and normative theory building.

Consequently, multiple performance measures should be used in testing the entrepreneurship-performance relationship. Based on the above discussion, firm's performance is measured with nine criteria. Respondents are asked to compare the development of their firm's nine criteria, over the last 12 months (or more if any), relative to their two most important competitors, using a five-point Likert scale (where 1= Decreased Significantly, 2= Decreased Slightly, 3= Stayed the Same, 4= Increased Slightly, 5= Increased Significantly). The firm's nine performance criteria are the following: sales growth, revenue growth, market share, net profit margin, growth in the number of employees (part-time, full-time), product/service quality and customer satisfaction (delivery, complains).

2.8.2. Reliability of the Scales

Although the questions used in the questionnaire were standard and adapted from previous studies, the validity and reliability of the variables employed in the research must be re-examined in order to test the "goodness" of the data in view of the new context. The Cronbach's Alpha is one of the assessments that is the most commonly used in determining internal consistency of variables within a scale. It is considered a reliability coefficient that evaluates for positive correlations among items. Cronbach's Alpha measures the average intercorrelations among the items measuring the concept. When Cronbach's Alpha is closer to 1, this means there is higher internal consistency and reliability among variables.
This research reviewed the validity of inter-consistency between items or the Cronbach‟s Alpha reliability coefficients of the nine independent variables and one dependent variable used in this study. This reliability test was done via SPSS, and the output is as shown in Table 1.2.

Table 1.2: Reliability Test (aggregated data for Italy and Germany)

Reliability test	Cronbach‟s Alpha	Cronbach‟s Alpha based on Standardized Items	N of items
Areas of Training			
Entrepreneurial Skills	0.89	0.89	4
Management Skills	0.91	0.91	4
Technical Skills	0.87	0.87	4
Methods of Training			
Formal Set of Training	0.89	0.89	1
Informal Set of Training	0.81	0.81	1
In-house Training	0.84	0.84	1
External Training	0.85	0.85	1

Source: Own elaboration on Questionnaire

The result indicates that the Cronbach‟s Alpha value for the 16 items is 0.86. The acceptance level of the alpha within the social science domain has the cut-off point for the reliability of the measures at 0.70. As the alpha for the standardized items was 0.86, which was above the 0.70 mark, the internal consistency and reliability of the measures used in this research was considered to be at an acceptable level.

2.9. Data Collection

In this research, the comprehensive and mixed models of data collection methods were selected in order to provide a more comprehensive picture. As a result, it allowed for the adoption of quantitative data collection methods, which can provide more illustrative and coherent perspectives of a unique circumstance. Collection of data was done in a period of 2 months. For the purpose of more flexibility in carrying out the survey, different types of form completion methods were employed: self-administered questionnaire completion, forms provided as email survey and completion of printouts.

2.9.1. Self-Administered Questionnaire

Personal or self-administered questionnaire was administered to a group of respondents by the author. The participants were guided through the process of

responding to the questionnaire. This method was selected because it provides the highest level of flexibility of data collection. The respondents, who were HR managers associated with Junior Enterprise Bergamo (JEBG) in the Bergamo area, BCG clients in Berlin were very friendly and committed in helping with the completion of the questionnaire in an appropriate manner. All uncertainties and doubts in the questions were clarified on the spot by the researcher. As a result, the response rate of 100% was achieved from this data collection method. In this method, approximately, 35 questionnaires were filled in Italy and 45 questionnaires in Berlin.

2.9.2. Email Questionnaire

The main method for doing this survey was through email questionnaire in three languages namely English, German and Italian. The questionnaire was attached to an email and was sent along with a cover letter to respondents. Analytical contact information concerning the companies of the sample was obtained via the database of "Unione Artigiani - Il portale dell'artigianato bergamasco", which is well-known and reliable source of data for Italian SMEs in Bergamo, Lombardy region. In Germany "The BCG" consulting group shared the questionnaire among its clientele at small and medium sized levels in the state of Berlin as well as other connections of SRH University Berlin, where the author works as a part-time lecturer.
As mentioned earlier, random sampling techniques were used. The method was inexpensive, and made it possible to reach out to respondents with various management responsibilities at different locations. It was much faster than the postal questionnaire method, and it is easier to administer since everything was done electronically via computers.
In many cases, due to time and cost constraints and the company's policy, meeting with HR staff was not easy. As such, the email method is considered the best method for this research. The response rate after two reminder letters with an interval of one-month in between was moderately acceptable. To select SMEs first, two sectors of the economy were selected (manufacturing and service sector) and, second, 714 companies in each country were randomly selected from that sub-group (simple random sample). In total, 1428 questionnaires mailed out to respondents in both Italy and Germany. In order to maximise response rate, two research assistants form University of Bergamo and SRH University Berlin spent 10 days telephoning these firms and two reminder letters were sent.
The questionnaire was sent only to the 675 small business managers in both countries who agreed to participate in the survey (mailed or e-mailed, depending on their preference). A cover letter explaining the study objectives was attached and a stamped return envelope was enclosed. Follow-up letters were sent approximately three weeks after the initial mailing. A total of 610 questionnaires were returned. The overall response rate, given that the target population was 1428 companies, was 42.71 per cent. The response rate was considered acceptable due to the low response expected of mail surveys and the specifically low response rate for similar types of correlational study in Italy and/or Germany.

2.10. Data Analysis

Having collected the necessary amount of data, it was then analyzed with SPSS 23 and Microsoft Excel 2013.

2.10.1. Software

With reference to the current study, SPSS was used to investigate the validity of the hypothesis through the collected data. The input data was provided in a Microsoft Excel file. For the purpose of hypothesis and validity testing, the raw data was analyzed by the Pearson's Chi-Square method and shown in the following tables for further discussions.

The Pearson's Chi-Square method analyzes the relationship as stated in the hypotheses and identifies the hypothesis of no association between columns and rows of tabular data. Needless to say the Chi-Square method finds significance of study when there is a strong relationship, sample size and the number of values of the two associated variables is large. According to statisticians, the probability of 0.05 or less in chi-square method is usually interpreted as sufficient justification for rejecting the null hypothesis.

Microsoft Excel, a computerized spreadsheet for presenting data in columns and rows, was used. In this study, each column represented a variable. Deployment of information in such a method allowed better computation and processing. The tables and charts were generated by Excel formed a more complete picture on the survey results. This information is shown in the following chapter.

2.10.2. Data Editing

Prior to analysis of data, it was essential for data to be edited, coded and handled where there are cases of incompleteness in response. The incompleteness and inconsistency in responding to questionnaires were checked for accuracy in the returned questionnaires. Inconsistencies refer to instances where the participants left some questions blank while they answered the remaining sections of the questionnaire. In such cases, the problem rectified by contacting the respondents (if it was possible) through email or phones to get the correct data and to clarify the data inconsistencies. In certain instances, it may be possible for blank questions to be extrapolated from the logical responses were extracted from other responses. In other cases, where it was possible, the researcher used the mid-point method to handle the blank responses, meaning the researcher assigned the midpoint in the scale to the affected questions.

It has been stated in many previous studies that blank responses in the returned questionnaires is a prevalent problem that researchers face during surveys. The reasons for these blank responses might be due to poor comprehension of the questions, low interest, unwillingness of the participant to answer, or the respondent's lack of knowledge to answer. In this study, if blanked questions went beyond 5% of the items (or from sections B and C) in the questionnaire, then that specific questionnaire was omitted from the sample data analysis. This is to ensure that consistency in validity is maintained, and it may be difficult for the researcher to predict the logical responses and edit accordingly. Due to this, 2% of the questionnaires were omitted in this study due to excessive blank responses or due to the lifespan of the company (if less than a year).

2.10.3. Data Entry and Coding

An auto-generated spreadsheet in the online Excel format was used to reflect the questionnaire. Each response to the items in the questionnaire was entered automatically into the online form of the Excel spreadsheet. These automatic keying in of data would assist subsequently in the entering of data in SPSS. The determinants of study are shown in the columns of the table. Except for a few questions, there was no need for coding in of raw data. The numerical scales were automatically entered as numbers. Through using the online spreadsheet and online forms from **SoSci Survey**(oFb - der onlineFragebogen), there was no need for the researcher to key in any data and there was no human error during the process. All the information was up to date, and since all the data were filled automatically in the online spreadsheet when questionnaires were submitted, there was no need for any calculation or counting of the received answers.

2.11. Data analysis and results

2.11.1. Demographic Profiles

According to Sekaran (2003), demographics information may or may not be good predictors and useful tools for assessing the main variables. In the case of enablers of skills development, this information can be used to give an overview of the companies' training status quo.

Table 2.2. Firm characteristics

		Germany		Italy	
Measure	Response	Frequency	%	Frequency	%
Extent of responsibility for human resourc	All of the role	271	89.4	281	91.5
	A major part of the role	28	9.2	24	7.8
	A minor part of the role	3	1.0	1	0.3
	Not relevant	1	0.3	1	0.3
	Total	303	100	307	100
Extent of market (Serving customers)	Locally/Regionally	59	19.5	42	13.7
	Nationally	112	37.0	189	61.6
	Internationally	132	43.6	76	24.8
	Don't know	0	0.0	0	0.0
	Total	303	100.0	307	100.0
Firm age	Less than 1 year	31	10.23	27	8.8
	1-4 years	243	80.2	273	88.9
	5-9 years	25	8.3	7	2.3
	10 years of more	4	1.3	0	0.0
	Total	303	100.0	307	100.0
Sector of the Firm	Manufacturing	201	66.3	242	78.8
	Service	102	33.7	65	21.2
	Total	303	100.0	307	100.0
Total number of Employees	1-9 employees	78	25.7	273	88.9
	10-49 employees	225	74.3	34	11.1
	Total	303	100.0	307	100.0
Employee's age	Less than 24 years old	75	24.8	139	45.3
	24 to 49 years old	181	59.7	135	44.0
	50 to 64 years old	41	13.5	28	9.1
	65 years old and over	6	2.0	5	1.6
	Total	303	100.0	307	100.0
Innovation-Driven	New product/service	163	53.8	171	55.7
	New operational process	112	37.0	123	40.1
	New management process	28	9.2	13	4.2
	Total	303	100.0	307	100.0
Training plan	Having formal training plans with Budget	257	84.8	128	41.7
	Having formal training plans but no Budget	32	10.6	137	44.6
	No formal training plan and no budget	14	4.6	42	13.7
	Total	303	100.0	307	100.0

However, mostly it was used to determine data accuracy, for example, in the case where firm age is less than one-year and/or the extent of respondents' responsibility for human resource is limited (a minor part or even not relevant), their responses will be omitted.
In this study, a descriptive analysis of sample respondents of a questionnaire was done and Table 2.2 summarises and presents the main characteristics of the companies that participated in the study.

2.11.2. Exploratory factor analysis

All theoretical concepts used in the present research were taken from prior studies, which provided a theoretical rationale for the existence of these concepts and also the items measuring these concepts. However, due to the fact that for the measurement of each construct, the author used items from many researchers, and employed an exploratory factor analysis-EFA to redefine the theoretical constructs according to the new established factors (see Table 5.2). Thus, principal component analysis was conducted on the scaled responses to aggregate HR managers' perceptions of each separate theoretical construct and Varimax rotation was used to identify a set of factors that were uncorrelated with each other.
Bartlett's test of sphericity for all five constructs displayed levels of correlations indicating that a factor model was appropriate ($p<0.001$). In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to test if variables should be dropped from the model due to Multicollinearity. The KMO value varies from 0 to 1, and to perform factor analysis KMO overall should be .60 or higher. In the case when the value is less than .60, the variables with the lowest anti-image value have to be removed until the KMO overall goes beyond the .60 mark. In this study, each construct/dimension exceeded the acceptable level (0.6) on the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. The results for the Bartlett's Test of Sphericity and the KMO were 2669.612 and 0.809 respectively with the significance of .000, which shows that both tests were highly significant and it can be concluded that it is safe to proceed with the factor analysis (see Table 3.2).
Therefore, concerning the construct validity of the constructs, the author must confirm that all five constructs passed the test, measuring that all factor loadings exceeded 0.6 on their own constructs and had low loadings (< 0.30) on unrelated factors.

Table 3.2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	2669.612
	df	171
	Sig.	.000

2.11.3. Reliability analysis

The conducted factor analysis (see Table 5.2) on the group variables indicated that their correlations were extremely high. Thus, the process of factor analysis was carried out in two main steps:
1- **Factor extraction:** In order to make an initial decision on the number of factors that measures the variables of interest

2- **Factor rotation:** To make easy the interpretation of factor extraction results and assists in making the final decision about the determinant factors

The underlying structure of 19 items was analyzed using the principal component analysis followed by the varimax rotation. The factor analysis revealed that there are four dimensions underlying the effective factor for predicting SMEs performance in Italy. They are: (F1) Areas of Training; (F2) Methods of Training; (F3) Organization size; (F4) Access to financial capital. The total variance, explained by factors, is shown in Table 4.2, which suggests that the four factors are accounted for 73.33% of the total variance. Factor 1, accounted solely about 46.15% of the total variance. All the eigenvalues for the variables in this case were higher than 1.0. As a result, all variables were chosen.

Table 4.2: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.769	46.154	46.154	8.769	46.154	46.154
2	2.017	10.615	56.769	2.017	10.615	56.769
3	1.728	9.093	65.863	1.728	9.093	65.863
4	1.420	7.473	73.335	1.420	7.473	73.335
5	.806	4.244	77.580			
6	.693	3.648	81.228			
7	.669	3.520	84.747			
8	.546	2.872	87.620			
9	.458	2.411	90.031			
10	.430	2.261	92.292			
11	.398	2.096	94.389			
12	.266	1.401	95.789			
13	.237	1.250	97.039			
14	.208	1.093	98.132			
15	.129	.677	98.809			
16	.092	.484	99.293			
17	.061	.324	99.616			
18	.040	.212	99.828			
19	.033	.172	100.000			

Note: Extraction Method: Principal Component Analysis.

Table 5.2, also illustrates the results of reliability analysis for each one of the five complex constructs/variables in both countries. The Cronbach's α coefficient of areas of training, methods of training, organization size, AFC and firm (SMEs) performance appeared to have good internal consistency with 0.876, 0.869, 0.690, 0.576, 0.896 accordingly in Italy.

According to Table 4.2, out of the 19 independent questions, four factors with eignevalues more than 1.0 have been extracted. Therefore, they were considered

significant factors. Among all the 19 items, these components accounted for 46.15%, 10.61%, 9.09% and 7.47% of the total variance respectively.
According to Peterson (1994), a Cronbach's alpha is acceptable if it is within the acceptable range (between 0.5 and 0.95) though specifically, depending on the type of research, the acceptable level for Cronbach's alpha in a basic research should be between 0.7 – 0.9. In relation to this, it can be noted that the first factor, areas of training, consisted of 12 variables (alpha $_{IT}$ = 0.876). The second factor, methods of training, was loaded with four variables (alpha $_{IT}$ = 0.869). The third factor, size of organization, comprised of one variable (alpha $_{IT}$ = 0.690). The fourth factor illustrated loadings for access to financial capital, consisted of two variables (alpha $_{IT}$ = 0.576). Finally the last factor firm performance was loaded with nine variables (alpha $_{IT}$ = 0.896) (see Table 5.2). The data show that internal consistency of data for areas and methods of training and also firm performance of Italian enterprises is higher than the German counterpart. Whereas the data concerning organization size and access to financial capital for German enterprises are more consistent than the Italian one. The necessary data for Germany is provided in the next chapter.

Table 5.2: Factor analysis and reliability analysis

Construct	Dimension	Item	Loadings (IT)	KMO Bartlett's Sig. TVE Cronbach's α (IT)
Areas of training				0.876
	Entrepreneurial Skills	ES1	0.750	
		ES2	0.735	
		ES3	0.787	
		ES4	0.690	
	Management Skills	MS1	0.755	
		MS2	0.896	
		MS3	0.845	
		MS4	0.838	
	Technical Skills	TS1	0.896	
		TS2	0.928	
		TS3	0.789	
		TS4	0.723	
Methods of Training				0.869
	Formal Set of Training	FT1	0.809	
	Informal Set of Training	IT1	0.817	
	In-house Training	HT1	0.750	
	External Training	ET1	0.735	
Organization Size				0.690
	Organization Size	SI1	0.787	
Access to Financial Capital				0.576
	Access to Financial Capital	AFC1	0.690	
		AFC2	0.755	
Firm Performance	Firm Performance			0.896
		FR1	0.896	
		FR2	0.845	
		FR3	0.838	
		FR4	0.896	
		FR5	0.928	
		FR6	0.789	
		FR7	0.811	
		FR8	0.809	
		FR9	0.810	

Note: Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

2.12. Hypotheses testing

For the testing of the proposed hypotheses two statistical methods were adopted, regression analysis and SEM using the statistical software packages SPSS 23 and AMOS 22. Initially the proposed model was tested using the method through AMOS. The results for Italy were not encouraging because most of the fit indexes were outside of the proper trade-off ranges (see Figure 4.2: Model 4). Thus, each hypothesis was tested separately using both regression and SEM analysis. With the assistance of the SPSS software, regression analysis was realised on three consecutive models in order to test the stated hypotheses (H1-H4). **In the first regression model**, H3 was tested and it proved that methods of training (MT) positively affect firm performance. **In the second model**, a second independent variable was added, the areas of training, trying to test H4 (Areas of training (AT) has a direct and positive effect on firm performance) as well as H3. **In the last, third model**, the effect of the two moderating variables (Organization size and AFC) to the MT→FP direct relationship, was tested (H1 = The association between MT and firm performance is moderated by Organization size, and H2 = The association between MT and firm performance is moderated by AFC) (Table 6.2).

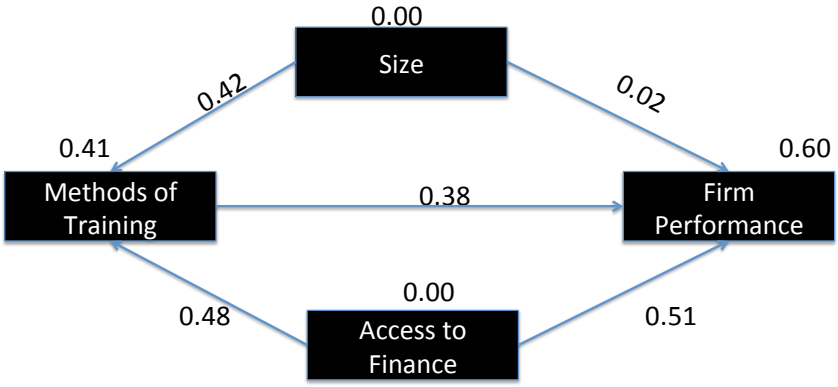
Table 6.2: Regression analysis of the three models (Italy)

	Adjusted R^2	Sig. of Regression model	Standardized β (B)	Sig.
Model 1	0.461	0.00	MT= 0.683	0.00
Model 2	0.479	0.00	MT= 0.442	0.001
			AT= 0.228	0.031
Model 3a	0.615	0.00	MT= 0.235	0.529
			Size= -0.214	0.561
			AFC= 0.639	0.157
			MT*Size= 0.433	0.532
			MT*AFC=-0.224	0.721

Source: Own Calculation

Model 1, shows that the variable MT directly and positively affects firm performance (b_{MT} = 0.683, sig = 0.000<0.05). This independent variable explains more than 45 percent (Adjusted R^2 = 0.461) of each change of the dependent variable firm performance. Thus, H3 is accepted. Model 2 demonstrates that the variable MT directly and positively affects firm performance (b_{MT} = 0.442, sig = 0.001). Also, the variable AT (b_{AT} = 0.228, sig = 0.031) directly and positively affects firm performance. The independent variables, MT and AT, have a positively direct and statistically significant effect on firm performance, and explain about 48 per cent (Adjusted R^2 = 0.479) of each change of the firm performance.
Thus, H4 and H3 are accepted. Finally, model 3a indicates that when the two moderating variables (Organization size and AFC) interact with the independent variable MT all variables become statistically insignificant, although they explain more than 60 per cent (Adjusted R^2 = 0.615) of each change of the dependent variable firm performance.
Similar results are obtained from the SEM analysis as shown in Model 3b (Figure 3.2).
Although this model is not statistically sound (significant), because the fit indexes, χ^2/df = 9.147 (above the tolerance level of < 3), p-value = 0.002 (below the tolerance level of >0.05), RMSEA (above the tolerance level of <0.1) and TLI (below the tolerance level of >0.9), are not within accepted levels, it could provide some useful information, due to the fact that the rest fit indexes are within accepted levels.

Figure 3.2: Model 3b – Path model for MT and FP

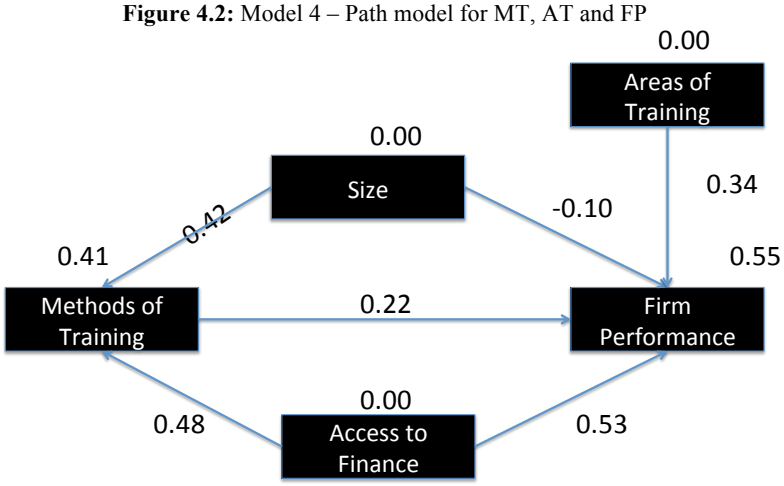


Notes: χ^2 = 9,147; df = 1; χ^2 / df = 9,147; *p*-value = 0.002; RMR = 0.057; RMSEA = 0.285; GFI = 0.958; TLI = 0.706; CFI = 0.951; NFI = 0.947

In this SEM model 3b, as with regression model 3a, MT positively affects (0.38) Firm Performance. Similar results are shown for "AFC", which directly and positively affects (0.51) firm performance. It also affects firm performance indirectly through MT (0.48×0.38=0.182). Similarly, the author noticed that "organization size" positively affect firm performance only indirectly through MT (0.42 × 0.38 = 0.160) but, not directly (0.02).

Further, model 4 (Figure 4.2) was constructed in which the areas of training as an independent variable added to the previous model to measure the firm performance.

Figure 4.2: Model 4 – Path model for MT, AT and FP



Notes: χ^2 = 165,209; df = 4; χ^2 / df = 41,302; *p*-value = 0.000; RMR = 0.132; RMSEA = 0.635; GFI = 0.706; TLI = –0.245; CFI = 0.502; NFI = 0.505

This model is also statistically insignificant. Consequently, the author proceeded to the construction of two new models, 5a (Figure 5.2) and 5b (Figure 6.2), where:

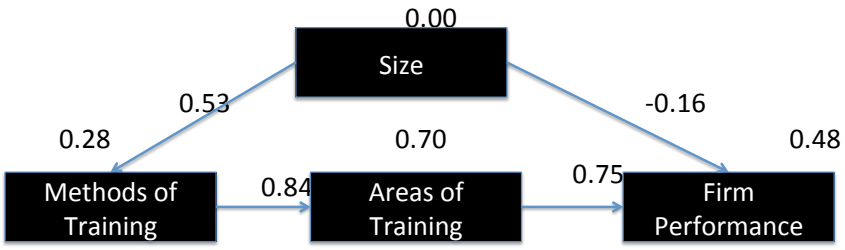
(1) MT affects firm performance through AT, and

(2) organization size and AFC moderate this relationship.

This model is not statistically significant because five of its fit indexes, χ^2/df, p-value, RMSEA, TLI and CFI are above or below the accepted levels. However, it provides a good indication (signal) that organization size affects positively and

indirectly (0.53 × 0.84 × 0.75 = 0.334) the relationship between MT → AT→ firm performance. It does not have any positive and statistically significant direct effect on firm performance, because the coefficient is negative (−0.16) and not statistically significant.

Figure 5.2: Model 5a - Modified path model for MT, AT and FP with Size

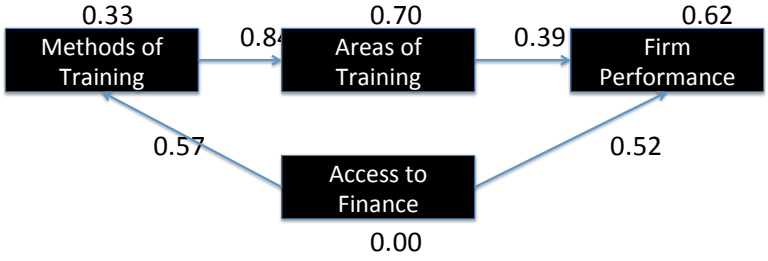


Notes: χ^2 = 44,017; df = 2; χ^2 / df = 22,008; *p*-value = 0.000; RMR = 0.038; RMSEA = 0.458; GFI = 0.836; TLI = 0.499; CFI = 0.833; NFI = 0.829

This model, model 5b, is statistically significant because all fit indexes, are within the accepted levels except one, RMSEA (which is very close to the accepted level of <0.1). It gives us the following results:

(1) AFC positively and directly affects firm performance (0.52); and
(2) AFC moderates, (i.e., affects positively but indirectly/0.57 × 0.84 × 0.39 = 0.187) the relationship between MT→AT→firm performance.

Figure 6.2: Model 5b- Modified path model for MT, AT and FP with AFC

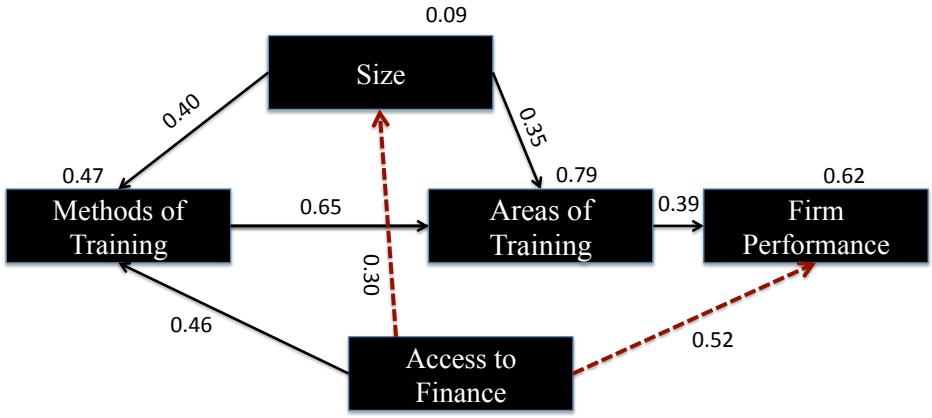


Notes: χ^2 = 5,038; df = 2; χ^2 / df = 2,519; *p*-value = 0.179; RMR = 0.016; RMSEA = 0.134; GFI = 0.928; TLI = 0.954; CFI = 0.982; NFI = 0.911

After many trials of various similar SEM models, model 6 (Figure 7.2) was concluded, which satisfies all fit indexes and provides interesting and unexpected results. Table 7.2 presents, the overall findings with regard to the hypotheses tested.
Model 6, demonstrates the following results:
(1) The relationship between MT→ AT→ firm performance is statistically significant.
(2) The above relationship is better and statistically more sound than the tested relationships of models 2, 4, 5a, and 5b, where MT and AT positively affected firm performance.
(3) The construct AFC directly and indirectly affects firm performance.
(4) The construct "Organization size" seems to work differently from the AFC construct. It affects firm performance better in two indirect ways, firstly, through MT and second through AT. This relationship between Organization size and AT is a

newly observed relationship, grounded in our data, which has never been supported before. However, it does not seem to have any direct and statistically significant effect on firm performance.
(5) Finally the variable AFC directly affects "Organization size". This is also a newly observed relationship, grounded in our data, which is also never supported before.
As far as the hypotheses of the study are concerned, H_1 is accepted, since "Organization size" positively and indirectly affects firm performance and moderates (0.40×0.65×0.39 = 0.101) the relationship between MT→AT→firm performance.

Figure 7.2: Model 6 - Modified path model for SMEs performance



Notes: $\chi^2 = 6{,}045$; df = 3; χ^2 / df = 2,015; *p*-value = 0.101; RMR = 0.012; RMSEA = 0.158; GFI = 0.917; TLI = 0.969; CFI = 0.993; NFI = 0.921

Table 7.2. Hypotheses test results

Hypotheses Path		Path coefficients***	Remarks
H1	Methods of Training→ Organization Size→ Firm Performance	0.40 × 0.65 × 0.39 = 0.1014	Accepted
H2	Methods of Training→ Access to Financial Capital→ Firm Performance	0.46 × 0.65 × 0.39 = 0.117	Accepted
H3	Methods of Training→Areas of training → Firm Performance	0.65 × 0.39 = 0.254	Accepted
H4	Areas of training → Firm Performance	0.392	Accepted
	Proposed new causal relationships		
	Access to financial capital→firm performance	0.524	Accepted
	Access to financial capital→Organization size	0.296	Accepted
Note: ***All coefficients are significant at 0.01 level			

Source: Own Calculation

H_2 is partially supported because AFC positively and indirectly affects firm performance and moderates (0.46×0.65×0.39 = 0.117) the relationship between MT→AT→firm performance. However, there is also a direct effect on FP (0.52), which is much stronger than the indirect effect through MT and AT.
H_3 is not accepted as stated in the proposed model (MT positively affects FP) rather indirectly affects firm performance through AT (0.65 × 0.39 = 0.254). H4 is supported since a positive and direct relationship between AT and firm performance is exhibited. More especially, this relation has an estimate coefficient of 0.392. Moreover, two other relationships were demonstrated in the revised model 6 (Figure 7.2). The first relationship is a positive and direct relation of AFC and firm performance with estimate coefficient 0.524. The second relation is a positive and direct relationship of AFC and "Organization size" with estimate coefficient 0.296.
In the next chapter the collected data for Germany and the final conclusion will be discussed.

2.13. Discussion

The results demonstrate that the organization size moderates the relationship between methods of training and SMEs performance in Italy. Earlier empirical evidence supports these results. For instance, Kotey B., and Folker C., (2007) found that the association between methods of training and firm performance is moderated by organization size in small South African firms.

The significance of the organization size in the mentioned relationship underlines the fact that the business environment in Italy continues to be uncertain and changeable. Thus, the Italian SMEs search for new opportunities in their environment in order to gain the competitive advantage from their competitors. This leads these firms to create value, to increase their profitability and to improve their performance possibly by increasing their size.

Additionally, AFC in the study moderates the relationship between methods of training and the performance of Italian SMEs through areas of training. Accordingly, Kotey B., and Folker C., (2007) concluded that the association between methods of training and SMEs performance is moderated by AFC but not through areas of training. Italian SMEs of our sample sometimes confront limitations in relation to the financial capital, especially during the crisis when most of managements of these firms try to find the adequate strategies for exploiting new opportunities. For this reason, these firms emphasise on difficulties of AFC in order to increase their performance.

Moreover, the results confirm a positive relationship between methods of training and the performance of SMEs through areas of training. The present study also shows that an interaction exists between methods of training and areas of training and that this interaction has a statistically significant positive impact on Italian SMEs performance.

According to the findings of the study, it seems that the impact of methods of training on the performance of Italian SMEs of our sample are strongly moderated by the organization size and AFC. Furthermore, the research supported the positive and direct relationship between areas of training and the performance of SMEs. Similar results are also supported by previous empirical evidence, e.g. Afolabi B., Macheke R., (2012).

Regarding the methods of training in small and medium sized enterprises in Italy managers widely recognise the formal set of training which is provided externally as the most convenient way of development, growth and to improve profitability and more particularly, SMEs performance. Therefore, it seems that Italian SMEs concentrate primary on methods of training, which is strongly related to the available fund by government and the size of organization.

Concerning the areas of training the results show that Italian SMEs primarily focus on management skills and less technical skills while there is very limited (if any) concentration on entrepreneurial skills.

Furthermore, our final model (Figure 7.2) demonstrated two more relationships. The first was a direct and positive relationship between AFC and SMEs performance. As it seems, Italian managers in small and medium sized enterprises have limited willingness to exploit their firm's financial capital as they have limited knowledge about impacts of investments on training. More specifically, the managers should invest the adequate financial capital and should not wait to offer training only if national/local and regional government funds are available. This has as a result to raise performance initially the productivity, sales and the revenue and secondly the net profit of their company.

The final model also suggested a direct and positive relationship between AFC and the organization size. A possible explanation of this direct and positive relationship could be the result of the Italian government policies towards the organization size in allocation of funds.

2.14. Conclusions, limitations and future studies

The aim of the current thesis was to develop and to examine a conceptual framework that investigates the impact of four important constructs (factors) on SMEs performance in Italy. The conceptual framework was tested on a representative sample of Italian SMEs. The novelty and contribution of the thesis lies in the synthesis of its conceptual framework; it includes factors that have rarely (if any) been collectively used before, to the best of the researchers' knowledge, in the international literature. Moreover, the focus of the study is on SMEs, an approach that is lacking on the literature. Therefore, this paper expects to make a contribution to the study of entrepreneurship training and the examination of the performance of SMEs.

First of all, it examines the relationship between methods of training and firm performance on a small and medium business context. Despite that numerous studies investigating methods of training and the performance of SMEs, the research in the context of SMEs has been limited.

Second, the present study has incorporated areas of training in its analysis. Although areas of training are concepts extensively used in the literature, they have been mostly used theoretical and not empirical. Consequently, there is limited empirical knowledge about the relationship between areas of training and the performance of SMEs.

Third, the concepts of methods of training and areas of training have been rarely combined in an empirical study, and their relationship has not been widely researched.

Results indicate that the organization size has an influence on methods of training, but not areas of training. That finding confirms that the organization size always has an influence on SMEs decision in selecting methods of offering training. The results also suggests the higher tendency in offering external/formal set of training in micro and small enterprises compared to medium sized enterprises.

Moreover, the present study underlines the significant of access to capital (e.g. national/regional funds and banking lending). AFC has an impact on most factors of the conceptual framework, including SMEs performance. It is, therefore, evident that in the period of financial crisis access to funds plays a vital part for Italian SMEs. Additionally, the study empirically proves that there is a relationship between methods and areas of training and that this relationship has a positive impact on Italian SMEs performance. The empirical findings confirm that methods of training, when supported by relevant areas of training, lead to higher SMEs performance.

The main limitation of this study includes the small sample size (307 responded questionnaires in Italy). This was due to the fact that the sample of this study consisted only of two sectors (manufacturing and service). Future research may repeat and continue this study with the proposed new relationships within a wider context (larger sample and all sectors). Furthermore, future researches can test the proposed relationships to large size firms for which differentiations in the results may arise.

Chapter 3

Empirical Analysis on the Determinants of Entrepreneurship Training Development in SMEs in Germany

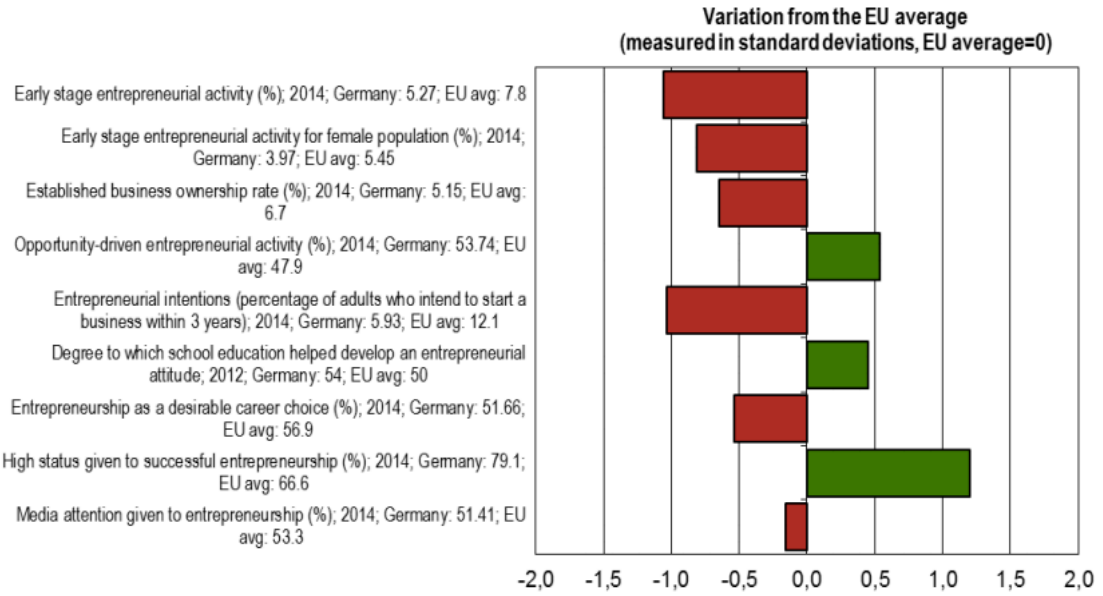
Summary: 3.1. Introduction – 3.1.1. Concept of Entrepreneurship – 3.1.2. Entrepreneurship Training in SMEs – 3.2. Required Skills for Entrepreneurship – 3.2.1. Research Hypotheses – 3.3. Control Variables – 3.3.1. Organization Size – 3.3.2. Access to Financial Capital (AFC) – 3.4. Methods of Entrepreneurship Training – 3.5. Entrepreneurship and SMEs Performance – 3.5.1. SMEs Performance Measurement – 3.6. Exploratory factor analysis – 3.6.1 Reliability analysis – 3.7. Hypotheses testing – 3.8. Discussion – 3.9. Conclusions, limitations and future studies.

3.1. Introduction

3.1.1. Concept of Entrepreneurship (in Germany)

Germany ranks 16 on the Global Entrepreneurship and Development Index (GEDI) rankings. The strength of the German economy lies on the entrepreneurial aspirations sub-index. Many reports define entrepreneurial aspirations as the efforts of early stage entrepreneurs to introduce new products and services, develop new production processes, penetrate foreign markets, hire employees, and finance new growth through formal or informal venture capital. Germany does not score as well on entrepreneurial attitudes and entrepreneurial activities. In fact, "entrepreneurial attitudes" is Germany's weakest sub-index with a ranking of 24.

Figure 1.3: Entrepreneurship in Germany



Note: Data bars pointing right show better performance than the EU average and data bars pointing left show weaker performance.

Source: European commission, 2015 SBA Fact Sheet Germany, available at: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/files/countries-sheets/2015/germany_en.pdf

For Germany, the SBA principle of 'Entrepreneurship' reveals the weakest performance of all SBA areas. The overall area average puts Germany in line with the EU average. However, for many indicators it lags behind many of the other

Member States, sometimes by a wide margin. This is the case for all indicators measuring the general level of entrepreneurial and start-up activity, such as early stage entrepreneurial activity, early stage entrepreneurial activity for the female population and the established business ownership rate (see also section one for the negative net business demography figures that reflect this). Over three quarters of the German population think that successful entrepreneurs are held in high regard (compared to less than two thirds for the EU).

3.1.2. Entrepreneurship Training in SMEs

Despite the many successful SMEs that are role models for aspiring entrepreneurs and the generally favourable entrepreneurial conditions, the level of entrepreneurial activity and the relative training among German SMEs is relatively low. A number of factors do explain this however. In general, Germans are less keen on being self-employed than other Europeans. It could be explain as a result of very good labour market conditions, which have cemented this attitude. Existing companies that offer brilliant career opportunities are always looking for more staff, especially highly skilled people and no time to train by themselves. This further depletes the number of potential entrepreneurs. Moreover, demographic changes and fewer young people in Germany make it less plausible to invest on entrepreneurship training aiming to start a business. The increased risk awareness of potential entrepreneurs further exacerbates the effectiveness of entrepreneurship training. As the very high proportion of opportunity-driven entrepreneurs (almost 57 % versus 47% for the EU) suggests, would-be entrepreneurs take longer to plan their business before starting up. While this is definitely a good thing, in particular for the sustainability of the business, the flip side is a much lower level of overall entrepreneurial activity. Last but not least, instead of the former broad-based, hands-off approach in entrepreneurial activity (training), the focus of policy support measures has recently shifted to fewer, more promising, often high-tech business ventures. The recent changes to the funding scheme for starters (“Gründungszuschuss”) are a case in point.

3.2. Required Skills for Entrepreneurship

3.2.1. Research Hypotheses

Based on the objective and research questions of this research, a total of four main hypotheses are formulated. Accordingly, hypotheses are formulated to test whether there are significant relationships between the content and the methods of training to the performance of SMEs or not. For the areas of training, three sub-hypotheses have been formulated to test whether there are significant relationships between them and SMEs performance. The three determinants of areas of training are technical skills, management skills and entrepreneurial skills.

3.3. Control Variables
3.3.1. Organization Size
3.3.2. Access to Financial Capital (AFC)

For the methods of training, two main hypotheses have been designed to control the variables namely organization size and access to financial capital (AFC) and four sub-hypotheses are formulated to test whether the methods of training influences the performance of SMEs or not. These included formal set of training, informal set of training, in-house training and external training. The next four main hypotheses and seven sub-hypotheses are used to prove whether there is a relationship between the performance of SMEs and the seven determinants.
The orders of hypotheses for the areas of training in this research are as follow.

3.4. Methods of Entrepreneurship Training
3.5. Entrepreneurship and SMEs Performance
3.5.1. SMEs Performance Measurement

Hypotheses:
Enablers of Skills Development have positive effect on the SMEs Performance

Methods of training

H1. The association between methods of training (MT) and firm performance is moderated by organization size.
H2. The association between methods of training (MT) and firm performance is moderated by AFC.
H3. Methods of training (MT) positively affect firm performance.

- $H1_{3.1}$ Formal set of training has a positive effect on the SMEs performance.
- $Ho_{3.1}$ There is no significant relationship between formal set of training and SMEs performance.

- $H1_{3.2}$ Informal set of training has a positive effect on the SMEs performance.
- $Ho_{3.2}$ There is no significant relationship between informal set of training and SMEs performance.

- $H1_{3.3}$ In-house training has a positive effect on the SMEs performance.
- $Ho_{3.3}$ There is no significant relationship between in-house training and SMEs performance.

- $H1_{3.4}$ External training has a positive effect on the SMEs performance.
- $Ho_{3.4}$ There is no significant relationship between external training and SMEs performance.

Areas of training
H4. Areas of training (AT) has a direct and positive effect on firm performance.

- $H1_{4.1}$ Entrepreneurial skills have a positive effect on the SMEs performance.

- $Ho_{4.1}$ There is no significant relationship between entrepreneurial skills and SMEs performance.

- $H1_{4.2}$ Management skills have a positive effect on the SMEs performance.
- $Ho_{4.2}$ There is no significant relationship between management skills and SMEs performance.

- $H1_{4.3}$ Technical skills have a positive effect on the SMEs performance.
- $Ho_{4.3}$ There is no significant relationship between technical skills and SMEs performance.

3.6. Exploratory factor analysis

All theoretical concepts used in the present research were taken from prior studies, which provided a theoretical rationale for the existence of these concepts and also the items measuring these concepts. However, due to the fact that for the measurement of each construct, the author used items from many researchers, and employed an exploratory factor analysis-EFA to redefine the theoretical constructs according to the new established factors (see Table 2.3). Thus, principal component analysis was conducted on the scaled responses to aggregate HR managers' perceptions of each separate theoretical construct and Varimax rotation was used to identify a set of factors that were uncorrelated with each other.
Bartlett's test of sphericity for all five constructs displayed levels of correlations indicating that a factor model was appropriate ($p<0.001$). In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to test if variables should be dropped from the model due to Multicollinearity. The KMO value varies from 0 to 1, and to perform factor analysis KMO overall should be .60 or higher. In the case when the value is less than .60, the variables with the lowest anti-image value have to be removed until the KMO overall goes beyond the .60 mark. In this study, each construct/dimension exceeded the acceptable level (0.6) on the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. The results for the Bartlett's Test of Sphericity and the KMO were 2791.422 and 0.789 respectively with the significance of .000, which shows that both tests were highly significant and it can be concluded that it is safe to proceed with the factor analysis (see Table 1.3).
Therefore, concerning the construct validity of the constructs, the author must verify that all five constructs passed the test, measuring that all factor loadings exceeded 0.6 on their own constructs and had low loadings (< 0.30) on unrelated factors.

Table 1.3: KMO and Bartlett's Test (Germany)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.789
Bartlett's Test of Sphericity	Approx. Chi-Square	2791.422
	df	171
	Sig.	.000

3.6.1. Reliability analysis

The conducted factor analysis (see Table 2.3) on the group variables indicated that their correlations were extremely high. Thus, the process of factor analysis was

carried out in two main steps:
1- **Factor extraction:** In order to make an initial decision on the number of factors that measures the variables of interest
2- **Factor rotation:** To make easy the interpretation of factor extraction results and assists in making the final decision about the determinant factors
The underlying structure of 19 items was analyzed using the principal component analysis followed by the varimax rotation. The factor analysis revealed that there are four dimensions underlying the effective factor for predicting SMEs performance in Germany and Germany. They are: (F1) Areas of Training; (F2) Methods of Training; (F3) Organization size; (F4) Access to financial capital. The total variance, explained by factors, suggests that the four factors are accounted for 67.21% of the total variance. Factor 1, accounted solely about 41.29% of the total variance.
All the eigenvalues for the variables in this case were higher than 1.0. As a result, all variables were chosen.
Table 2.3, also illustrates the results of reliability analysis for each one of the five complex constructs/variables in both countries. The Cronbach's α coefficient of areas of training, methods of training, organization size, AFC and firm performance appeared to have good internal consistency with 0.781, 0.673, 0.79, 0.803 and 0.717 respectively in Germany.
According to the "total variance explained" data, out of the 19 independent questions, four factors with eignevalues more than 1.0 have been extracted. Therefore, they were considered significant factors.

Table 2.3: Factor analysis and reliability analysis

Construct	Dimension	Item	Loadings (IT)	Loadings (DE)	KMO Bartlett's Sig. TVE Cronbach's α (IT)	KMO Bartlett's Sig. TVE Cronbach's α (DE)
Areas of training					0.876	0.781
	Entrepreneurial Skills	ES1	0.750	0.872		
		ES2	0.735	0.851		
		ES3	0.787	0.781		
		ES4	0.690	0.876		
	Management Skills	MS1	0.755	0.814		
		MS2	0.896	0.631		
		MS3	0.845	0.841		
		MS4	0.838	0.853		
	Technical Skills	TS1	0.896	0.890		
		TS2	0.928	0.852		
		TS3	0.789	0.808		
		TS4	0.723	0.768		
Methods of Training					0.869	0.673
	Formal Set of Training	FT1	0.809	0.842		
	Informal Set of Training	IT1	0.817	0.869		
	In-house Training	HT1	0.750	0.827		
	External Training	ET1	0.735	0.72		
Organization Size					0.690	0.79
	Organization Size	SI1	0.787	0.793		
Access to Financial Capital					0.576	0.803
	Access to Financial Capital	AFC1	0.690	0.803		
		AFC2	0.755	0.673		
Firm Performance	Firm Performance				0.896	0.717
		FR1	0.896	0.878		
		FR2	0.845	0.532		
		FR3	0.838	0.871		
		FR4	0.896	0.601		
		FR5	0.928	0.83		
		FR6	0.789	0.822		
		FR7	0.811	0.701		
		FR8	0.809	0.576		
		FR9	0.810	0.824		

Note: Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

According to Peterson (1994), a Cronbach's alpha is acceptable if it is within the acceptable range (between 0.5 and 0.95) though specifically, depending on the type of research, the acceptable level for Cronbach's alpha in a basic research should be between 0.7 – 0.9.
In relation to this, it can be noted that the first factor, areas of training, consisted of 12 variables (alpha $_{IT}$ = 0.876, alpha $_{DE}$ = 0.781). The second factor, methods of training, was loaded with four variables (alpha $_{IT}$ = 0.869, alpha $_{DE}$ = 0.673). The third factor, size of organization, comprised of one variable (alpha $_{IT}$ = 0.690, alpha $_{DE}$ = 0.79).
The fourth factor illustrated loadings for access to financial capital, consisted of two variables (alpha $_{IT}$ = 0.576, alpha $_{DE}$ = 0.803). Finally the last factor firm performance was loaded with nine variables (alpha $_{IT}$ = 0.896, alpha $_{DE}$ = 0.717) (see Table 2.3). The data show that internal consistency of data for areas and methods of training and also firm performance of Italian enterprises is higher than the German counterpart. Whereas the data concerning organization size and access to financial capital for German enterprises are more consistent than the Italian one.

3.7. Hypotheses testing

For the testing of the proposed hypotheses two statistical methods were adopted, regression analysis and SEM using the statistical software packages SPSS 23 and AMOS 22. Initially the proposed model was tested using the method through AMOS. The results for Germany were not encouraging because most of the fit indexes were outside of the proper trade-off ranges (see Figure 2.3: Model 3b). Thus, each hypothesis was tested separately using both regression and SEM analysis. With the assistance of the SPSS software, regression analysis was realised on three consecutive models in order to test the stated hypotheses (H1-H4). **In the first regression model**, H3 was tested (i.e., Methods of training (MT) positively affects firm performance) defining the variable firm performance as dependent variable and the variable methods of training as independent. **In the second model**, a second independent variable was added, the areas of training, trying to test H4 (Areas of training (AT) has a direct and positive effect on firm performance) as well as H3. **In the last, third model**, the effect of the two moderating variables (Organization size and AFC) to the MT→FP direct relationship, was tested (H1 = The association between MT and firm performance is moderated by Organization size, and H2 = The association between MT and firm performance is moderated by AFC) (Table 3.3).

Table 3.3: Regression analysis of the three models (Germany)

	Adjusted R^2	Sig. of Regression model	Standardized β (B)	Sig.
Model 1	0.485	0.00	MT= 0.587	0.00
Model 2	0.413	0.00	MT= 0.381	0.001
			AT= 0.272	0.179
Model 3a	0.729	0.00	MT= 0.411	0.501
			Size= 0.482	0.591
			AFC= - 0.401	0.131
			MT*Size= 0.467	0.578
			MT*AFC= 0.312	0.563

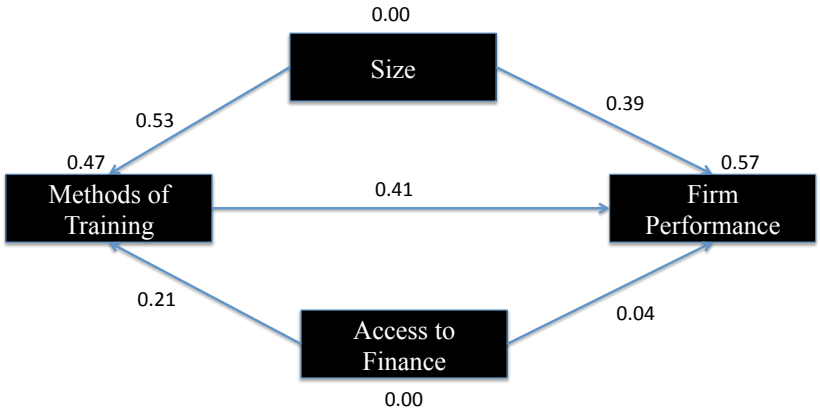
Source: Own Calculation

Model 1, shows that the variable MT directly and positively affects firm performance

(b_{MT} = 0.587, sig = 0.000<0.05). This independent variable explains more than 48 percent (Adjusted R^2 = 0.485) of each change of the dependent variable firm performance. Thus, H3 is accepted.

Model 2 demonstrates that the variable MT directly and positively affects firm performance (b_{MT} = 0.381, sig = 0.001). But the variable AT (b_{AT} = 0.272, sig = 0.179) has insignificant (sig = 0.179>0.05) effect on firm performance. The independent variables, MT has a positively direct and statistically significant effect on firm performance, while AT has not and the model only explain about 41 per cent (Adjusted R^2 = 0.413) of each change of the firm performance main because of MT.

Figure 2.3: Model 3b



Notes: χ^2 = 9,231; df = 1; χ^2 / df = 9,231; *p*-value = 0.004; RMR = 0.057; RMSEA = 0.312; GFI = 0.942; TLI = 0.8236; CFI = 0.951; NFI = 0.947

Thus, H4 is accepted and H3 is not supported by the collected data. Finally, model 3a indicates that when the two moderating variables (Organization size and AFC) interact with the independent variable MT all variables become statistically insignificant, although they explain more than 70 per cent (Adjusted R^2 = 0.729) of each change of the dependent variable firm performance. Similar results are obtained from the SEM analysis as shown in Model 3b (Figure 2.3).

Although this model is not statistically sound (significant), because the fit indexes, χ^2/df = 9.231 (above the tolerance level of < 3), p-value = 0.004 (below the tolerance level of >0.05), RMSEA (above the tolerance level of <0.1) and TLI (below the tolerance level of >0.9), are not within accepted levels, it could provide some useful information, due to the fact that the rest fit indexes are within accepted levels.

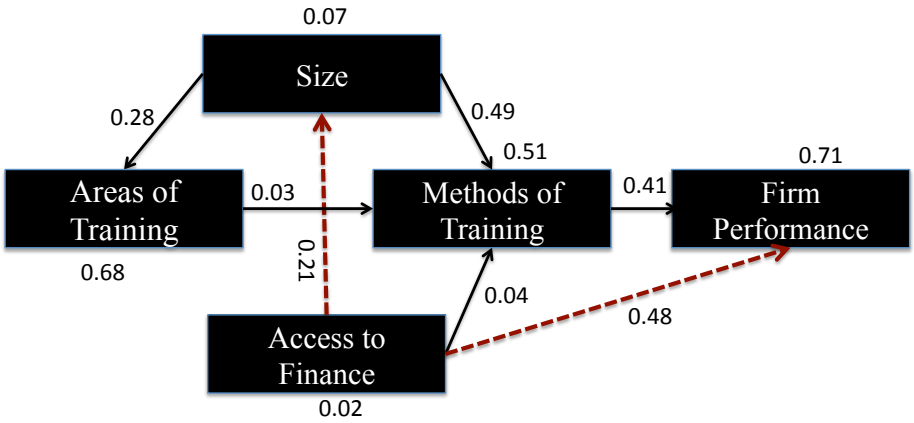
In this SEM model 3b, as with regression model 3a, MT positively affects (0.41) Firm Performance. Similarly, the "organization size" directly and positively affects (0.39) firm performance. It also positively affects firm performance indirectly through MT (0.53 × 0.41 = 0.217). In contrast results are shown for "AFC", which only indirect and positive effect on firm performance through MT (0.21 × 0.41 = 0.217) but, not directly (0.04).

After many trials of various similar SEM models, similar to what implemented for the case of Italy, the author concluded to model 4 (Figure 3.3), which satisfies all fit indexes and provides interesting and unexpected results. Table 4.3 presents, the overall findings with regard to the hypotheses tested.

Model 6, demonstrates the following results:

(1) The relationship between AT→ MT→ firm performance is statistically insignificant.
(2) The construct AFC indirectly affects firm performance but not directly.
(3) The construct "Organization size" seems to work differently from the AFC construct. It affects firm performance better in one indirect way, through MT and insignificantly through AT. This relationship between Organization size and AT is a newly observed relationship, grounded in our data, which has never been supported before. However, it does not seem to have any direct and statistically significant effect on firm performance.
(4) Finally the variable AFC directly affects "Organization size". This is also a newly observed relationship, grounded in our data, which is also never supported before.

Figure 3.3: Model 4



Notes: $\chi^2 = 7{,}215$; df = 3; χ^2 / df = 2,405; *p*-value = 0.125; RMR = 0.081; RMSEA = 0.132; GFI = 0.924; TLI = 0.913; CFI = 0.964; NFI = 0.915

As far as the hypotheses of the study are concerned, H_1 is accepted, since "Organization size" positively and indirectly affects firm performance and moderates (0.49×0.41 = 0.2009) the relationship between MT → Size →firm performance.

Table 4.3: Hypotheses test results

Hypotheses	Path	Path coefficients	P- value	Remarks
H1	Methods of Training→ Organization Size→ Firm Performance	0.49 × 0.41 = 0.2009	0.031	Accepted
H2	Methods of Training→ Access to Financial Capital→ Firm Performance	0.04 × 0.41 = 0.0164	0.125	Rejected
H3	Methods of Training → Firm Performance	0.41	0.014	Accepted
H4	Areas of training → Methods of Training→ Firm Performance	0.03 × 0.41 = 0.0123	0.076	Rejected
	Proposed new causal relationships			
	Access to financial capital→firm performance	0.483	0.026	Accepted
	Access to financial capital→Organization size	0.212	0.011	Accepted

Source: Own Calculation

H_2 is not supported because AFC positively and indirectly affects firm performance and moderates (0.04×0.41=0.0164) the relationship between MT→AFC→ firm performance (FP). However, there is also a direct effect on firm performance (0.48), which is much stronger than the indirect effect through MT.
H_3 is accepted as stated in the proposed model (MT positively affects FP) because MT positively and directly affects firm performance (0.41). H4 is not supported since

a positive and indirect relationship between AT and firm performance through MT is exhibited. More especially, this relation has an estimate coefficient of 0.012. Moreover, two other relationships were demonstrated in the revised model 4 (Figure 3.3). The first relationship is a positive and direct relation of AFC and firm performance with estimate coefficient 0.483. The second relation is a positive and direct relationship of AFC and "Organization size" with estimate coefficient 0.212.

3.8. Discussion

The results express that the organization size moderates the relationship between methods of training and firm performance in German SMEs. Earlier empirical evidence supports these results. Kotey B., and Folker C., (2007) found that the association between methods of training and firm performance is moderated by organization size in small South African firms.

Additionally, AFC in our study fails to moderate the relationship between methods of training and firm performance. So our hypothesis is rejected, as the German SMEs of our sample does not report limitations in relation to the financial capital and the managements of these firms have access to various options and adequate funding strategies for exploiting new opportunities. For this reason, these firms verify availability and easy AFC as a means to increase their performance.

Moreover, the results confirm a positive relationship between methods of training and firm performance. The results also show that methods of training positively and directly affects firm performance and not indirectly. The present research shows that an insignificant interaction exists between areas of training and methods of training and that this interaction has a statistically insignificant impact on firm performance of German SMEs.

According to the findings of the study, it seems that the impact of methods of training on the performance of German SMEs of our sample are strongly moderated by the organization size. Furthermore, the research does not support the positive and direct relationship between areas of training and SMEs performance in Germany.

Regarding the methods of training in small and medium sized enterprises in Germany managers widely recognise the informal set of training (usually on the job training), which is provided in-house as the most predominant way of development, growth and to improve profitability and more particularly, SMEs performance. Given that access to financial capital for SMEs in Germany compared to Italy is much easier, it seems that German SMEs concentrate primary on those methods of training, which is not related to the available fund by government but their own sponsorship and strongly related to the size of organization.

Concerning the areas of training the results show that German SMEs primarily focus on technical and entrepreneurial skills and less management skills (if any).

Furthermore, our final model (Figure 3.3) demonstrated two more relationships. The first was a direct and positive relationship between AFC and SMEs performance. As it seems, German managers in small and medium sized enterprises have willingness to exploit their firm's financial capital as they have good knowledge about impacts of investments on training. Therefore, managers invest the adequate financial capital and do not depend their training offers to government funds as they have their own sponsorship in most cases. This has as a result to raise performance initially the productivity, sales and the revenue and secondly the net profit of their enterprises.

The final model also suggested a direct and positive relationship between AFC and the organization size.

3.9. Conclusions, limitations and future studies

The aim of the current thesis was to develop and to examine a conceptual framework that investigates the impact of four important constructs (factors) on SMEs performance in Germany. The conceptual framework was tested on a representative sample of German SMEs. The novelty and contribution of the thesis lies in the synthesis of its conceptual framework; it includes factors that have rarely (if any) been collectively used before, to the best of the researchers' knowledge, in the international literature. Moreover, the focus of the study is on SMEs, an approach that is lacking on the literature. Therefore, this paper expects to make a contribution to the study of entrepreneurship training and the examination of the SMEs performance.

First of all, it examines the relationship between methods of training and firm performance on a small and medium business context. Despite that numerous studies investigating methods of training and the performance of SMEs, the research in the context of SMEs has been limited.

Second, given that in German SMEs of our sample areas of training does not play a significant role in performance improvement, the present study has incorporated areas of training in its analysis. Although areas of training are concepts extensively used in the literature, they have been mostly used theoretical and not empirical. Consequently, there is limited empirical knowledge about the relationship between areas of training and SMEs performance.

Third, the concepts of methods of training and areas of training have been rarely combined in an empirical study, and their relationship has not been widely researched.

Results indicate that the organization size has an influence of methods of training, but not access to financial capital (AFC). That finding confirms that the organization size always has an influence on SMEs decision in selecting methods of offering training. The results also suggests the higher tendency in offering informal/in-house set of training in micro and small enterprises compared to medium sized enterprises.

Moreover, the present study highlights the insignificance of access to capital as a determinant in offering training by German SMEs, which mostly provide it on their own without government funds. AFC has an impact on most factors of the conceptual framework, including SMEs performance. Additionally, given the data the study empirically proves that there is insignificant relationship interaction between areas and methods of training in German SMEs. The empirical findings confirm that methods of training, when supported by areas of training, do not lead to higher SMEs performance.

The main limitation of this study includes the small sample size (303 responded questionnaires in Germany). This was due to the fact that the sample of this study consisted only of two sectors (manufacturing and service). Future research may repeat and continue this study with the proposed new relationships within a wider context (larger sample and all sectors). Furthermore, future researches can test the proposed relationships to large size firms for which differentiations in the results may arise.

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Chapter 1

Training: Structure and the Impact on SMEs Performance

Chapter 2

Empirical Analysis on the Determinants of Entrepreneurship Training Development in SMEs

Theoretical Contributions

The first chapter of this thesis has been developed based on the theory of human capital, most clearly articulated by Gary Becker (1964) and Schultz (1961). Human capital became especially popular in historical research after the rise of growth theory in the 1950s. The theory is identical to the theory of Physical capital, except that the terms are changed. The reference in human capital is to people and skills, rather than plants and equipment. In the theory of human capital, a standard cost-benefit calculation is done and the theory applies to the acquisition of skills. Formal Education and on the job training (OJT) are the most important methods of investing in human capital, e.g. see: Becker G., 1964. *Human Capital*, Chicago: The University of Chicago Press; Schultz T.W., 1961. *Investment in Human Capital*, The American Economic Review, Vol.51 Iss:1, pp.1-17.

From the 1980s onwards, the focus on workplace skills development increases notably by fundamental shifts in forms of work organization. Then in the early 1990s, built on the theory, Watkins and Marsick (1992) offer a theory of learning in organizations that distinguishes formal training from informal learning. Formal training as they mention occurs in the absence of action; learners are removed from the day-to-day work to engage in lectures, discussions, simulations, role plays, and other instructional activities, e.g. see: Watkins K. E., Marsick V.J., 1992. *Towards a theory of informal and incidental learning in organizations*. International Journal of Lifelong Education, Vol.11 Iss:4, pp.287–300.

In contrary to formal learning, the conceptual framework for informal learning is grounded in experiential learning theory pioneered by Dewey (1938) and later expanded on by the work of Kolb (1984) and others. Informal learning occurs as the result of individuals' making sense of experiences they encounter during their daily work lives, e.g. see: Dewey J. 1938. *Experience and education*, Old Tappan, NJ: MacMillan; Kolb D., 1984. *Experiential learning: Experience as the source of learning and development,* Upper Saddle River, NJ: Prentice-Hall. Build upon the theories the thesis is organised in three main chapters.

The second chapter instead as a starting point supports the argument by Allan O'Connor (2013) adopting a definition of entrepreneurship that describes it as a social process involving the efforts of individuals in enterprise activity. Enterprise is defined in the Schumpeterian view as the *introduction* of new products, services, processes, materials, etc. that result in market disruption, e.g. see: Allan O'Connor, 2013. *A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes,* Journal of Business Venturing, Vol. 28, Iss: 4, pp. 546–563.

Major theoretical contribution of the second chapter comes from the Innovation theory of Schumpeter (1949), e.g. see*:* Schumpeter, Joseph A. (1949). *"Economic theory and entrepreneurial history", in Wohl, R. R., Change and the entrepreneur: postulates and the patterns for entrepreneurial history, Research Center in Entrepreneurial History, Cambridge, Massachusetts: Harvard University Press.* According to Schumpeter (1949), entrepreneur is a man who sees opportunity for introducing new techniques or commodity, Improving organization and develops resources. He alludes entrepreneurship is not only about establish a new business but could embark upon new combination of factors of production resulting in new

product; new method of production; opening of new market; new source of raw material supply and reorganization of any industry. Further, he considers entrepreneurs, as the prime mover of economic development while profit is merely a part of objectives of entrepreneurs. Moreover, the strategy in the chapter partly supported by Harvard School theory given by Cole (1949) e.g. see: Cole, A.H., 1949. *Entrepreneurship and Entrepreneurial History, In Change and the Entrepreneur: Postulates and patterns for Entrepreneurial History,* Cambridge, MA: Harvard University Press, Research Centre in Entrepreneurial History, pp.85-107, which envisages entrepreneurship as purposeful activity that initiate, maintain and develop a profit oriented business. The theory focuses on two activities co-ordination activity and sensitivity to the environment. These activities also are supported by the theory of change, which is most succinctly communicated through the serendipity that happens when enterprise mix the right people, the right values and the right environment and *set the conditions for social innovation emergence*, e.g. see: Clark H. 2004. *Deciding the Scope of a Theory of Change*. New York: ActKnowledge monograph.

Some research has suggested that generally entrepreneurship as a theory is failing to provide continued economic growth in developed communities, e.g. see: Bögenhold D., Staber U., 1991. *The decline and rise of self-employment.* Work, Employment and Society, Vol 5 Iss:2 , pp.223–239; Greene F.J., 2002. *An investigation into enterprise support for younger people 1975–2000.* International Small Business Journal Vol.20 Iss: 3, pp.315–336; Meager N., Bates P., Cowling M., 2003. *An evaluation of business start-up support for young people*. National Institute Economic Review 186 (October), pp.59–72.

Shane (2008) quite pointedly highlights a number of myths associated with entrepreneurship, which misdirects entrepreneurs, investors and policy-makers into believing that entrepreneurship is a panacea for revitalizing and stimulating economies, e.g. see: Shane S.A., 2008. *The Illusions of Entrepreneurship*. Yale University, New Haven and London.

More specifically, others claim that the impact of entrepreneurship training is unclear e.g. see: Pittaway L., Cope J., 2007. *Entrepreneurship education: a systematic review of the evidence.* International Small Business Journal Vol.25, pp.479–510, or does little or nothing to enhance entrepreneurship skills and performance e.g. see: Oosterbeek H., van Praag M., Ijsselstein A., 2010. *The impact of entrepreneurship education on entrepreneurship skills and motivation*. European Economic Review Vol.54, pp.442–454.

The theoretical inquiry in this thesis was driven by the primary research question: how can SMEs managers direct specific forms of training namely entrepreneurship training to promote economic performance of their enterprises? A major contribution arising from the analysis framed by this question is the development of a policy framework that responds to calls for more definition of purpose for entrepreneurship training.

LITERATURE REVIEW

Chapter 1

Training:
Structure and the Impact on Skills Development in SMEs

Summary: 1.1. Introduction – 1.2. Areas of Training in SMEs – 1.2.1. Entrepreneurial skills– 1.2.2. Management Skills – 1.2.3. Technical Skills – 1.3. Methods of Training Provision – 1.3.1. Formal Set of Training – 1.3.1.1 Off-the-Job Training – 1.3.2. Informal Set of Training – 1.3.2.1. On-the-Job Training – 1.3.3. In-house Training – 1.3.4. External Training – 1.4. Outcomes from Participating in Training – 1.4.1. The Impact of Training on SMEs Performance – 1.5. Barriers to Training Provision in SMEs – 1.5.1. Access to Finance: Equity Capital, Venture Capital.

1.1. Introduction

There is a general consensus among researchers that the skills, motivation and activation of employees are significant prerequisites for the sustainable success, productivity and innovation of enterprises e.g. see: EUROPEAN COMMISSION, 2009. *Guide for Training in SMEs,* available online at: *http://ec.europa.eu/social/BlobServlet?docId=4202&langId=en* (accessed December 31, 2014). Among these preconditions training has received an unprecedentedly attention especially in recent years in the literature which is supported by an increasing demand in many industries where knowledge and well-trained workers play a key role in production e.g. see: Lucas R.E., 1988. *On the Mechanics of Economic Development*. Journal of Monetary Economics, Vol.22 Iss:1, pp.3-42.

At the global level, a recent report by OECD has evaluated various dimensions influencing growth in small firms, measuring SMEs performance, e.g. see: OECD, 2012. *"Skills development for SMEs and Entrepreneurship"* Summary Report, Local Economic and Employment Development (LEED), OECD Publishing, available online at:http://www.oecd.org/cfe/leed/WORKSHOP%20SUMMARY%20REPORT_SKILLS%20FOR%20SMEs%20and%20ENTREPRENEURSHIP.pdf (accessed January 21, 2015), which recognizes training as a key factor or in another study e.g. see: Jones B., Grimshaw D., 2012. *The Effects of Policies for Training and Skills on Improving Innovation Capabilities in Firms*, Nesta Working Paper No. 12/08, available online at: www.nesta.org.uk/wp12-08 (accessed February 13, 2015), which identifies the impacts of training and skill policies on innovation. Further, some studies, e.g. see: Dearden L., Reed H., Reenen J. V., 2006. *The Impact of Training on Productivity and Wages: Evidence from British Panel Data*. Oxford Bulletin of Economics and Statistics Vol.68 Iss:4, pp. 397-421,

found considerable effects of training on productivity, or highlight the role of training in firm's competitiveness e.g. see: Sum V., 2011. *Integrating training in business strategies means greater impact of training on the firm's competitiveness,* Research in Business and Economics Journal, pp.1-19, available online at: http://www.aabri.com/manuscripts/11771.pdf (accessed February 15, 2015). The latter study investigates whether the integration of training in the firm's business strategies increases the impact of training on the firm's competitiveness. Further details about the significance and impacts of training are provided in chapter 2.

Despite such significance, the state of play of training in Small and Medium sized Enterprises (SMEs) is characterised by a paradox.

On the one side, continuous training / lifelong learning both for workers and managers are considered as crucial elements of competitiveness and, on the other side statistics present that continuous training are less probable to be accessible to employees working in SMEs than to those in large companies.

To tackle this contradiction a number of reports have suggested SMEs should concentrate on critical elements leading large enterprises to the higher efficiency and success and enabling them to sustain and grow in an increasing competitive market. These key elements of success are often evidence of the necessary skills that should be passed on by business owners and entrepreneurs to workforce and stakeholders.

Concerning the significance of small and medium-sized enterprises, they are largely contributing to the global economy in terms of, GDP, investment and social welfare and their prominence is renowned in every country at least in Europe, e.g. see: Stel A.J. van., 2006. *Empirical Analysis of Entrepreneurship and Economic Growth*, International Studies in Entrepreneurship Series 13, Springer Science, New York; Botha M., Nieman G., Vuuren J.van 2006. *'Enhancing female entrepreneurship by enabling access to skills'*, Entrepreneurship Management Vol.2, pp.479-493; Baumol W.J., 2002. *The Free-market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton University Press, Princeton.

According to the Small Business Act (2014), in the two countries of study namely Italy and Germany the contribution of SMEs is as follow: in Italy SMEs represent 99.9% of enterprises contributing roughly 80% of national employment and 69.5% of value added, the third and fifth highest shares in the OECD area respectively in 2013 (e.g. see: EU commission, 2014 SBA Fact Sheet (Italy), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/italy_en.pdf).In Germany instead they represent 99.5% of enterprises creating the highest value added in Europe (see e.g. EU commission, 2014 SBA Fact Sheet (Germany), http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/germany_en.pdf).

Given the contribution of SMEs to the economy, it is very compelling for policy makers to support the creation of them as a positive move towards economic

growth. There exist, however, a need to keep these small and medium-sized enterprises in action and avoid failure but skills shortage has been a major challenge to them, e.g. see: Smith E.E., Perks S., 2006. "*Training interventions needed for developing black macro-entrepreneurial skills in the informal sector: A qualitative perspective"*, Published Thesis, Nelson Mandela Bay Metropolitan University, underlining skills acquisition through training can offer a lifelong solution to the existence battle of SMEs.

Keeping SMEs in operation would avoid the loss of jobs, revenue and reduce poverty in the communities so apparently there is a lot that needs to be done. Aside from the financial limitations that may affect the enterprises, the business skills are of paramount importance in keeping the business in action, e.g. see: Smith E.E., Perks S., 2006. "*Training interventions needed for developing black macro-entrepreneurial skills in the informal sector: A qualitative perspective"*, Published Thesis, Nelson Mandela Bay Metropolitan University. Therefore, there exist a demand for a study providing an overarching and systematic analysis of entrepreneurial skills and training needs of SMEs.

At macro-level, the purpose of this study is to examine the importance of training skills namely required entrepreneurship skills for SMEs managers and employees in Italy and Germany and the impact of training on the success of the business. Further, at micro-level, training enables new small and medium-sized enterprises in the manufacturing sector to sustain and maintain their growth, accordingly benefiting the regions in development, employment and the country in revenues. Given training skills not only promote manufacturing and business environment but also productivity, efficiency and benefit the country at large. Consequently, it is, of paramount importance to identify key success factors that promote efficiency and survival of small and medium-sized enterprises that could serve as reference points for emerging SMEs.

The thesis keeps going into detail to present how training could successfully be developed and implemented in small and medium-sized companies despite both the internal and external hurdles SMEs face in this context. It reviews the typical challenges SMEs regularly face when it comes to training and analyses the development of suitable methods and techniques of training based on the specific needs of micro and small enterprises.

Last but not least, the study analyses the impact of entrepreneurship training and methods of provision on the performance of small and medium sized enterprises.

1.2. Areas of Training in SMEs

Numerous scholars have been drawn to investigate the areas of training and their impact on firms' performance, e.g. see: Botha M., 2006. *Measuring the effectiveness of the Women entrepreneurship programme, as a training intervention, on potential, start-up and established women entrepreneurs in South Africa*, Published PhD Thesis, Pretoria: University of Pretoria, which discusses the low levels of key skills like ability to gather resources, financial management,

human resource management, marketing and technical skills, may lead to zero performance, while weakness in a particular element would decrease effectiveness in the overall performance of the venture. This thus means that the increase in the capacity of any of these skills can lead to an increase in SMEs performance e.g. see: Afolabi B., Macheke R., 2012. *"An Analysis of Entrepreneurial and Business Skills and Training Needs in SMEs in the Plastic Manufacturing Industry in the Eastern Cape Province, South Africa",* International Review of Social Sciences and Humanities, Vol. 3 Iss: 2, pp. 236-247, available online at*:* http://irssh.com/yahoo_site_admin/assets/docs/24_IRSSH-352-V3N2.202201424.pdf (accessed January 02, 2014), denoting SMEs to get the desired performance, it is essential to have all the core and supportive skills in place to enhance the business performance. In a similar note, Strydom J.W., 2005. "*Tracking study on skills development and employment generation of small retail establishments in Mamelodi, Tshwane"*, Southern African Business Review, Vol.9 Iss:3, pp.15–22, underlines the subsequent business skills, in order of priority, as being critical for small firms: "marketing skills", "financial skills" and "purchasing or procurement skills". In contrast the study of Marx S., Van Rooyen D., Reynerder H., 1998. "*Business management",* Van Schaik, Pretoria, recognised the role of "marketing skills" and "financial skills", but add both "legal and entrepreneurial skills" to the list. The latter discusses that of all the business skills described in the literature, "marketing skills*,* financial skills, legal skills and entrepreneurial skills" are the fundamental business skills necessary in order for the survival of a small enterprise.

Furthermore, Kuene T.R., 2008. "*A critical analysis of entrepreneurial and business skills in SMEs in the textile and clothing industry in Johannesburg, South Africa,* Published Thesis, Pretoria; and Solomon G., 2004. "*Entrepreneurship and the impact of entrepreneurial orientation training on SMEs in the South African context: A longitudinal approach",* Unpublished Thesis, Cape Town: University of Western Cape, identified the necessity of "entrepreneurial" and "business skills" for the growth of the business recognizing the entrepreneur's skills as significant determinants of success for businesses. The latter study on training, also denotes training for small enterprises is predominantly internally in South Africa and conveys "generic management skills" such as "marketing", "finance", record-keeping, "human relations", as well as "industrial relations". The studies conclude that training improves SME performance over time, showing that skills are certainly of paramount importance in the real business environment for the sustainability and profitability of businesses e.g. see: Smith E.E., Perks S., 2006. "*Training interventions needed for developing black macro-entrepreneurial skills in the informal sector: A qualitative perspective",* Published Thesis, Nelson Mandela Bay Metropolitan University.

By the same token, EUROPEAN COMMISSION, 2006. *Management Capacity Building, Final Report of the Expert Group,* available online at*:* http://ec.europa.eu/DocsRoom/documents/2266/attachments/1/translations/en/renditions/native (accessed December 31, 2014), identifies the legal requirements on

training in SMEs. The report looks at the means through which existing or new SMEs develop their management competencies, including accounting, financial, marketing, quality and production related as well as general administration and management skills. The report states, the management capacity in essence relates to four main fields of expertise of the owner/manager or of the staff in charge: (1) Strategic and management knowledge aspects (including human resource management, accounting, financing, marketing, strategy and organisational issues, such as production and information and technology aspects). (2) Understanding the running of the business and of the potential opportunities or threats (including visions for further development of activities, current and prospective marketing aspects). (3) Willingness to question and maybe review the established patterns (innovation, organisational aspects) and (4) Attitudes towards investing time in management development or other needed competencies.

At an international level, regarding the areas of training a plethora of courses, programs and awards being offered in various forms, e.g. see: THE WORLD BANK, 2014. *Entrepreneurship Education and Training Programs around the World*, available online at: https://openknowledge.worldbank.org/bitstream/handle/10986/18031/9781464802027.pdf?sequence=1 (accessed February 31, 2015), O'Connor A., 2013. *A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes*, Journal of Business Venturing Vol.28 Iss: 2013 pp. 546–563; Leffler, E., Svedberg, G., 2005. Enterprise learning: a challenge to education? European Educational Research Journal Vol.4 Iss: 3, pp.219–227, which identify content and curriculum of training as the focal point of program design efforts that other categories revolve around them. The papers include a program's relative thematic content (e.g., awareness, general business skills, socio-emotional skills, and business plan development), as well as four common areas of focus including "financial literacy and accounting", "marketing and sales", "management skills", and "strategic planning". In a similar note, OECD, 2002. *Management Training in SMEs,* available online at: www.oecd.org/cfe/smes/2492440.pdf (accessed December 31, 2014), classifies training packages for SMEs inline with skills needed in the business environment. For example, for start-ups, the report suggests training in formulating business plans, identifying markets, hiring skilled workers and complying with government regulations, while for more established SMEs, it offers developing skills in marketing and exporting; product development and process improvements; identification and use of new technology, including information and communication technologies (ICT); increasing co-operation among staff and promoting internal teamwork; enhancing networking with suppliers, clients and other firms; and generally improving adaptability and flexibility to respond to changing market conditions and client needs. Consequently, it identifies the role of teaching management skills on SMEs performance. Similarly, OECD, 2013. *OECD Skills Studies Skills Development and Training in SMEs*, OECD Publishing, Paris, available online at: DOI: 10.1787/9789264169425-en (accessed

January 29, 2015), lists a number of areas of participation in training for SMEs namely, Management skills, Social skills, Language/cultural skills, Entrepreneurial skills, Employment progression / career advancement. The following sections present an overview of the required skill-sets in small and medium sized enterprises.

1.2.1 Entrepreneurial skills

According to OECD, 2010. *SMEs, Entrepreneurship and Innovation,* OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, available online at: http://www.oecd-ilibrary.org/industry-and-services/smes-entrepreneurship-and-innovation_9789264080355-en,(accessed January 21, 2015), entrepreneurial skills include specific skills for creating and running new business ventures and innovative projects in existing firms, such as risk assessment and warranting, strategic thinking, self-confidence, the ability to make the best of personal networks, motivating others to achieve a common goal, co-operation for success, and the ability to deal with other challenges and requirements met by entrepreneurs.

Moreover, various books link entrepreneurial skills to personal- and interpersonal capabilities describing them as being skills that is delivered by a person's behaviour, e.g. see: Bateman T., Snell S., 2009. "*Management: Leading and collaborating in a competitive world"*, McGraw-Hill, Boston; Nieuwenhuizen C., 2008. "*Entrepreneurial skills"*, Juta, Cape Town. PMCid:PMC2292985, underlining three groups of skills and competencies associated with "entrepreneurial skills": "pro-activeness", "achievement orientation" and "commitment to others". Concerning the interpersonal abilities, see also: Robbins R., Hunsaker P., 2006. "*Training in interpersonal skills: Tips for managing people at work"*, Prentice-Hall, Upper Saddle River, outlining a list of critical interpersonal skills (see: Table 1) that they believe successful managers and future entrepreneurs should possess. It worth noting that teaching entrepreneurial skills as it deals with to personal- and interpersonal capabilities is not easy. This fact is also highlighted by the study of Pettinger R., 2007. *"Introduction to management",* Palgrave-McMillan, New York.

Entrepreneurial skills are also connected with innovation and this is a significant aspect in managing a firm, e.g. see: Jones B., Grimshaw D., 2012. *The Effects of Policies for Training and Skills on Improving Innovation Capabilities in Firms*, Nesta Working Paper No. 12/08, available online at: www.nesta.org.uk/wp12-08 (accessed February 13, 2015). By the same token, entrepreneurial characteristics such as "commitment" and "determination", "leadership", "opportunity obsession" and "motivation to excel", are essential for successful SMEs managers.

Table 1: Key Interpersonal Skills

Listening	Self-awareness
Sending messages	Persuading
Setting goals	Politicking
Providing feedback	Running meetings
Resolving conflicts	Negotiating
Managing change	Working with diverse groups of people
Coaching	Working with teams
Ethical decision making	Creative problem solving

Source: Robbins R., Hunsaker P., 2006. Training in interpersonal skills: Tips for managing people at work, Prentice-Hall, Upper Saddle River.

Persistence and determination of SMEs are roughly calculated to contribute up to over 90% of successes, e.g. see: Bateman T., Snell S., 2009. *"Management: Leading and collaborating in a competitive world"*, McGraw-Hill; Giliomee J., 2004. *The small business environment*, Entrepreneurial Business School, Bellville. At the European level, the important role of training in promoting more entrepreneurial skills is now widely underscored in various EU reports. European commission sees training as the main gate to spread the entrepreneurial mind-sets and tries to recognise the entrepreneurial skills as the outcome of training e.g. see: EUROPEAN COMMISSION, 2009. *Guide for Training in SMEs*, pp.45, which believes that being an entrepreneur, is a job that needs to be learnt. It offers some courses to be taught as the best practices for SMEs such as management skills (company creation, fiscal and financial aspects, commercial skills, etc.) and professional skills (marketing, company localisation, technologies, etc.). Similarly, EUROPEAN COMMISSION, 2008. *"Entrepreneurship in higher education, especially within non-business studies, Final Report of the Expert Group"*, available online at: http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/entr_highed_en.pdf (accessed February 04, 2015), which encourage innovative business start-ups, foster a culture that is friendlier to entrepreneurship and to the growth of small and medium-sized enterprises (SMEs).

In terms of the entrepreneurial characteristics and required skills e.g. see: EUROPEAN COMMISSION, 2014. *Business Start Training course, YES – Young Europeans Start-up LLP GRUNDTVIG Learning Partnership 2013-2015,* available online at: http://www.youngstartups.eu/wp-content/uploads/2014/02/TRAINING-COURSE.pdf (accessed February 04, 2015), which recognizes the skills such as Ability to Plan; Communication Skills; Marketing Skills; Interpersonal Skills; Basic Management Skills as of paramount importance if the entrepreneur's business is to succeed.

1.2.2 Management skills

Agreement persists amongst scholars concerning the significance of management skills and the growth and survival of small businesses see also: Asah F., Fatoki O. O., Rungani E., 2015. *"The impact of motivations, personal values and management skills on the performance of SMEs in South Africa"*, African Journal of Economic and Management Studies, Vol. 6 Iss: 3, pp.308 - 322; Dockel J.A., Ligthelm A.A., 2005. '*Factors responsible for the growth of small businesses: management'*, South African Journal of Economic and Management Sciences Vol.8 Iss: 1, pp.54–62, which identifies management skills as a crucial factor in determining business prosperity indicating, "management acumen is indispensable for running successful small enterprises". The latter study also states that in enterprises where owners possess sound managerial skills, the enterprises stand a better chance of longevity.

According to OECD, 2010. *SMEs, Entrepreneurship and Innovation,* pp.166, management skills are defined as skills for business planning, regulations and quality control, human resources planning (recruitment, training and skills development) and allocation of resources (e.g. management of intellectual property, financial management, firm health and safety operation).

Management skills can be cultivated, developed and learned and they comprise a wide range of areas namely planning, goals formulation, decision-making, motivating, marketing, accounting, negotiation e.g. see: OECD, 2012. *"Skills development for SMEs and Entrepreneurship" Summary Report*, pp.8 , in another study by Nieman G., Bennett A., 2006. *Business management: A value chain approach*, Van Schaik, Pretoria; and Pettinger R., 2007. *Introduction to management,* Palgrave-McMillan, New York, authors attempt to create another classification for managerial skills, namely conceptual, interpersonal and technical skills, focusing on the role of managerial skills and their application to the small enterprise. Interpersonal skills have already discussed and technical skills will be followed in the following section but in terms of conceptual skills, different scholars mention that small enterprises can benefit from conceptual skills in the different ways e.g. see: Marx S., Van Rooyen D., Reynerder H., 1998. *Business management*, Van Schaik, Pretoria, who believe conceptual skills help in developing plans, strategizing and organising resources effectively, or another study by Nieman G., Bennett A., 2006. *Business management: A value chain approach*, Van Schaik, Pretoria, which state conceptual skills help in understanding the enterprise and how it relates to the environment within which it operates. In a similar note a study of Northouse P., 2009. *Introduction to leadership: Concepts and practice*, Sage, Thousand Oaks. PMCid:PMC3244754 mentions owners with conceptual skills possess vision and, in general, have better problem-solving abilities.

Attention is also given to required skills depending on various identifiable managerial levels e.g. see: Nkosi E., Bounds M., Goldman G., 2013. *Skills required for the management of Black-owned small enterprises in Soweto*, *Acta Commercii*, Vol.13 Iss: 1, pp.1-10, available online at:

http://dx.doi.org/10.4102/ac.v13i1.186 (accessed February 03, 2015), which discusses top management typically requires to apply more conceptual (also referred to as strategic skills) and fewer technical (or hands-on) skills while at a supervisory level, technical and conceptual skills would predominate. In SMEs instead, the report adds, owners are often required to occupy multiple managerial roles, so they need both.

The significance of business plan development skill as an area of management skills, has been covered by a number of reports of major international institutions e.g. see: THE WORLD BANK, 2014. *Entrepreneurship Education and Training Programs around the World*, pp.49; OECD, 2013. *"OECD Skills Studies Skills Development and Training in SMEs*, pp.20, which put emphasis on business plan development as a part of management training in SMEs. By the same token a recent ILO report e.g. see: ILO, 2014. *Start and Improve Your Business Implementation Guide,* available online at: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_315262.pdf (accessed February 04, 2015), develops an initiative to promote business planning in SMEs called SIYB "Start and Improve Your Business". The initiative as a family of management training helps SMEs to: Generate the Business Idea (GYB), Start the Business (SYB), Improve the Business (IYB) and Expand the Business (EYB) aiming at the contribution to economic development and to the creation of new and better jobs. The steps include: Generate Your Business Idea (GYB) a training course, fieldwork and a counselling session to assist the potential entrepreneur to develop a business idea including a financing plan; Start Your Business (SYB) a training course and counselling session that helps potential entrepreneurs to formulate a detailed business plan, register the business, explore financing options and take the other steps necessary to get the business started; Improve Your Business (IYB) a modular training package that offers tailor made training, improving management skills of existing entrepreneurs so as to increase the success of their businesses. The modules include marketing, costing, buying and stock control; record keeping, business and financial planning and people and productivity; Expand Your Business (EYB). A training package for growth oriented entrepreneurs, that combines management training with targeted individual consultancy sessions.

At the European level, a recent report by EUROPEAN COMMISSION, 2014. *Entrepreneurship Education: A Guide for Educators*, available online at: http://ec.europa.eu/DocsRoom/documents/7465/attachments/1/translations/en/renditions/native (accessed December 31, 2014), mainly deals with business planning management and leadership training within the context of entrepreneurial education. Various books also highlight the area e.g. see: CORPORATE LINKS. 2010. *The Entrepreneurship Training Program (2006-2009), Evaluation Report*, available online at: http://www.iceida.is/media/pdf/frumkvodlafraedsla.pdf (accessed February 31, 2015), which highlights business plan development, in addition to marketing, taxation, risk management and e-commerce to improve the capacity of the entrepreneur.

Marketing and sales is another area of interest for management training within the category of management skills in SMEs, e.g. see: THE WORLD BANK, 2014. *Entrepreneurship Education and Training Programs around the World*, pp.8; OECD, 2012.*"Skills development for SMEs and Entrepreneurship", Summary Report*, pp.6; CORPORATE LINKS. 2010. *The Entrepreneurship Training*

Program (2006-2009), Evaluation Report, available online at: http://www.iceida.is/media/pdf/frumkvodlafraedsla.pdf (accessed February 31, 2015), which the latter mentions, marketing training programmes can be promoted among SME through consultants, workshops and seminars, materials development, radio and TV airtime, print media, (newspapers, posters, brochures).
In addition to the above-mentioned reports, some books have been produced about the impact of marketing management e.g. see: Needle D., 2004, *Business in context: An introduction to business and its environment*, Thomson, London, which describes marketing management as an interactive process that enables small enterprises to exist, grow and make satisfactory profit by aiming at satisfying customers' needs see also: Meggison L., Byrd M., Meggison W., 2006. *Small business management: An entrepreneur's guide,* McGraw-Hill, Singapore. PMid:17032143. In the same vein, Nieman G., 2006, *Small business management: A South African approach,* Van Schaik, Pretoria, states that an enterprise cannot be viable if it cannot sell its services or products, identifying the necessity of marketing skills among business owners as a mean to develop entrepreneurship.
It is worth to mention that marketing skills have been pervasively accompanied by financial skills in the training literature, e.g. see: Samkin G., Pitu E., Low M., 2014. *Identifying the Financial Literacy Skills Necessary to Run a Small New Zealand Business,* e-Journal of Business Education & Scholarship of Teaching, Vol. 8 Iss: 1, pp: 44-66, available online at: http://www.ejbest.org/upload/eJBEST_Samkin,_Pitu_Low_-_8(1)_2014.pdf (accessed February 31, 2015); Botha M., 2006. *Measuring the effectiveness of the Women entrepreneurship programme, as a training intervention, on potential, start-up and established women entrepreneurs in South Africa*, Published PhD Thesis, Pretoria: University of Pretoria, identify marketing and financial literacy as the most common areas of focus in training in SMEs.
Attention is also drawn to mere significance of financial literacy in some papers e.g. see: Collis J., Jarvis R., 2002. *"Financial information and the management of small private companies",* Journal of Small Business and Enterprise Development Vol.9 Iss:2, pp.100–110, available online at: http://dx.doi.org/10.1108/14626000210427357(accessed February 31, 2015), emphasising financial skills as an essential element for growth and the success of small firms. The report defines "financial skills" as "being the control and monitoring of the performance of an enterprise using management accounts and cash-flow information."
In the same vein, there exist a number of books describing financial skills e.g. see: Nieman G., 2006. "*Small business management: A South African approach"*, Van Schaik, Pretoria; Needle D., 2004. "*Business in context: An introduction to business and its environment"*, Thomson, London, which the former defines financial skills as "the skills that are responsible for ensuring that the enterprise makes the *best use of its financial resources"* and the latter describes them as

"being part of the finance and accounting tasks that deal with the raising of capital to finance the enterprise".

Regarding the implications of financial literacy for small-business owners e.g. see: Lee G., McGuiggan R., 2008. *"Understanding small - and medium-sized firms' financial skill needs"*, Journal of International Finance and Economics, Vol.8 Iss: 3, pp.93–103, which recognises the significance of financial skills to small-business owners as an enable helping them to evaluate business performance, analyse and estimate cash flows, enhance online transactions, manage retirement funds, understand business exit strategies, and the price of goods and services to make investment decisions. Business managers with sufficient financial skills are also capable of exploiting the information at their disposal to forecast and plan their income and costs and make proper decisions that will eventually increase profitability and meet their customers' expectations e.g. see: Burgess C., 2007. "*Do hotel managers have sufficient financial skills to help them manage their areas?"*, International Journal of Contemporary Hospitality Management Vol.19 Iss:3, pp.188–200, available online at: http://dx.doi.org/10.1108/09596110710739895(accessed February 31, 2015). Furthermore, undertaking financial management initiatives affect the performance of small businesses, e.g. see: Gloy B.A., LaDue E.L., 2003. *"Financial management practices and farm profitability"*, Agricultural Finance Review Vol.63 Iss: 2, pp.157–174, available online at: http://dx.doi.org/10.1108/00215060380001147 (accessed February 31, 2015); Burgess C., 2007. "*Do hotel managers have sufficient financial skills to help them manage their areas?"*, International Journal of Contemporary Hospitality Management Vol.19 Iss:3, pp.188–200, available online at: http://dx.doi.org/10.1108/09596110710739895(accessed February 31, 2015), which the latter supports the idea denoting that the vase majority of managers are good at customer care but they should address the shortage of financial skills, causing overall ineffectiveness in their jobs and affecting negatively on profitability. In a similar note a study by Oosthuizen J.H., Van Tonder E., 2010. *"An exploratory study of the critical managerial skills-set for formal sector venture success in townships and disadvantaged communities"*, in E. Njiro & T. Mazwai (eds.), Soweto International Conference on Entrepreneurship & Development: proceedings, Soweto, South Africa, 27–28, pp. 81–106, highlights the significance of choosing the most appropriate finance option for small-business owners that suits their business needs and can be done if the managers have sufficient financial skills.

The development of effective Human Resource Management (HRM) is another area of management skills, which has been highlighted in various books, e.g. see: Machado C., Melo P., 2013. *Effective Human Resources Management in Small and Medium Enterprises: Global Perspectives,* IGI Global; 1 edition (November 30, 2013), ISBN-13: 978-1466647312, which address HRM training and development in SMEs by providing a channel of communication to disseminate knowledge; including management philosophies, culture, and management

practices, specific to SMEs in both private and public sectors. The area is particularly important, as it is essential in tackling today's employment challenges and changes. In addition, as SMEs continue to flourish, identifying and traching HRM strategies and practices are necessary for these organizations to obtain a competitive management model e.g. see: Cooper C.L., Burke R.J. 2011. *Human Resource Management in Small Business: Achieving Peak Performance,* Edward Elgar Publishing; Ly T., Marginson S., Do H., Do Q., Le T., Nguyen N., Vu T., Pham T., Nguyen T., 2014. *Higher Education in Vietnam: Flexibility, Mobility and Practicality in the Global Knowledge Economy,* Palgrave MacMillan, UK.
In addition to the above-mentioned books, some papers have been produced about the impact of HRM on the entrepreneurial process e.g. see: Li-Qun Wei, 2013. *The impact of human resource management practices in the entrepreneurial process,* The Journal of General Management, Vol. 38 Iss: 3, pp.15, which analyzes the importance of human resource management practice for entrepreneurship and concludes the HRM's influence in the relationship between entrepreneurial orientation and the firm's new product introduction. In addition, SMEs need to do well as it is decisive in determining the success of diversification programme, SMEs overall performance and a sustainable development e.g. see: Gurudas N., 2014. *Greening in the Product Life Cycle: A Study with Engineering Small-and Medium-Sized Enterprises,* Sustainability: The Journal of Record, Vol.7 Iss: 4, pp. 219-225*,* available online at*:* doi:10.1089/SUS.2014.9784 (accessed January 01, 2014). The report recommends the promotion of human resource development in engineering SMEs for analysing the product life cycle for a sustainable development. By the same token, O'Regan N., Stainer L., Sims M., 2010. *Training in SMEs and its relationship to profitability,* International Journal of Human Resources Development and Management, Vol. 10 Iss: 2, pp.166-181, available online at*:* DOI - 10.1504/IJHRDM.2010.031442 (accessed January 20, 2015), recognize the impact of training on performance and profitability in manufacturing SMEs. The paper discusses the continuous development of employee potential is dependent on training at every level to acquire improved skills. Subsequently, three training groups in SMEs are identified: employee input on decision-making, influence on working practices and creativity on performance objectives. The paper concludes those who utilise HR professionals seem to perform better than those who invest in training without HR input. Novo Melo P., Feliciana Machado C., 2013. *Human resource management in small and medium enterprises in Portugal: rhetoric or reality?* International Journal of Entrepreneurship and Small Business, Vol.20 Iss: 1, pp.117 – 134, which aims to understand the level of implementation of human resource practices in Portuguese SMEs. It shed lights on the fact that human resource practices are not seen as a strategic factor for the organisation. It points out that SMEs only apply some human resources parcelled and reactive practices, without any strategic integration. However, the paper affirms, even that informally, there exist HRM in SMEs. On the other side, Cardon M., Stevensb C.E, 2004. *Managing human resources in small organizations: What do we*

know? Human Resource Management Review, Vol. 14 Iss: 3, pp 295–323 discusses that the understanding of the HR issues (e.g., recruiting, compensation, or performance management) in small and emerging firms is limited. The paper highlights the lack of the theory and data necessary to understand how small and emerging firms train their employees, manage their performance, promote or handle organizational change, or respond to potential labour relations and union organization issues.

1.2.3 Technical skills

The overview of the training literature underlines the importance of technical skills as a success factor in SMEs growth and enhanced performance e.g. see: Gray C., 2006. *"Absorptive capacity, knowledge management and innovation in entrepreneurial small firms"*, International Journal of Entrepreneurial Behaviour & Research, Vol. 12 Iss: 6, pp.345 – 360; Feindt S., Jeffcoate J., Chappell C., 2002. *Identifying Success Factors for Rapid Growth in SME E-commerce,* Small Business Economics, Vol. 19 Iss:1, pp 51-62. According to OECD, 2010. *SMEs, Entrepreneurship and Innovation,* pp.166, technical skills include those skills for problem solving, design, operation, rethinking and maintenance of machinery of technological structures or marketing plans, ICT professional skills, research skills (e.g. work developed by engineers, researchers, marketing professionals) and drafting skills.
They are highlighted by a number of studies as a major contributing factor to the development and prosperity of enterprises e.g. see: Nieman G., Bennett A., 2006. *Business management: A value chain approach*, Van Schaik, Pretoria; Pettinger R., 2007. *Introduction to management,* Palgrave-McMillan, New York; Roodt J., 2005. *'Self-employment and the required skills'*, Management Dynamics Vol.14 Iss:4, pp.18–33, mentioning that owners need to have technical skills in order to supervise employees and to assess whether they are performing tasks correctly. The studies discuss managers should have the specific knowledge, techniques and resources required for performing of all tasks in order to be successful at managing their enterprises.
This fact is also highlighted by the study of Parmigiani A., Mitchell W., 2010. '*The hollow corporation revisited: Can governance mechanisms substitute for technical expertise in managing buyer- supplier relationships?'* European Management Review, Vol.7 Iss:1, pp.46–70, available online at: http://onlinelibrary.wiley.com/doi/10.1057/emr.2009.28/epdf (accessed February 31, 2015), mentioning most enterprises focus on technical skills rather than on other expertise, as technical expertise is seen to contribute most to the performance of the enterprise. However, it is worth mentioning that technical skills on their own are not enough and multiple skills, such as financial conceptual skills together with technical skills, are needed for the functioning of a successful enterprise e.g. see: Roodt J., 2005. *'Self-employment and the required skills'*,

Management Dynamics, Vol.14 Iss:4, pp.18–33; Davis D., Woodward B., 2009. *'An analysis of skills required of graduates of an Information Systems program'*, Information Technology, Learning and Performance Journal, Vol.24 Iss:2, pp.11–21. The latter also supports this sentiment by denoting that most employers not only look for technical skills, but also for strong 'soft skills' in order to have a competitive edge.

Information Technology and E-commerce are technical skills, which are widely identified and linked with entrepreneurship in a series of recent papers, e.g. see: FIWARE, 2014. *A guide to FIWARE for beginners - SME Developers Introductory Training session*, available online at*:* http://www.fi-ware.org/about/ (accessed December 31, 2014); Mellett S., O'Brien E. 2014. *Irish SMEs and e-learning implementation: The strategic innovative approach*, British Journal of Educational Technology, Vol.45 pp. 1001–1013, available online at*:* doi: 10.1111/bjet.12186 (accessed January 02, 2014), which identify e-learning as a cost-effective and convenient solution that increase the competitiveness of SMEs. The latter research looks at a best practice e-learning approach used in Canada and adapts it to develop models that are best suited to Irish SMEs. In the same way, Hamburg I., Engert S., 2007. *Competency-based training in SMEs: The role of e-Learning and e-Competence,* available online at*:* http://www.researchgate.net/publication/234827811_Competency-based_training_in_SMES_the_role_of_e-learning_and_e-competence/file/5046351ca8b8b4b977.pdf (accessed January 02, 2014), identify e-learning as one of the prerequisites to achieve the Lisbon objectives.

At the European level, the most recent body of research by the European Commission recognizes the significance of e-learning and information technology and identify them as technical skills in different reports. For example "Digital agenda" or "Horizon 2020" are two main work programs promoted by the European commission aiming to improve the conditions of the European ICT innovation ecosystem to ensure that researchers and entrepreneurs have the best conditions to learn and transform ideas into commercially successful products, e.g. see: EUROPEAN COMMISSION, 2015. *ICT Innovation in Horizon 2020,* available online at: http://ec.europa.eu/digital-agenda/en/ict-innovation-horizon-2020 (accessed July 31, 2015), which focuses on the ICT innovation strategy under Horizon 2020, ensuring that the rapid changes occurring in ICT technology develop into tangible benefits for European SMEs. Similarly, EUROPEAN COMMISSION, 2012. *Report on the results of public consultation on The Entrepreneurship 2020 Action Plan,* available online at: http://ec.europa.eu/enterprise/policies/sme/files/entrepreneurship-2020/final-report-pub-cons-entr2020-ap_en.pdf (accessed December 31, 2014); EUROPEAN COMMISSION, 2009. *Guide for Training in SMEs,* pp.41, which focus on promoting the spirit of entrepreneurship through recognizing the significant role of ICT as a mean to support new businesses and European SMEs to thrive and growth for national economies. The report mentions that new forms of training such as e-learning, open and distant learning or the support of external coaches

have helped many SMEs in Europe to manage their organizational problems as well.

Legal skills are another area of technical training within the category of technical skills, which is essential for an organization's success. Small business owners require legal skills to make sure that their businesses are functioning within the boundaries of what is permissible legally, e.g. see: Hatten T., 2009. *Small business management: Entrepreneurship and beyond*, South Western, Mason, which discusses that the owners do not need to have a law degree, but they must have a working knowledge of legal basics. This fact is also noted by Van Rensburg L., 2008. *Business Management: An Introduction,* Van Schaik, Pretoria, mentioning that it is compelling that a small-enterprise owner possess a working knowledge of the basics of the labour laws of the country. Planning for other legal courses, on the other hand, namely on the ground of patent, discrimination, and safety are much more underestimated in the literature, e.g. see: Buckner E., Hindman D., Huelsman J., Bergman Z., 2014. *Managing Workplace Sexual Harassment: The Role of Manager Training,* Employee Responsibilities and Rights Journal, Vol. 26 Iss: 4, pp. 257-278, which identifies discrimination and sexual harassment as persistent problems for businesses and discusses management's responsibility to implement training programs specially for employees in positions of authority to prevent them. Furthermore, legal skills are of importance to small businesses to make sure that owners are aware of issues relating to litigation as a result of non-compliance with the law that could be harmful to the business. However, putting effort towards compliance with the law by enterprise owners is challenging. According to Hatten T., 2009. *Small business management: Entrepreneurship and beyond*, South Western, Mason, the following two challenges are the most prevalent that small-enterprise owners may face: "Legal wording is technical and not easy to understand; Legal documents often imply vast amounts of paperwork and the small enterprise owner can get lost and confused with the detail".

The significance of legal skills is also highlighted by various books e.g. see: Meggison L., Byrd M., Meggison W., 2006. "*Small business management: An entrepreneur's guide"*, McGraw-Hill, Singapore. PMid:17032143; Hatten T., 2009. "*Small business management: Entrepreneurship and beyond"*, South Western, Mason, suggesting to small-business owners to seek the advice of an experienced lawyer as soon as consider a new business venture. The latter supports the idea by mentioning that business owners must engage the services of a lawyer when they are preparing the draft of their business plans and not when they are already in trouble.

Language skills are another important area within the category of technical skills, which have been highlighted widely at the European level, e.g. see: European Commission, 2006. *ELAN: Effects on the European Economy of Shortages of Foreign Language Skills in Enterprise,* available online at: http://ec.europa.eu/languages/policy/strategic-framework/documents/elan_en.pdf (accessed January 21, 2015), which provides an analysis of the use of language

skills by SMEs and the impact on exporting and business performance. The study illustrates the value of language skills and their applications across a range of industry sectors and European member states. Another initiative by the European commission that tries to promote the greater use of foreign languages in SMEs is: European Commission, 2011. *Report on Language Management Strategies and Best Practice in European SMEs: The PIMLICO Project,* available online at: http://ec.europa.eu/languages/policy/strategic-framework/documents/pimlico-full-report_en.pdf (accessed January 21, 2015), in which the report recognizes the language as barriers to the internationalisation and international trading patterns of SMEs. The findings of the paper demonstrate that successful companies use various forms of language management strategies (LMSs) to address the diverse communication interfaces of their international activity. This fact is also noted at the global level, by an OECD report recognizes the language skills as the main barrier to internationalization of SMEs e.g. see: OECD, 2009. *Top Barriers and Drivers to SME Internationalisation*, Report by the OECD Working Party on SMEs and Entrepreneurship, available online at: http://www.oecd.org/cfe/smes/43357832.pdf (accessed January 21, 2015), in which points out the critical role of the language skills that can both push and pull SMEs into international markets.

Attention is also given to language skills as a way to facilitate mobility throughout Europe for lifelong learning purposes and provide citizens with the opportunity to present their language skills e.g. see: The European Parliament and of the Council, 2004. DECISION No 2241/2004/EC, available online at*:* http://eur-lex.europa.eu/legal-content/EL/TXT/PDF/?uri=CELEX:32004D2241&from=EN (accessed February 02, 2015), which promotes the Europass-Language Portfolio (Article 8) to recognize the importance of language skills; Larsen C., Hasberg R., Schmid A., 2011. *Measuring Geographical Mobility in Regional Labour Market Monitoring: State of the art and perspectives,* Rainer Hampp Verlag Publishing, Germany. The latter emphasizes that the language skills can be achieved either in a formal context (school and training) or in other in non-formal context (at work, voluntary work experiences) as a mean to facilitate the geographical mobility.

In addition, there are a number of case studies e.g. the UK parliament, *Roads to Success: SME Exports,* Published by the Authority of the House of Lords, available online at: http://www.publications.parliament.uk/pa/ld201213/ldselect/ldsmall/131/131.pdf (accessed January 21, 2015), on chapter 6, "language and culture" discusses the critical role of language skills and recognises it as an obstacle to exporter SMEs. The study suggests the necessity of a cultural shift in attitudes of small and medium sized enterprises towards learning modern foreign languages.

In Germany e.g. see: Bel Habib I., 2011. *Multilingual Skills provide Export Benefits and Better Access to New Emerging Markets*, International Web Journal, available online at: http://www.sens-public.org/spip.php?article869&lang=fr (accessed January 21, 2015), which shows that German SMEs are very proactive in using the language skills e.g. German SMEs make use of most market

languages, up to 12. The paper analyses the effects of linguistic skills on the export performance of German SMEs. It concluded only 63% of German SMEs present a multilingual export strategy while 8% of them declare they have missed out on exportation contracts due to language barriers.

In Italy, the issue has recognized recently by a report by OECD, e.g. see: OECD, 2014. *Italy: Key Issues and Policies*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, available online at: http://dx.doi.org/10.1787/9789264213951-en (accessed January 21, 2015), which identifies the importance of language among Italian SMEs for better exploiting export opportunities.

The demand for social skills as another category of technical skills is increasing in enterprises partly because of the shift towards the service sector see: e.g. e.g. see: Kureková L., Haita C., Beblavý M., 2012. *Being and becoming Low-Skilled: A Comprehensive Approach to studying low-skillness,* NEUJOBS Working Paper No. 4.3.1, available online at: http://files.figshare.com/1475685/being.pdf (accessed February 03, 2015), mentioning the highest increase for the social skills appears in the jobs that require direct contact with the customers. Attention is also drawn to areas of social skills such as communication e.g. see: Xerri, MJ., Brunetto Y., 2011. *Fostering the innovative behaviour of SME employees: a social capital perspective, Research & Practice in Human Resource Management,* Vol. 19 Iss2, pp. 43-59, available online at: http://rphrm.curtin.edu.au/2011/issue2/innovative.html (accessed January 21, 2015), which confirms that innovative behaviour of SME employees is influenced by organizational factors and social skills such as communication and the network of relationships that are embedded within firms. Various books also highlight the area e.g. see: Ly T., Marginson S., Do H., Do Q., Le T., Nguyen N., Vu T., Pham T., Nguyen T., 2014. *Higher Education in Vietnam: Flexibility, Mobility and Practicality in the Global Knowledge Economy,* Palgrave MacMillan, UK, which emphasises the important social skills for new employees such as communication skills, linguistic competences, critical thinking skills and teamwork as obvious examples. Problem solving skill is one of the areas of interest in literature which classifies partly as social skills as it needs communication skills and technical advanced skills which is a prerequisite for an entrepreneur, e.g. see: Brien E.O., Hamburg I., 2014. *Supporting Sustainable Strategies for SMEs through Training, Cooperation and Mentoring,* Higher Education Studies, Vol. 4 Iss:2, pp.61-69, available online at: http://www.ccsenet.org/journal/index.php/hes/article/download/33471/20152 (accessed February 03, 2015); Sendag S., Odabas H. F., 2009. *Effects of an online problem based learning course on content knowledge acquisition and critical thinking skills,* Computers & Education, Vol.53, pp.132-141, available online at: http://dx.doi.org/10.1016/j.compedu.2009.01.008 (accessed February 03, 2015). The latter looks at the method of problem based learning (PBL) in workplace as an ideal approach of training for sustainable development, which is widely used and advocated in higher education. The studies conclude PBL positively affects

learning outcomes and develops skills in critical and creative thinking, leadership, communication, problem solving that can be applied in future situations, which are critical in today's workplace.

1.3. Methods of Training Provision

An overview of the literature underlines a number of approaches towards training provided by enterprises e.g. see: O'Regan N., Stainer L., Sims M., 2010 (Formal Training); European Commission, 2006 (Off-the-job Training); Nübler I., Hofmann C., Greiner C., 2009 (Informal Training); Makó C., Szirmai P., Illéssy M., 2006 (on the job training); Department of Education, Training and Employment, Queensland, 2014 (In-house training); Kitching J., Blackburn R., 2002, (External training).
Given that, in another study, Aragon-Sanchez A., Barba-Aragon I., Sanz-Valle R., 2003. *Effect of training on business results*. "International Journal of Human Resource Management", Vol. 14 Iss: 6, pp. 956-980, identify nine provision types of training methods including, Learning at a local college; Through government programme; Learning provided by local college but within the workforce; Employee providing on the job training; Learning by doing; Private training provider in the workplace; Private training provider outside of the workplace; Distance Learning; E-Learning. Moreover, the acquisition of knowledge and skill acquisition includes three main categories of informal on-the-job training, formal-in-house training and external training, e.g. see: Storey D., Westhead P., 1994. *Management Training and Small Firm Performance: A critical review*, working paper n.18, Warwick business school, available online at: http://www2.warwick.ac.uk/fac/soc/wbs/research/ei/research/working_papers/wp18_-_management_training__small_firm_performance_a_critical_review.pdf (accessed January 21, 2015).
At the international level, a World Bank report by Almeida R., Behrman J., Robalino D., 2012. *The Right Skills for the Job? Rethinking Training Policies for Workers*. Washington, DC: World Bank publishing, available online at: https://openknowledge.worldbank.org/handle/10986/13075 (accessed January 25, 2015), focus on three types of training programs relevant for individuals who are leaving formal general schooling or are already in the labour market namely pre-employment technical and vocational education and training (TVET); on-the-job training (OJT); and training-related active labour market programs (ALMPs).

1.3.1 Formal Set of Training

The formal/ informal definitions of training pose a starting point for the discussion on methods of training. To this aim, formal education and/or training or, more accurately, "education and training in a formal setting", has been defined by a

couple of major European institutions. For example CEDEFOP defines it as learning process that occurs in an organised and structured environment and is explicitly designated as learning (in terms of objectives, time or resources). It is intentional from the learner's point of view and typically, leads to validation and certification e.g. see: CEDEFOP, 2014. *Terminology of European Education and Training Policy*, Office for Official Publications of the European Community, Luxembourg, available online at: http://www.cedefop.europa.eu/EN/Files/4117_en.pdf (accessed February 02, 2014). Another European institution, OECD focuses on the correspondence of formal training to a clear aim: namely, the acquisition of knowledge, skills and competences which occurs within the system of education and initial training, or during training organised by the employer in the workplace. The latter meaning is also highlighted in e.g. see: Werquin, P. 2007, *Terms, Concepts and Models for Analysing the Value of Recognition Programmes*, paper prepared for the OECD Activity on Recognition of Non-formal and Informal Learning, EDU/EDPC, Vol. 24, www.oecd.org/dataoecd/33/58/41834711.pdf, which mentions the broader definition is now quite widely agreed.

In addition to the above-mentioned definitions, some papers have extended the definition, considering additional perspectives other than just a simple definition of a "planned and organised learning activities" focusing on the sponsorship of formal training e.g. see: Kock H., Ellström P.E., 2011. *Formal and integrated strategies for competence development in SMEs*, Journal of European Industrial Training, Vol. 35 Iss: 1, pp.71-88, available online at: http://dx.doi.org/10.1108/03090591111095745 (accessed February 02, 2014), which defines it as a set of training which is mainly financed by the employer and taking place during working hours. The report continues formal learning is often organised through internal or external courses and participants are certified or given a certain grade.

Much of the literature on formal training in SMEs has also highlighted the cost of formal training that individuals must bear for training in the definition e.g. see: Lazear E.P., *Personel Economics,* Wiley Publishing, available online at: https://faculty-gsb.stanford.edu/oyer/wp/handbook.pdf (accessed February 02, 2014), which supports the idea of sharing cost in formal training initially introduced by Becker's classic study of human capital (1964) e.g. see: Becker G., 1964. *Human Capital*, Chicago: The University of Chicago Press. According to Becker's optimal allocation of human capital, the efficient way to divide the investment costs of skill is for firms to pay for firm-specific human capital acquisition of workers and for workers to pay for their own general human capital. Attention is also given to the impact of formal training on performance, profitability and increased productivity in SMEs, e.g. see: O'Regan N., Stainer L., Sims M., 2010. *Training in SMEs and its relationship to profitability,* International Journal of Human Resources Development and Management, Vol. 10 Iss: 2, pp.166-181, available online at*:* DOI - 10.1504/IJHRDM.2010.031442 (accessed January 20, 2015); Westhead P., Storey D., 1996. *Management*

Training and Small Firm Performance: Why the Link is Weak, International Small Business Journal, Vol. 14 Iss: 4, pp. 13-25, which recognize the importance of formal training on performance, profitability, growth and survival in SMEs. It highlights the impact of formal training in SMEs in terms of: employee input on decision-making, influence on working practices and creativity on performance objectives. In a similar note, Zieba K., Zieba M., 2014. *Training Services in Small and Medium-sized Enterprises: Evidence from Poland,* Social Sciences, Vol. 2 Iss:.84, pp.47-56, available online at*:* http://dx.doi.org/10.5755/j01.ss.84.2.7492 (accessed January 20, 2015), identify the importance of formal training and skills in knowledge economy and the lack of resources and abilities to train employees in SMEs.

Furthermore, the impact of formal training engagement of employees on their retention rates has been explored in a number of papers e.g. see: Pajo K., Coetzer A., Guenole N., 2010. *Formal Development Opportunities and Withdrawal Behaviours by Employees in Small and Medium-Sized Enterprises*. Journal of Small Business Management, Vol.48, pp.281–301*,* available online at: doi: 10.1111/j.1540-627X.2010.00295.x (accessed December 31, 2014), which evaluate direct and indirect relationships between involvement in formal training and employee attitudes towards turnover intentions and neglectful behaviour for those employed in small and medium-sized enterprises (SMEs).

From the international perspective, ILO, 2008. *Skills for Improved Productivity, Employment Growth and Development,* available online at*:* http://ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_092054.pdf (accessed January 02, 2014), identifies several initiatives endeavour to improve the links between formal training institutions and informal sector workers and entrepreneurs. It is worth noting the paradoxical characteristic of the training situation in SMEs, e.g. see: EUROPEAN COMMISSION, 2009. *Guide for Training in SMEs,* pp.5, which mentions that on one side continuous training and lifelong learning for workers and managerial staff are regarded as crucial elements of competitiveness and one the other side, continuous training and qualifications are less likely to be available to employees working in SMEs than to those in large companies. The report concludes, the performance of an enterprise and its economic success depend very much on the capacity and competence of the entrepreneur and the managers to permanently adapt them to changing environments and market conditions.

1.3.1.1 Off-the-Job Training

There are a number of articles which portrait the concept and the different dimensions of off-the-job training e.g. see: Wood S., 2004. *Fully on-the-job training Experiences and steps ahead,* NCVER publishing Australia, available online at: http://www.meester-gezel.nl/doc/OJT_training_on_the_job.pdf (accessed January 25, 2015), which defines the concept of off-the-job training as a

period that the registered training organisations invites the trainee in for theory-based training in a classroom setting where active learning takes place, such as role-plays and discussions. Larger training organisations tended to invite groups of 15–20 trainees per workshop. Concerning the content of training a study by Ronald L. J., Bu-Rahmah M.J., 2012. *Developing employee expertise through structured on-the-job training (S-OJT): an introduction to this training approach and the KNPC experience,* Industrial and Commercial Training, Vol. 44, Iss 2, pp. 75-84(10), available online at: http://dx.doi.org/10.1108/00197851211202902 (accessed January 25, 2015), mentions most training occurred off-the-job in a classroom setting, focusing on background information rather than on specific job information.

At the European level, a project implemented by European Commission examines the correlation of the on-off site training e.g. see: Makó C., Szirmai P., Illéssy M. 2006. *Under pressure: Exploring new trajectories of development in the context of globalisation—An international comparison of SMEs* (2003-3448/001-001-LE2-510REF Leonardo da Vinci project). Budapest: Institute of Sociology, Hungarian Academy of Sciences. The results identifies On-the-Job Trainings (OJT) as the dominant training form in the practice of SME sector, compare to Off-the-Job Trainings (Off-JT). It concludes the time spent on CVT courses should be allocated to both the On-the-Job Training (OJT) and Off-the-Job (Off-JT) as they are functioning together. In another study in Baltic states, the research results show that staff training in (manufacturing) SMEs occurs more informal and on-the-job than involving sending employees on off-the-job training courses e.g. see: Smallbone D., North D., 1996. *Small Business Development in Remote Rural Areas: the Example of Mature Manufacturing Firms in Northern England,* Journal of Rural Studies, Vol. 12 Iss: 2, pp. 151-167.

At the international level, ILO, 2012. *Overview of Apprenticeship systems and issues, ILO contribution to the G20 Task Force on Employment* (revised from September), International Labour Organization, Geneva, available online at*:* http://www.ilo.org/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/genericdocument/wcms_190188.pdf (accessed January 02, 2014), mainly deals with off-the-job education and training as a part of regulated apprenticeship systems.

1.3.2. Informal Set of Training

Informal training on the other hand is resulted from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support. It is in most cases unintentional from the learner's perspective e.g. see: CEDEFOP, 2014. *Terminology of European Education and Training Policy*, Office for Official Publications of the European Community, Luxembourg, available online at: http://www.cedefop.europa.eu/EN/Files/4117_en.pdf (accessed February 02, 2014). Informal training is often referred to as "learning by experience" or simply

as "experience". As is already apparent, an initial difficulty in a process of recognising informal learning outcomes is that it is often very hard, if not impossible, to ensure that candidates for recognition fully realise the nature and scope of their own informal learning. A second problem is the fact that this learning may not lead to any recognition if the learning outcomes fall short of the standard fixed by the evaluator or assessment body, e.g. see: Werquin P., 2007. *"Terms, Concepts and Models for Analysing the Value of Recognition Programmes"*, paper prepared for the OECD Activity on Recognition of Non-formal and Informal Learning, EDU/EDPC, 24, available online at: www.oecd.org/dataoecd/33/58/41834711.pdf (accessed February 02, 2014).

There are a number of reports, which look at the both sides of in/formal training, e.g. see: Kock H., Ellström P.E., 2011. *Formal and integrated strategies for competence development in SMEs*, Journal of European Industrial Training, Vol.35 Iss: 1, pp.71-88, available online at: http://dx.doi.org/10.1108/03090591111095745 (accessed January 29, 2015), which focuses on a distinction between formal and integrated (informal) training strategies for competence development. The study looks at the conditions under which these strategies are likely to be used, and the effects of learning outcomes. It analyses the effect of training strategies either formal or informal on development of entrepreneurial skills among employees namely through increasing professional competence, improving ability to carry out new work tasks, enhancing holistic view of the business, using knowledge outside the workplace, increasing motivation for learning.

By the same token the study of Nübler I., Hofmann C., Greiner C., 2009. *"Understanding Informal Apprenticeship, Findings from Empirical Research in Tanzania."* Employment Working Paper 32, International Labour Organization, Geneva, available online at:http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_110481.pdf (accessed January 02, 2014), suggests that workers often benefit from combining elements of formal education and training with informal training. Attention is also drawn to the contribution of formal and informal learning to the employability of employees e.g. see: Van der Klink M., Boon J., Van der Heijden B., 2009. *The contribution of formal training to employability*, available online at: http://www.ou.nl/Docs/Campagnes/ICDE2009/Papers/Final_paper_047klink.pdf (accessed January 20, 2015), which indicates that informal learning activities, like networking, contributes significantly to the employability, while the impact of formal training appeared to be rather insignificant. The study also confirms the impact of organizational characteristics on informal learning and employability. Moreover, the study by Van der Klink M., Boon J., Schlusmans K., 2012. *All by myself. Research into employees' informal learning experiences*, Int. J. Human Resources Development and Management, Vol. 12 Iss: 1/2, pp.77–91, looks at informal learning as an important phenomenon in the contemporary era of lifelong learning, emphasising that the majority of the informal learning outcomes are

skill-based, generic and applicable in a larger cluster of jobs than participants' present jobs.

On the other hand, Kotey B, Folker C, 2007, *"Employee training in SMEs: effect of size and firm type—family and non family"* Journal of Small Business Management Vol. 45, pp.214–238, contended that informal training is more consistent with the typical short-term strategic orientation of the SMEs in that it is both informal and inherently flexible, considering the effect of size and firm type on performance.

A number of case studies also highlight training among employees through informal courses e.g. see: Rezai G., Mohamed Z., Shamsudin M.N., 2011. *Informal Education and Developing Entrepreneurial Skills among Farmers in Malaysia,* World Academy of Science, Engineering and Technology International Journal of Social, Behavioral, Educational, Economic and Management Engineering Vol.5 Iss:7, pp.124-131, which demonstrates the Malaysian government efforts in promoting informal agri-entrepreneurial training (mainly teaching managerial skills) in developing entrepreneurship among the 796 farmers in Malaysia. The study employed factor analysis and logic regression analysis to determine whether the current informal educational and training establishments are sufficient to teach and develop entrepreneurial skills. The paper confirms the importance of informal training as well as the necessity of fundamental changes in farmers' attitude to promote entrepreneurship among farmers.

Having discussed the two main sets of formal/informal training, an overview of the common methods of training in literature is provided in the following sections. Furthermore, in the next section on-the-job training as the main sub-category of informal training is discussed.

1.3.2.1. On-the-Job Training

While there exists a large literature showing the crucial role of formal education system, much less work exists on the effects of informal training provided by firms. It is worth mentioning Becker (1964) in his theory of human capital, made a distinction for the first time between *firm specific* and *general training*, e.g. see: Becker G., 1964. *Human Capital*, Chicago: The University of Chicago Press. The theory applies to the acquisition of skills and distinguish formal education and on the job training (OJT) as the most important methods of investing in human capital. Following his work a series of papers reviewed both sides but this part highlights those training literature recognizing the impact of On the Job Training (OJT) on SMEs performance. According to Afolabi B., Macheke R., 2012. *An Analysis of Entrepreneurial and Business Skills and Training Needs in SMEs in the Plastic Manufacturing Industry in the Eastern Cape Province, South Africa,* International Review of Social Sciences and Humanities, Vol. 3 Iss: 2, pp. 236-247, available online at: http://irssh.com/yahoo_site_admin/assets/docs/24_IRSSH-352-

V3N2.202201424.pdf (accessed January 02, 2014), entrepreneurial skills can be acquired through learning on the job or training.

Various books also highlight this: e.g. see: OECD, 2013. *Skills Development and Training in SMEs*, pp.81, which denotes most SMEs focus on the niche market and have unique required skills, which make on-the-job training, becomes an essential training approach for them. In the same vein, Cooper C. L., Burke R. J., 2011. *Human Resource Management in Small Business: Achieving Peak Performance,* Edward Elgar Publishing UK, identify on the job training as the most common form of training (if any) provided by SMEs and a very important component in the SME arsenal. The report mentions, however, on the job training is likely insufficient for high-potential individuals successfully selected into an SME but more formal training in SMEs is generally not an element provided.

Attention is also given to the role of technical on the job training programs in producing industrial trainees e.g. see: Harvie C., Lee B.C., 2002. *The Role of SMEs in National Economies in East Asia,* Edward Elgar Publishing UK, which recognizes the role of OJT in SMEs as a great contributor to the alleviation of skilled worker shortages, reduce unemployment and skills update as well as promoting entrepreneurship environment.

At the international level, a World Bank report by Almeida R., Behrman J., Robalino D., 2012. *The Right Skills for the Job? Rethinking Training Policies for Workers*. Washington, DC: World Bank publishing, available online at: https://openknowledge.worldbank.org/handle/10986/13075 (accessed January 25, 2015), identifies imperfections in labour and capital markets, coordination and poor individual employee decision making as the main reasons training interventions including on the job training fail. It concludes public interventions are designed and implemented without full understanding of the reasons why markets alone do not generate an efficient distribution of skills.

Attention is also drawn to the three different forms of on the job training namely "learning by doing", "learning by interacting", "learning by using" mapped in the practice of firms functioning in both in the "old" and the "new" economies, e.g. see: Makó C., Szirmai P., Illéssy M., 2006. *Under pressure: Exploring new trajectories of development in the context of globalisation—An international comparison of SMEs* (2003-3448/001-001-LE2-510REF Leonardo da Vinci project), Budapest: Institute of Sociology, Hungarian Academy of Sciences.

In terms of the implications of on the job training on the ground of human resources, e.g. see: Lyons P., Mattare M., 2011. "*How can very small SMEs make the time for training and development: skill charting as an example of taking a scenistic approach*", Development and Learning in Organizations: An International Journal, Vol. 25 Iss: 4, pp.15 – 19, which propose on-the-job training model for very small organizations, highlighting the necessity of a long-term training strategy in SMEs rather than addressing only what is needed at the moment. Despite that, the paper identifies the correlation between workplace training and employee satisfaction and lower turnover and human performance as the main implications of OJT. In a similar note, Konings J., Vanormelingen S.,

2015. *The Impact of Training on Productivity and Wages: Firm-Level Evidence,* The Review of Economics and Statistics, Vol. 97, Iss: 2 pp. 485-497 (doi:10.1162/REST_a_00460); Konings J., Vanormelingen S., 2010. *The Impact of Training on Productivity and Wages: Firm-Level Evidence,* IZA Discussion Paper No. 4731, available online at: http://ftp.iza.org/dp4731.pdf (accessed January 21, 2015), which uses firm-level panel data of on-the-job training to estimate its impact on firm performance namely productivity and wages. The study employs a control function approach to endogeneity input factors of training, concluding productivity premium of a trained worker is substantially higher compared to the wage premium.

At the European level the importance of on the job training has recognised by different reports, e.g. see: EUROPEAN COMMISSION, 2009. *Guide for Training in SMEs*, pp.40, which emphasises the development of on-the-job training through several tools that can be facilitated by internal resources. However, the report insists on the value of traditional training sessions (in a training centre) as well. By the same token OECD, 2012. *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, available online at*:* DOI: 10.1787/9789264177338-en analyses the importance of on-the-job training provided by SMEs which is often not formally recognised.

In Italy e.g. see: Sciulli D., 2013. *On-the-job-training contracts in Italy: Training or flexibility device?* Cuadernos de Economía, Vol. 36 Iss: 102, pp. 168–183, which looks at the 1997 "Treu Act's" effects on the flows out from on-the-job-training contracts (including both "Contratti di Formazione Lavoro" and "Apprenticeship Contracts") into a new labour market status after one year of the implementation. The report suggests that Italian firms value the flexibility characteristics of on-the-job-training contracts more than their training content. Further, Tiraboschi (2006) notes that the contract is preferred in Italy as employers often use it as a means of using cheap labour, e.g. see: Tiraboschi M., 2006. *'Productive Employment and the Evolution of Training Contracts in Italy'*, IJCLLIR, Vol. 22, pp. 637-651, which mentions *On-the-job-training* contracts in Italy like other Mediterranean countries has tended to subordinate training objectives using the economic incentives and lower costs in terms of salaries and contributions. It is worth noting also to a Eurofound report, European Foundation for the Improvement of Living and Working Conditions, 2013. *Restructuring in SMEs: Italy,* available online at: http://eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2012/4720/en/1/EF124720EN.pdf (accessed December 31, 2014), which mentions the majority of training in Italy is aimed at improving and updating skills on current tasks and responsibilities, rather than on the acquisition of skills for new tasks and responsibilities. This is particularly relevant for SMEs, as over 80% of all SMEs offers same sort of training to their staff. In Germany this task is being done by the unique vocational education and training system.

Outside the European boundaries, in Russia e.g. most of the Russian firms assess on-the-job training, as the most important source of job-related skills, while skills

gained through previous working experience was second e.g. see: Smallbone D., Welte F., 2009. *Entrepreneurship and Small Business Development in Post-Socialist Economies,* Routledge, Taylor & Francis Croup, NEW YORK.

1.3.3. In-house Training

While there exists a large literature showing the crucial role of formal off the job training and education, much less work exists on transferable skills/ entrepreneurship skills through in-house training. It is worth noting there are three options for in-house training, based on employers' preference choosing to have their own personnel deliver training and/or conduct assessment, e.g. see: Department of Education, Training and Employment, Queensland, 2014. *Staff training option,* available online at: http://www.training.qld.gov.au/employers/training-staff/options.html (accessed January 26, 2015), which describes the three options of in-house training namely: Option 1: a registered training organisation delivering a customised course. This type of training can be a combination of on-the-job and/or classroom delivery. The assessment of the quality of the training rests with the registered training organisation. Option 2: in house staff provide some or all of the training in house, but the final assessments, issue of qualifications and the quality of the training are conducted by a registered training organisation. Option 3: in-house staff conduct most training and assessment in house, with the support and assistance of a registered training organisation. In the same vein, Kitching J., Blackburn R., 2002. *The Nature of Training And Motivation to Train in Small Firms*. Small Business Research Centre, Kingston University, London, available online at: http://core.ac.uk/download/pdf/4154524.pdf (accessed January 26, 2015), points out that trainers may be internal or external to the enterprise and the location might be in-house or external training. The paper discusses that in SMEs the strong employer preference and default position' for workforce training is in-house training, unless employers had strong reasons for providing training away from the workplace. The study highlights the fact that for owner-managers the case is different as they often felt they would benefit less from in-house training (unless provided by external trainers) as they considered themselves most of the time the most knowledgeable and/or skilled person in the business and usually seek external training opportunities for themselves than for their workforces.
Attention is also given to the structure of in-house training mentioning it may be viewed as the most effective methods of formal training e.g. see: Jones P., Pickernell D., Beynon M., Packham G., 2013. *The risk of business trainings in relation to productivity and profitability of small and medium sized enterprises. An exploratory analysis*, Risk perception in financial and non-financial entities, Iss: 127 pp.83-108, available online at: http://www.ue.katowice.pl/uploads/media/6_P.Jones_D.Pickernell_M.Beynon_G.Packham_The_Risk....pdf (accessed January 26, 2015), or informal training see:

Hill R., Stewart J., 2000. *Human Resource Development and Small Organisations*, "Journal of European Industrial Training", Vol. 24 Iss: 2, pp. 105-117, denoting in-house training could also be perceived as informal, flexible, relevant and convenient and also provided the benefit of being low cost.
The overview of the literature also underlines the performance implications of in-house training namely about worker productivity, labour turnover business performance, profits, growth and survival in the market, e.g. see: Mehra A., Langer N., Bapna R., Gopal R.D., 2014. *Estimating Returns to Training in the Knowledge Economy: A Firm Level Analysis of Small and Medium Enterprises.* MIS Quarterly, Vol. 38 Iss: 3, pp.1-35, available online at: http://misq.org/misq/downloads/download/article/1115/ (accessed January 26, 2015); Jones P., Pickernell D., Beynon M., Packham G., 2013. *The risk of business trainings in relation to productivity and profitability of small and medium sized enterprises. An exploratory analysis*, Risk perception in financial and non-financial entities, Iss 127 pp.83-108, available online at: http://www.ue.katowice.pl/uploads/media/6_P.Jones_D.Pickernell_M.Beynon_G.Packham_The_Risk....pdf (accessed January 26, 2015), which underline the impact of in-house training as one of the most important HRM practices with regard to worker productivity. The former emphasizes the lack of in-house institutionalized facilities for training leads the smaller firms rely on external training available in the corporate education market. The latter study also highlights using outside providers for in-house designed and delivered courses as the most effective methods of formal training, concluding there is a positive association between "Somebody within the workplace providing on the job training", "Learning by doing/in-house training by staff", "by a private training provider outside of the workplace" and the business profitability outcome.
In a similar note, Aragon-Sanchez A., Barba-Aragon I., Sanz-Valle R., 2003. *Effect of training on business results*. "International Journal of Human Resource Management", Vol. 14 Iss: 6, pp. 956-980; Dewhurst H., Dewhurst P., Livesey R., 2007. *Tourism and Hospitality SME Training Needs and Provision: A Sub-regional Analysis*. "Tourism and Hospitality Research", Vol. 7 Iss: 2, pp. 131-143, postulate productivity, quality, labour turnover and financial advantages as the outcome of in-house training in SMEs. Attention is also drawn to in-house training in SMEs as a mean to benefit small firm performance profits, growth or survival in the market as implications of, e.g. see: Westhead P., Storey D. 1996. *Management Training and Small Firm Performance: Why the Link is Weak*, International Small Business Journal, Vol. 14 Iss: 4, pp. 13-25.

1.3.4. External Training

The external provision of training for the purpose of promoting entrepreneurship is an untapped area in the literature, which only a handful of research have already studied the area so far. Agreement persists amongst scholars that employers in SMEs are reluctant to provide training away from the workplace and they have

strong preference and default position' for workforce training is in-house training. However, this is not the case for themselves as they consider themselves most of the time the most knowledgeable and/or skilled person in the business, usually seek external training opportunities for themselves than for their workforces e.g. see: Kitching J., Blackburn R., 2002. *The Nature of Training And Motivation to Train in Small Firms*. Small Business Research Centre, Kingston University, London, available online at: http://core.ac.uk/download/pdf/4154524.pdf (accessed January 26, 2015), which identifies the importance of external training for owner-managers. By the same token Cotterill R., 2004. *Best Practice Guidance on Training for Small and Medium Sized Enterprises,* available online at*:* http://www.epsc.org/data/files/PRISM/Training Guidance Rev 1.pdf (accessed December 31, 2014), identifies external training courses as a good option, for obtaining qualifications that need to be considered by SMEs managers. The study discusses although the external training involves an additional cost, but the additional benefit to the employee and the company maybe make it worthwhile, as it provides an extra motivation to employees and offers an assurance of competence to the employer. Despite that, providing the external training for a variety of reasons in smaller firms to all grades of workers, including managers are less likely than larger enterprises e.g. see: OECD, 2002. *Management Training in SMEs,* available online at*:* www.oecd.org/cfe/smes/2492440.pdf (accessed December 31, 2014), which confirms the relationship between firm size and the provision of external training for all occupational groups. However, attention is also given in some studies to the reasons for preferring external training e.g. see: Kitching J., Blackburn R., 2002. *The Nature of Training And Motivation to Train in Small Firms*. Small Business Research Centre, Kingston University, London, available online at: http://core.ac.uk/download/pdf/4154524.pdf (accessed January 26, 2015), which mentions employers prefer externally provided training namely because 'Lack of in-house skills', 'only/best option' 'possibility of free or subsidised training' as the most commonly reported reasons either for owner-managers or employees.

At the global Level, e.g. see: OECD, 2013. *OECD Skills Studies Skills Development and Training in SMEs*, pp.19, which indicates SMEs in most OECD countries do not use external training centres for their workforce development. This is when many studies e.g. see: Fashoyin T., Tiraboschi M., 2011. *Productivity, investment in human capital and the challenge of youth employment,* edited by Pietro Manzella and Lisa Rustico, Newcastle upon Tyne, Cambridge Scholars Publishing, pp., xx + 373, ISBN 978-1-4438- 3174-1, highlight the fact that the establishment of permanent links among educational institutions, training centers and productive organizations is of key importance for a modern economy. Further OECD (2013, see: pp.19), mentions to some notable examples of Denmark and Italy where the culture and tradition of training to a large extent influences organizational strategies for participation in external training.

1.4. Outcomes from Participating in Training

1.4.1. The Impact of Training on SMEs Performance:

Despite the fact that the study of the relation between training and firm's performance has occupied a good amount of research, there is an untapped potential for entrepreneurship e.g. see: Glaub M., Frese M., 2011. "*A Critical Review of the Effects of Entrepreneurship Training in Developing Countries*." Enterprise Development and Microfinance Vol. 22 Iss:4, pp. 335–53; Bryan J., 2006. *Training and performance in small firms*. International Small Business Journal Vol. 24 Iss: 6, pp. 635-660. DOI:10.1177/0266242606069270, which attempt to explain the positive impact of training on SMEs performance. In the general run of literature, training improves organizational performance by creating a workforce with extensive knowledge and skills e.g. see: Ballesteros J.L., De Saá P., Domínguez C., 2012. *The role of organizational culture and HRM on training success: evidence from the Canarian restaurant industry*. International Journal of Human Resource Management 23, 3225-3242; Tharenou P., Saks A.M., Moore C., 2007. *A review and critique of research on training and organizational-level outcomes,* Human Resource Management Review Vol.17, pp.251-273; Kraiger K., 2003. *Perspectives on training and development*. In: Borman W.C., Ilgen D.R., Klimoski R.J. (Eds.), Handbook of Psychology: Industrial and Organizational Psychology. John Wiley and Sons Inc., Hoboken, NJ, pp. 171-192. However, some research studies even go further and distinguish the impacts of formal and informal training on business performance e.g. see: Fuller A., Ashton D., Felstead A., Unwin L., Walters S., Quinn M., 2003. *"The impact of informal learning at work on business productivity"*, Department of Trade and Industry, London; Jayawarna D, Macpherson A, Wilson A, 2007. "*Training commitment and performance in manufacturing SMEs incidence, intensity and approaches"* Journal of Small Business and Enterprise Development Vol. 14 pp.321–328, which mention that formal training is more significantly associated with enhanced business performance than informal training. Back to the topic, a study by Theriou G., Chatzoudes D., 2015. *Exploring the entrepreneurship-performance relationship: evidence from Greek SMEs*, Journal of Small Business and Enterprise Development, Vol. 22 Iss: 2, pp. 352 - 375*,* available online at: http://dx.doi.org/10.1108/JSBED-03-2013-0024 (accessed February 04, 2015), attempts to shed some light on those entrepreneurial actions that seem to influence performance. The paper employs contingency theory suggests that congruence among key variables, such as environment, structure and strategy, is important for obtaining increased performance. Subsequently, the results indicate that "environmental factors" and "access to financial capital" moderate the relationship between "entrepreneurial orientation" and "firm performance", through "entrepreneurial management".

Attention is also drawn to the impact of different training methods on SMEs' business performances e.g. see: Jones P., Beynon M.j., Pickernell D., Packham G., 2013. *Evaluating the impact of different training methods on SME business performance,* Environment and Planning C: Government and Policy, vol. 31, pp.

56 – 81, available online at: doi:10.1068/c12113b or http://envplan.com/epc/fulltext/c31/c12113b.pdf (accessed December 31, 2014), which considers the relationship between a diverse range of training methods and the levels of impact that training has on business performance.
But, it is interesting to note that empirical research does not always provide evidence to support the effect. One possible explanation is that training does not have a direct effect on performance but an indirect effect by improving other organizational outcomes e.g. see: Aragon M.I.B., Jimenez D.J., Valle R.S., 2014. *Training and performance: The mediating role of organizational learning,* BRQ-BUSINESS RESEARCH QUARTERLY, Vol. 17 Iss: 3, pp. 161-173, which suggests that organizational learning mediates the relationship between training and performance and that the adoption of a learning-oriented training enhances performances through its positive effect on organizational learning.

1.5. Barriers to Training Provision in SMEs

Barriers to training development in SMEs are all those factors that make it difficult for managers to either introduce the new set of training to employees or to grow the already existing ones. According to two recent OECD reports, the main obstacles to training development in SMEs are: "Regulatory framework"; "Culture"; "Access to finance: Equity capital, venture capital" e.g. see: OECD, 2015, Entrepreneurship at a Glance 2015, OECD Publishing, Paris, available online at: http://www.oecd-ilibrary.org/docserver/download/3015021e.pdf?expires=1439992895&id=id&accname=guest&checksum=1629A94678A44837112DDBFCB6C1E469 (accessed February 02, 2015); OECD, 2014, Entrepreneurship at a Glance 2014, OECD Publishing, Paris, available online at: http://www.oecd-ilibrary.org/docserver/download/3014031e.pdf?expires=1439992982&id=id&accname=guest&checksum=A7C01FCE0384A742BDF1A2A7B7E8CFD2 (accessed January 02, 2014).
However, it is worth mentioning that there is also another classification, which differentiates between internal and external obstacles to training development as partly presented by Welter F., 1997. *Small and medium enterprises in Central and Eastern Europe: Trends, Barriers and Solutions*. RWI-Papier, 51. RWI, Essen. According to his study, external barriers include the entire external environment in which an enterprise operates, such as macro economic situation and institutional infrastructure; therefore this presents a formal institutional framework. On the other hand, internal barriers include obstacles found within an individual enterprise, such as entrepreneurs' skills, as well as their mind-set, mentalities, behaviours, which present informal institutions e.g. see: Kuzmina I., 2003. *Entrepreneurship and Small Business Development in Latvia,* Small Firms and Economic Development in Developed and Transition Economics: A Reader. Edited by D.A.Kirby and A.Watson. / Ashgate. ISBN 0754630609. London 2003,

p.153-164; Mateev M., 2003. *Entrepreneurship and SME Developments in Transition Countries: The Case of Bulgaria*. In D. K. Cirby and A. Watson (Ed.).
To sum up, Table 2 presents an overview of the major external and internal barriers to training development in SME. At the same time, in the following sections we are going to present these barriers and discuss how they hinder entrepreneurial climate in a country.
For the purpose of this thesis we looked at both models but classified the literature based on the above-mentioned three types of obstacles in the first model for conducting our research.
The above-mentioned obstacles to training development are in the aggregate supported by a number of studies e.g. see: Panagiotakopoulos A., 2011. *Barriers to employee training and learning in small and medium-sized enterprises (SMEs)*, Development and Learning in Organizations: An International Journal, Vol. 25 Iss: 3, pp.15 – 18, which look at organizational constraints such as lack of time or limited financial resources, as well as negative attitudes towards employee training.
The study reviews critically the HRD literature in the small business context in order to identify the main barriers to employee training and learning and recommend ways to overcome them.

Table 2: Perceived Barriers to Training Development

External Barriers	Internal Barriers
Economic Conditions - Macroeconomic instability - High inflation - Tough competition - Low demand *Legal Framework* - Unsteady and changing legislation - High taxes - Non-transparent and inadequate enforcement mechanisms *Financial Framework* - Inefficient banking system - High interest rates - High collateral requirements - Underdeveloped financial markets - Inefficient credit policy *State Support* - Non-existing physical infrastructure - Lack of business support services - Corruption *Social Conditions* - Low motivation of workforce - Lack of qualified workers - High levels of bureaucracy - Negative perceptions about entrepreneurs	- Lack of knowledge and management techniques - Lack of experience and skills - Entrepreneurs' mentalities and mind-sets

Source: Putkaradze L., Abramishvili I.,2009. *Entrepreneurship and SME Development in Transition Economies: The Case of Georgia,* available online at*:* http://www.diva-portal.org/smash/get/diva2:221973/FULLTEXT01.pdf (accessed January 02, 2015).

The analysis suggests that a key challenge for policy makers in this area is to facilitate changes in owner attitudes, improve access to training interventions and create the necessary institutional conditions to encourage SMEs to move to high value-added trajectories. In a similar note Johnston K., Loader K., 2003. *Encouraging SME participation in training: identifying practical approaches*.

Journal of European Industrial Training, Vol.27 Iss: 6, pp.273–280, available online at*:* http://dx.doi.org/10.1108/03090590310479901 (accessed January 20, 2015), deal with the low value of training, ad hoc in training choices, cost and management preference of informality in training and learning among the main reasons for the limited usage of training in SMEs as the main reasons for limited usage of training services by SMEs.

Regarding the "regulatory framework", a review of literature shows whenever the institutional reforms are slow, legal and financial infrastructure is the major drawback for SMEs and entrepreneurship development e.g. see: Putkaradze L., Abramishvili I., 2009. *Entrepreneurship and SME Development in Transition Economies: The Case of Georgia,* available online at*:* http://www.diva-portal.org/smash/get/diva2:221973/FULLTEXT01.pdf (accessed January 02, 2015). The poor legal infrastructure for instance may hinder training development in SMEs through a wide range of factors such as lack of incentives, no tax break or unsteady tax legislation and high taxes for businesses as well as government's intervention in the economy, e.g. see: Catoiu, I., Veghes C., 2003. *Living to Survive: The Small and Medium Enterprise Sector in Romania after Ten Years of Transition to a Market Economy*, in Kirby, D.A. & Watson, A. (eds.), Small Firms and Economic Development in Developed and Transition Economies: A Reader, Aldershot: Ashgate; Kuzmina I., 2003. *Entrepreneurship and Small Business Development in Latvia,* Small Firms and Economic Development in Developed and Transition Economics: A Reader. Edited by D.A.Kirby and A.Watson. / Ashgate. ISBN 0754630609. London 2003, p.153-164; Mateev M., 2003. *Entrepreneurship and SME Developments in Transition Countries: The Case of Bulgaria*. In D. K. Cirby and A. Watson (Ed.), Small Firms and Economic Development in Developed and Transition Economies: A Reader. Hampshire: Ashgate Publishing Ltd., 181-195. At the same time, laws and regulations are regarded as a major drawback for ET development, when there is policy instability, frequent changes in legislations, non-transparent implementation of laws, poorly functioning state, inadequate accounting standards and business registration methods. Therefore, having a strong legal framework as it includes laws property, bankruptcy, contracts, commercial activities, taxes is fundamental for promoting training in SMEs e.g. see: Welter F., Smallbone D., 2003. *Entrepreneurship and Enterprise Strategies in Transition Economies: An Institutional Perspective*. In Kirby D., Watson A., (eds), Small Firms and Economic Development in Developed and Transition Economies: A Reader. Aldershot: Ashgate, pp. 95-114.

However, establishing new laws is not enough for the legal framework to be efficient, most of the problems occur in the implementation stage e.g. see: Catoiu, I., Veghes C., 2003. *Living to Survive: The Small and Medium Enterprise Sector in Romania after Ten Years of Transition to a Market Economy*, pp.12; Kuzmina I., 2003. *Entrepreneurship and Small Business Development in Latvia,* pp.159.

Furthermore, the lack of educated personnel and correct enforcement mechanism will enforce SME's reluctant or reserved attitude towards government and official

regulations which is a rather common attitude during the beginning period of transition e.g. see: Welter F., 1997. *Small and medium enterprises in Central and Eastern Europe: Trends, Barriers and Solutions*. RWI-Papier, 51. RWI, Essen. Consequently, great importance should be given to the legal climate of the country when entrepreneurs will be subject to law and their property rights shall be protected e.g. see: Chilosi A., 2001. *Entrepreneurship and Transition*, MOCT-MOST: Economic Policy in Transitional Economies, Vol. 11, pp.327-357.

Concerning the "cultural reasons", some studies highlight the difficulties that SMEs face in deciding to advance the skills of their workforce more formally, and pertinent government strategies e.g. see: Lange T., Ottens M., Taylor A., 2000. *SMEs and barriers to skills development: a Scottish perspective*, Journal of European Industrial Training, Vol. 24 Iss: 1, pp.5-11, available online at: DOI http://dx.doi.org/10.1108/03090590010308219(accessed February 13, 2015), which investigates some of the major training development barriers in SMEs namely the influence of the prevalent SME culture as the main one and referring to awareness, finance, and access to training as other development barriers. The study investigates the attitude of Scottish SMEs towards learning and skills and concludes by arguing that the continuous creation of new skills strategies, new initiatives, new misleading names and labels in recent years has added to an obvious state of confusion among small and medium-sized companies and their employees.

In addition to the above-mentioned report, some papers have discussed the moderating role of environment, culture, attitude and intention on development of training e.g. see: Paul Dana L., 2001. *The education and training of entrepreneurs in Asia*, Education & Training; 2001; Vol.43 Iss: 8/9; ABI/INFORM Global pp. 405-415, which looks at the development of entrepreneurial skills on different examples in Asia, highlighting the role of culture and environment in entrepreneurship attitude of managers and employees.

Despite that, some reports mention small businesses are generally less engaged with the training as not seeing the need for training. For instance Australian research suggests many small businesses do not feel that training relevant to their business is actually available e.g. see: Townsend R., Waterhouse P., Malloch M., 2005. *Getting the Job Done: How Employers Use and Value Accredited Training Leading to a Qualification*, NCVER, Adelaide, South Australia.

In a UK study, small firms reported that the most common routes to employee development were from "learning by doing" and through "discussions with their manager" e.g. see: Green A., Martinez-Solano L.E., 2011. *"Leveraging training skills development in SMEs: an analysis of the West Midlands, England, UK"*, OECD Local Economic and Employment Development (LEED) Working Papers, No. 2011/15, OECD Publishing, Paris, available online at: DOI http://dx.doi/10.1787/5kg0vststzr5-en (accessed February 13, 2015); Benson J., Gospel H., Zhu Y., 2013. *Workforce Development and Skill Formation in Asia,* Routledge, Taylor & Francis Croup, LONDON AND NEW YORK in chapter 8: *Workforce development and skill formation in Taiwan*, which the latter mentions

the major problems related to Human resource development including lack of experience, enthusiasm as well as the nature of the relatively higher turnover rate of employees, which make SMEs less keen to conduct training.

In another study, Coetzer A., Redmond R., Sharafizad J., 2012. *Decision-making regarding access to training and development in medium-sized enterprises: an exploratory study using the critical incident technique*, Research Online ECU Publications, available online at: http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1502&context=ecuworks2012 (accessed February 13, 2015), review factors influencing decisions of managers regarding employee access to training identifying the significance of: amount of discretion in the decision making situation (i.e., for mandatory training the decision-maker typically had very little discretion); need to retain employees perceived as 'solid citizens' or 'stars'; beliefs about the improvability of skills and abilities; attitude toward various modes of training delivery (e.g. online training); concerns about low levels of learning transfer back to the workplace.

Attention is also drawn to the risk of poaching after training e.g. see: Almeida R., Cho Y., 2012. *Employer-Provided Training: Patterns and Incentives for Building Skills for Higher Productivity,* Book Chapter: The Right Skills for the Job? pp. 105 - 132, Washington, DC: World Bank publishing, available online at: http://dx.doi.org/10.1596/9780821387146_ch04 (accessed February 13, 2015), in which discusses the result of cross-sectional evidence from the World Bank's Enterprise Surveys (http://enterprisesurveys.org/). The study mentions while most firms consider informal training sufficient for their regular operations, many firms also report that high worker turnover and poaching of workers is an important factor behind the lack of investment in training, especially among the larger firms.

To combat the issue a number of research studies have focused on the issue of staff poaching e.g. see: Panagiotakopoulos A., 2012. *Staff "poaching" in the small business context: overcoming this key barrier to training*, Industrial and Commercial Training, Vol. 44 Iss: 6, pp.326 – 333, available online at: http://dx.doi.org/10.1108/00197851211254752 (accessed March 13, 2015), which tries to investigate how small firm owners' "poaching" concerns could be overcome so that workforce skills development could be stimulated in such firms. The study employs the quality and quantitative analysis (e.g. company reports) in Greece SMEs and concludes that owners in small firms by enhancing staff loyalty and placing much emphasis on their management style, as well as creating a "friendly" atmosphere at work might reduce or resolve the issue. The interviews indicated that employees in such enterprises seem to place much value on aspects of their working lives other than payment. The study suggests a supportive and competent owner, increased job autonomy and responsibility, involvement in decision-making and a harmonious working climate with few conflicts as the key factors to avoid the poaching issue.

1.5.1. Access to Finance: Equity Capital, Venture Capital

Yet another major drawback is financial infrastructure, inadequate banking system that lacks willingness and experience to finance small business. In such situation of inefficient framework conditions training remains restricted in SMEs, e.g. see: e.g. see: Smallbone D., Welte F., 2009. *Entrepreneurship and Small Business Development in Post-Socialist Economies,* Routledge, Taylor & Francis Croup, NEW YORK. Therefore, numerous scholars have been drawn to investigate the impact of public financing on training provision extensively e.g. see: Kotey B., Folker C., 2007. *Employee training in SMEs: effect of size and firm type—family and non family*, Journal of Small Business Management, Vol.45, pp.214–238; Skinner J., Pownall I., Cross P., 2003. *Is HRD practised in micro-SMEs?* Human Resource Development International, Vol.6, pp.475–489; Webster B., Walker E., Brown A., 2005. *Australian small business participation in training activities,* Education and Training, Vol.47 pp.552–561, note that micro SMEs, with no employees, face additional barriers to training due to their limited resources, restricted time, deficiency of off-the-shelf training packages, and lack of engagement with training. In another study, Ganah A., Rennie A., 2009. *Barriers to training for employees at SMEs in the construction sector*, The First TG 59 International People in Construction Conference. pp. 138-146, Port Elizabeth, South Africa, 12-14 July, available online at: http://www.irbnet.de/daten/iconda/CIB14342.pdf. (accessed February 17, 2015), present a discussion on some of the key barriers that may hinder the efforts of small and medium-sized enterprises (SMEs) on ET development in the construction sector. The study concludes that awareness, finance and geographical location are among the main obstacles for provision of training in SMEs. To address the issues of finance and geographical location, some researchers have tried to develop a hybrid model which is less costly with higher accessibility e.g. Svensson L., Ellström P.E., Åberg C., 2004. *Integrating Formal and Informal Learning: A Strategy for Workplace Learning*. Journal of Workplace Learning, Vol. 16 Iss: 8, pp.479–491, available online at: http://dx.doi.org/10.1108/13665620410566441 (accessed February 13, 2015). The hybrid model aims to integrate formal and informal learning with the use of e-learning assuming desirable competencies for both an individual and an organisation might be created. The study tests the model with two case studies in an industrial setting and a hospital context. Despite the fact that the results are promising in terms of flexibility and accessibility, but some problems such as lack of time for reflection (feedback) remain to be solved.

At the international level, OECD, 2013. *OECD Skills Studies Skills Development and Training in SMEs*, pp.78, discusses there are some other barriers for enterprises to not carry out the training including: lack of time (impossible to interrupt production) and public financing as well as difficulty of the access, implementation and identification of suitable training providers.

Attention is also given to lack of state support namely non-existence or inefficient business infrastructure and business supporting services in developing ET in SMEs e.g. see: Aidis R., Sauka A., 2005. *Entrepreneurship in a changing environment: Analyzing the impact of transition stages on SME development*, available online at: *https://www.researchgate.net/publication/228617603_Entrepreneurship_in_a_changing_environment_Analyzing_the_impact_of_transition_stages_on_SME_development* (accessed February 13, 2015); Aidis R., 2003. *By law and by custom: Factors affecting small- and medium-sized enterprises during the transition in Lithuania*. [Amsterdam] : Thela Thesis.

According to Lee N., Sameen H., Cowling M., 2015. *Access to finance for innovative SMEs since the financial crisis*, Research Policy, Vol. 44 pp.370–380; Welter F., Smallbone D., 2003. *Entrepreneurship and Enterprise Strategies in Transition Economies: An Institutional Perspective*, pp.102, difficulties in financing are due to restricted and underdeveloped financial markets, inefficient banking system, high interest rates, collateral requirement and moral hazard problems, makes it nearly impossible to finance a business. This further leads to the lack of financial resources and inefficient credit policy, e.g. see: Catoiu, I., Veghes C., 2003. *Living to Survive: The Small and Medium Enterprise Sector in Romania after Ten Years of Transition to a Market Economy*, in Kirby, D.A. & Watson, A. (eds.), Small Firms and Economic Development in Developed and Transition Economies: A Reader, Aldershot: Ashgate; Kuzmina I., 2003. *Entrepreneurship and Small Business Development in Latvia*, pp.159; Mateev M., 2003. *Entrepreneurship and SME Developments in Transition Countries: The Case of Bulgaria*. In D. K. Cirby and A. Watson (Ed.).

These hindering factors are once again due to imperfect legal framework and less effective law application, which in its turn is due to the codes of behaviour that are still to be developed through long years of experience e.g. see: Chilosi A., 2001. *Entrepreneurship and Transition*, MOCT-MOST: Economic Policy in Transitional Economies, Vol. 11, pp.327-357; Aidis R., Sauka A., 2005. *Entrepreneurship in a changing environment: Analyzing the impact of transition stages on SME development*, available online at: *https://www.researchgate.net/publication/228617603_Entrepreneurship_in_a_changing_environment_Analyzing_the_impact_of_transition_stages_on_SME_development* (accessed February 13, 2015); Aidis R., 2003. *By law and by custom: Factors affecting small- and medium-sized enterprises during the transition in Lithuania*. [Amsterdam]: Thela Thesis.

Therefore, investments are key to economic stability and high entry barriers in terms of investments would translate to stagnation e.g. see: McMillan J., Woodruff C., 2002. *"The Central Role of Entrepreneurs in Transition Economies."* Journal of Economic Perspectives, Vol.16 Iss: 3, pp.153-170; Welter F., and Smallbone D., 2003. pp. 98.

To combat the issues regarding the limited flow of investments for financing existing business and start-ups a number of actions should be taken namely the

creation of competitive and transparent banking and financial systems together with institutional infrastructures. In this way valuable entrepreneurs will be able to manifest themselves to develop training e.g. see: Chilosi A., 2001. *Entrepreneurship and Transition*, MOCT-MOST: Economic Policy in Transitional Economies, Vol. 11, pp.327-357.

Chapter 2

Empirical Analysis on the Determinants of Entrepreneurship Training Development in SMEs

Summary: 2.1. Introduction – 2.1.1. Concept of Entrepreneurship – 2.1.2. Entrepreneurship Training in SMEs – 2.2. Required Skills for Entrepreneurship – 2.3. Control Variables – 2.3.1. Organization Size – 2.3.2. Access to Financial Capital (AFC) – 2.4. Methods of Entrepreneurship Training – 2.5. Entrepreneurship and SMEs Performance – 2.5.1. SMEs Performance Measurement – 2.6. Other Impacts of Entrepreneurship Training – 2.6.1. Increased Firm Productivity – 2.6.2. Increased Innovation – 2.6.3. Increased Competitiveness.

2.1. Introduction

2.1.1. Concept of Entrepreneurship

Despite a good amount of research on entrepreneurship during the last decades, there is no single definition of entrepreneurship, as different authors give different perspectives and definitions e.g. see: Landström H., 2005. *A History of Entrepreneurship and Small Business Research*. Pioneers in Entrepreneurship and Small Business Research. H. Landström, Springer Science+Business Media Inc.
Various books also highlight the fact e.g. see: Kuratko D. F., 2009. *Introduction to Entrepreneurship*. Canada, South-Western Cengage Learning; Kuratko D. F., Hodgetts R. M., 2004. *Entrepreneurship: Theory, Process, Practice*, Thomson South-Western, United Kingdom.
One of the first initial discussion and definition of entrepreneurship suggested by Richard Cantillon in the eighteenth century, who defined entrepreneurship as "a process of a self-employment with an uncertain return" and viewed an entrepreneur as "someone who consciously make(s) decisions about resource allocation, in that they choose to pay a certain price, consequently also bearing the risks of enterprise" e.g. see: Roux Y., Couppey M., 2007. *Investigating the Relationship between Entrepreneurial and Market Orientations within French SMEs and Linking it to Performance,* Umea School of Business and Economics, Umea University, Master thesis; Lowe R. Marriot S., 2006. *Enterprise: Entrepreneurship and Innovation, Concepts, Contexts and Commercialization*, Elsevier Ltd. The definition poses a starting point for the discussion of entrepreneurship and entrepreneurs.
In addition to Cantillon, early economists such as Joseph Schumpeter (1934) wrote about entrepreneurship and its impact on economic development e.g. see: Kuratko D. F., 2009. *Introduction to Entrepreneurship*. Canada, Southwestern Cengage Learning. Schumpeter related entrepreneurship with innovation provided a different point of view of entrepreneurs, seeing them as individuals whose function is to carry out 'new combinations'; i.e., introducing new products, see: Kuratko D. F., Hodgetts R. M., 2004. *Entrepreneurship: Theory, Process, Practice*, Thomson South-Western, United Kingdom. This definition and identification of entrepreneurship with innovation widely accepted later by most researchers e.g. see: Kreiser P., Marino L. M., Weaver K. M., 2002. *"Assessing*

the Psychometric Properties of the Entrepreneurial Orientation Scale: A Multi-Country Analysis." Entrepreneurship Theory and Practice Vol.26 Iss:4 pp.71-94.
Since then, the effort to describe and define entrepreneurship has continued e.g. see: Mintzberg H., 1973. *"Strategy-Making in Three Modes."* California. Management Review, Vol.16 Iss:2, pp.44-53, which extends Schumpeter's view by implying that the role of the entrepreneur deals with innovation, uncertainty, and brokerage. The study suggests that the entrepreneur integrates capital with marketing opportunities to form 'new combinations', such as introducing new products (goods and services) or a new quality of products, opening new markets or carrying out a new position in the industry. Further, Timmons (1997) defines entrepreneurship as "a way of thinking, reasoning, and acting that is opportunity driven, holistic in approach, and leadership balanced", e.g. see: Timmons J., 1997. *Opportunity recognition*. In: Bygrave W. editor. Portable MBA in Entrepreneurship. 2nd ed. New York: John Wiley & Sons, Inc.
Attention is also given to the "organization" e.g. see: Ireland D.R., Covin J.G., Kuratko D.F. 2009. *"Conceptualizing corporate entrepreneurship strategy"*, Entrepreneurship Theory and Practice, Vol. 33 Iss:1, pp. 19-46, which define entrepreneurship as "the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization" (pp. 21). Table 3 outlines some of the main definitions of Entrepreneurship in the past decades. The concept of entrepreneurship in the thesis has mainly been structured based on the Schumpeter and Timmons definitions.

Table 3: Definitions of Entrepreneurship

Author	Year	Definition of Entrepreneurship
Cantillon	18th century	Entrepreneurship is a process of a self-employment with an uncertain return
Schumpeter	1934	Entrepreneurship places an emphasis on innovation, such as: **new products**; **new production methods**;**new markets**; **new forms of organization**.
Drucker	1985	Entrepreneurship is an act of **innovation** that involves endowing existing resources with new wealth-producing capacity.
Stevenson	1985	Entrepreneurship is a process by which individuals pursue and exploit **opportunities** irrespective of the resources they currently control.
Gartner	1988	Entrepreneurship is the **creation of organizations**, the process by which new organizations come into existence.
Timmons	1997	Entrepreneurship is a **way of thinking, reasoning, and acting** that is opportunity driven, holistic in approach, and leadership balanced.
Venkataraman	1997	Entrepreneurship is about how, by whom, and with what **consequences** opportunities to bring future goods and services into existence are discovered, created and exploited.
Sarasvathy, Dew	2003	Entrepreneurship is an endogenous process of interactive human action striving to imagine and create a better world
Davidson	2005	Entrepreneurship consists of the competitive behaviors that drive the market process.
Ireland, Covin, Kuratko	2009	Entrepreneurship is the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization

Source: Own elaboration based on literature review

Entrepreneurship activities at an enterprise not only impact the process of economic growth and development, but also offer great job opportunities, provide a wide range of consumer goods and services and literally enhance national prosperity and competitiveness e.g. see: van Praag C. M. Versloot P. H., 2007. *"What is The Value of Entrepreneurship? A Review of Recent Research."* Small Business Economics Vol.29 Iss:4 pp. 351-382; Baumol, 2002; Baumol W.J., 2002. *The Free-market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton University Press, Princeton.

At an international level, a recent report by ILO focuses on entrepreneurship opportunities as a major source of job creation, growth and secures people's livelihoods, e.g. see: ILO, 2014, *Entrepreneurship and SME Management Training,* available online at: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_175474.pdf (accessed December 31, 2014), which states when formal labour markets do not offer enough jobs, people often turn to entrepreneurial activities for economic survival.

Given the numerous papers have been drawn to investigate entrepreneurship, it is deduced that entrepreneurship activities contribute not only to macroeconomic outcomes, but to firm performance e.g. see: Brown T., Davidsson E. P., Wiklund J., 2001. *"An Operationalization of Stevenson's Conceptualization of Entrepreneurship as Opportunity-Based Firm Behaviour."* Strategic Management Journal Vol.22 Iss:10 pp.953-968, which argues that entrepreneurship is relevant to firm performance, regardless of the firm's size, type or age.

Furthermore, some researchers have related entrepreneurship with opportunity, rather than emphasising risk-taking and innovation e.g. see: Stevenson H. H., Jarillo J. C., 1990. *"A Paradigm of Entrepreneurship: Entrepreneurial Management."* Strategic Management Journal Vol.11, pp.17-27, which defines entrepreneurship as "a process by which individuals – either on their own or inside organisations – pursue opportunities without regard to the resources they currently control". This fact is also highlighted by a number of studies e.g. see: Oviatt B. M., McDougall P. P., 2005. *"Defining International Entrepreneurship and Modelling the Speed of Internationalization."* Entrepreneurship Theory and Practice Vol.29 Iss:5, pp. 537-553, which highlighted the same two components associated with entrepreneurship; "opportunities" and "individuals who strive to take advantage of them"; Schaper M., Volery T., 2004. *Entrepreneurship and Small Business A Pacific Rim Perspective*, John Wiley & Sons Australia, Ltd, which denotes entrepreneurship as the process conducted by individuals to identify new entrepreneurial opportunities and convert them into marketable products or services. They described entrepreneurial opportunities as situations where the individual can introduce new products, services and processes and sell them at a higher price to cover their cost of production. Further, Lee S. M., Peterson S. J., 2000. *"Culture, Entrepreneurial Orientation, and Global Competitiveness."* Journal of World Business, Vol.35 Iss:4, pp.401-416, suggested that entrepreneurs start with an opportunity that is provided by the environment; and Shane S., Venkataraman S., 2000. *"The Promise of Entrepreneurship as a Field of Research."* Academy of Management. The Academy of Management Review Vol.25 Iss: 1, pp.217-226, which identifies entrepreneurship as "the study of sources of opportunities; the process of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them".

From an European perspective, entrepreneurship is considered as a mind-set that supports everyone in day-to-day life at home and in society, and provides a foundation for entrepreneurs establishing a social or commercial activity. Entrepreneurship is also a key competence for lifelong learning, as defined in the 2006 European Framework for Key Competences. (EU Commission, 2015. *Education & Training for Entrepreneurship,* available online at: http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/education-training-entrepreneurship/index_en.htm(accessed July 31, 2015). Further discussion on the European perspective is provided in the following section.

2.1.2. Entrepreneurship Training in SMEs

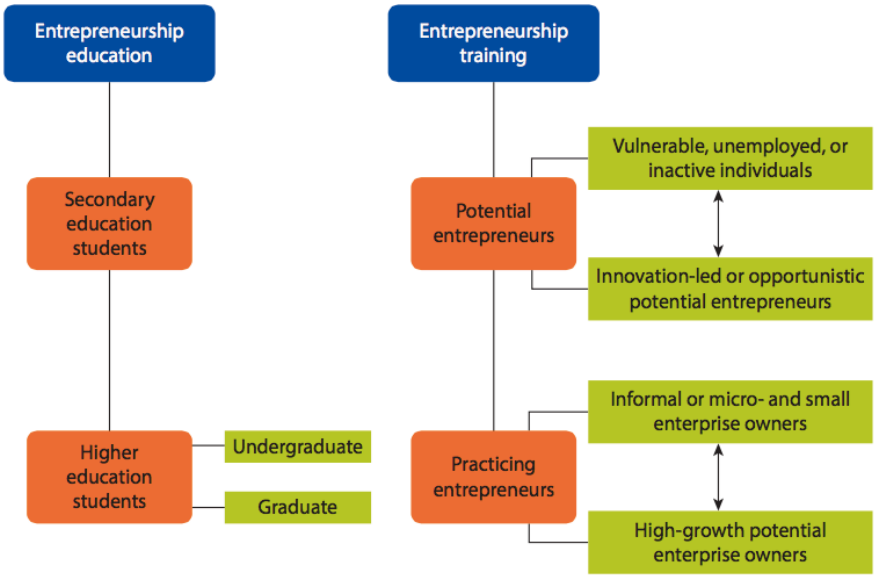
The increasing importance of flexibility, competitiveness, and reactivity of SMEs to constant change in the market have increased calls in the literature for corporate entrepreneurship (CE) or intrapreneurship e.g. see: Zahra S.A., Nielsen A.P., Bogner W.C., 1999. *"Corporate entrepreneurship, knowledge, and competent development"*, Entrepreneurship, Theory and Practice, Vol. 23 Iss: 3, pp. 169-89, which emphasises creating an entrepreneurial culture within businesses to increase the firms' innovative capacity. According to Apetreia A., Kureshib N.I., Horodnicc I.A., 2015. *When culture shapes international business*, Journal of Business Research, Vol. 68 Iss: 7, pp. 1519–1521, the element of culture shapes entrepreneurship in SMEs in both industrialized and emerging economies. A comprehensive overview of literature reveals that there is no general consensus on the necessity of firm-level training for entrepreneurship as some researchers argue that everyone within the dynamics of the contemporary economy could be an entrepreneur e.g. see: Casson, M., 2000. *Enterprise and Leadership*. Edward Elgar Publishing Ltd., Cheltenham, UK; while others argue that everybody should be exposed to entrepreneurship training and development e.g. see: Gibb, A., 2002. *In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge*. International Journal of Management Reviews Vol. 4 Iss: 3, pp.233–269.

Given the significance of entrepreneurship training it is worth distinguishing the two keywords of "Entrepreneurship Training" and "Entrepreneur Education". The distinction is extremely significant as a wide range of reports and research studies at the EU and international levels dealing with these terms. According to a World Bank report, entrepreneurship education (EE) programs have an academic nature targeting two groups in particular: secondary and higher education students, to focus on building knowledge and skills of entrepreneurship. By contrast, entrepreneurship training (ET) programs, tend to focus on building knowledge and skills, explicitly in preparation for starting or operating an enterprise targeting two groups in particular potential entrepreneurs (Vulnerable, unemployed or inactive individuals; Innovation-led or opportunistic potential entrepreneurs), practicing entrepreneurs (Informal or micro and small enterprise owners; High-growth potential enterprise owners) e.g. see: THE WORLD BANK, 2014. *Entrepreneurship Education and Training Programs around the World*, pp.3; Martin B. C., McNally J.J., Michael J. K., 2013. *Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes,* Journal of Business Venturing Vol. 28 Iss: 2013, pp.211–224.

Figure 1 portrays differences between the two terminologies. For better understanding see also: Volkmann C., Wilson K. E., Mariotti S., Rabuzzi D., Vyakarnam S., Sepulveda A., 2009. *Educating the Next Wave of Entrepreneurs: Unlocking Entrepreneurial Capabilities to Meet the Global Challenges of the 21st*

Century. Cologny, Switzerland: World Economic Forum; GEM (Global Entrepreneurship Monitor); Martinez A.C., 2010. *A Global Perspective on Entrepreneurship Education and Training*. Global Entrepreneurship Monitor Special Report. Babson Park.

Figure 1: Classifying Entrepreneurship Training and Education Programs



Source: The word Bank, 2014. *Entrepreneurship Education and Training Programs around the World*, available online at: https://openknowledge.worldbank.org/bitstream/handle/10986/18031/9781464802027.pdf?sequence=1 (accessed February 31, 2015).

Despite the classification by World Bank, the target audience for entrepreneurship training is not always enterprise owners, unemployed/ inactive or innovation-led individuals, but regular employees, e.g. see: OECD, 2014. *Supporting entrepreneurship in the vocational training system in Tunisia,* OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, available online at: http://www.etf.europa.eu/webatt.nsf/0/401B9D4C50EE9220C1257D7B004F24E6/$file/VET-entrepreneurship-Tunisia-Final-EN.pdf,(accessed January 21, 2015); Hytti U., Gorman C. O´, 2004. "*What is 'enterprise training'? An analysis of the objectives and methods of enterprise training programmes in four European countries*", Training + Training, Vol. 46 Iss:1, pp. 11–23. The latter study discusses the content of the entrepreneurship-training programme should reflect at least one of the following pedagogical objectives:

• Learn to understand entrepreneurship ("about" entrepreneurship): training "about" enterprise deals mostly with awareness creation and increasing theoretical understanding about entrepreneurship.

• Learn to become entrepreneurial ("in" entrepreneurship): training "in" enterprises deals mainly with management training for established entrepreneurs and employees.

• Learn to become an entrepreneur ("for" entrepreneurship): training "for" enterprise deals more with encouraging people to set-up and run their own business, e.g. see: Henry C., Hill F., Leitch D., 2005b. *"Entrepreneurship training and training: Can entrepreneurship be taught? Part I",* Training + Training, Vol.47 Iss:2, pp. 98–111.

Moreover, the objective of entrepreneurship training is not only development of knowledge and skills and change in firms culture but also may lead to a new business venturing (corporate venturing); Castrogiovanni G.J., Urbano D., Loras J., 2011.*"Linking corporate entrepreneurship and human resource management in SMEs",* International Journal of Manpower, Vol. 32 Iss: 1 pp. 34 – 47, available online at: http://dx.doi.org/10.1108/01437721111121215 (accessed February 31, 2015), innovativeness and strategic renewal in SMEs e.g. see: Guth W.D., Ginsberg A., 1990. *"Guest editors' introduction: corporate entrepreneurship",* Strategic Management Journal, Vol. 11 Iss: 4, pp. 5-15.

Given the distinction, the analysis approach to this thesis excludes studies focus only on entrepreneurship education at university and school levels and concentrates on the promotion of entrepreneurship training (ET) programs among employees and managers in SMEs.

It is worth noting, some studies use terms entrepreneurship education and entrepreneurship training interchangeably e.g. see: EUROPEAN COMMISSION, 2015. *Entrepreneurship Education: A Road to Success, A compilation of evidence on the impact of entrepreneurship education strategies and measures,* available online at: http://ec.europa.eu/DocsRoom/documents/8564/attachments/1/translations/en/renditions/native (accessed February 31, 2015); Premand P., Brodmann S., Almeida R., Grun R., Barouni M., 2012. "*Entrepreneurship Training and Self-employment among University Graduates: Evidence from a Randomized Trial in Tunisia."* Mimeo. World Bank, Washington, DC., available online at: http://ftp.iza.org/dp7079.pdf (accessed February 31, 2015). Or call the term as business training e.g. see: McKenzie D., Woodruff C., 2013. *What Are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World? The World Bank Research Observer*, available online at: http://wbro.oxfordjournals.org/content/early/2013/07/22/wbro.lkt007.full.pdf (accessed February 31, 2015); De Mel S., McKenzie D., Woodruff C., 2012. "*Business Training and Female Enterprise Start-up, Growth and Dynamics*." Policy Research Working Paper 6145, World Bank, Washington, DC.; Karlan D. S., Valdivia M., 2006. *Teaching entrepreneurship: Impact of business training on microfinance clients and institutions*, Center discussion paper, Economic Growth Center, No. 941, available online at: http://www.econstor.eu/bitstream/10419/39347/1/52491091X.pdf (accessed February 04, 2015).

At the European level, a recent report by the EU commission, clearly defines key terms in the area such as 'Entrepreneurial skills/attitudes/competences' and the main forms of entrepreneurship education (the report interchangeably uses terms

EE and ET) including those are developed by national/regional strategies (draft strategies or action plans); institutional changes (educational institutions prioritise content and methods) and courses and classes (Schools and universities introduce entrepreneurship education) e.g. see: EUROPEAN COMMISSION, 2015. *Entrepreneurship Education: A Road to Success, A compilation of evidence on the impact of entrepreneurship education strategies and measures,* available online at:http://ec.europa.eu/DocsRoom/documents/8564/attachments/1/translations/en/renditions/native (accessed February 31, 2015). It is interesting to mention that the emergence of the literature on entrepreneurship training in the EU backs to 2006 in spite of several works on entrepreneurship education since 2002 when the EU commission uncovered the first report on the best procedure project on "education and training for entrepreneurship", which basically aimed to promote the teaching of entrepreneurship in the education systems at all levels, from primary school to university, e.g. see: EUROPEAN COMMISSION, 2002. *Best Procedure project on "Education and training for entrepreneurship" - Final Report of the Expert Group,* available online at: http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/education_final_en.pdf (accessed July 04, 2015). The project pursued for four more years and then as a result of the criticism and a number of suggestions from the member states on linking the entrepreneurship education with SMEs, consequently in 2006, the EU commission for the first time put the link between entrepreneurship education and SMEs in the limelight, and implicitly developed entrepreneurship training e.g. see: EUROPEAN COMMISSION, 2006. Implementing the Community Lisbon Programme: Fostering entrepreneurial mind-sets through education and learning (2006), available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0033:FIN:EN:PDF (accessed July 04, 2015). The latter stresses the importance of promoting a more entrepreneurial culture and of creating a supportive environment for SMEs, denoting if Europe wants to successfully maintain its social model, it needs more economic growth, more new firms, more entrepreneurs willing to embark in innovative ventures, and more high-growth SMEs. Subsequently, in 2008, the European parliament by passing the Small Business ACT (SBA) enforced the support of entrepreneurship training in SMEs among the member states, e.g. see: European Parliament, 2008. *Small Business Act (SBA),* available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0394:FIN:EN:PDF (accessed December 31, 2014), which aims to improve the overall approach to entrepreneurship, and to promote SMEs' growth and performance by helping them to tackle the remaining problems, which hamper their development. The act includes 10 principles, the principle 8 mentions, "*promote the upgrading of skills in SMEs and all forms of innovation*". The 10 principles include: "I. Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded; II. Ensure that honest entrepreneurs who have faced bankruptcy quickly get a second chance; III. Design rules according to the "Think

Small First" principle; IV. Make public administrations responsive to SMEs' needs; V. Adapt public policy tools to SME needs: facilitate SMEs' participation in public procurement and better use State Aid possibilities for SMEs; VI. Facilitate SMEs' access to finance and develop a legal and business environment supportive to timely payments in commercial transactions; VII. Help SMEs to benefit more from the opportunities offered by the Single Market; VIII. Promote the upgrading of skills in SMEs and all forms of innovation; IX. Enable SMEs to turn environmental challenges into opportunities; X. Encourage and support SMEs to benefit from the growth of markets". This act inspired the launch of a priority action plan for SMEs called "The Marshall Plan 2.Green", e.g. see: WALLOON GOVERNMENT, 2009. *Marshall Plan 2.Green,* available online at: http://www.wallonie.be/sites/wallonie/files/actualites/fichiers/texte_integral_en_pm2v.pdf (accessed December 31, 2014), which aims at six priority areas: "The human capital; Create competitiveness clusters; Use scientific research to pave the way for the future; Set up a framework conducive to the creation of activities and quality jobs; The Employment-Environment Alliance; Combining employment and social well-being". The plan encourages SMEs for business creation through promoting entrepreneurship among their workforce, suggesting the establishment of performance indicators, and measurements for better results and impact of the plan on firm level performance.

Reviewing the previous literature also denotes the significance of the Oslo agenda e.g. see: EUROPEAN COMMISSION, 2006. *'Oslo Agenda for Entrepreneurship Education in Europe,* available online at:http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/doc/oslo_agenda_final_en.pdf (accessed December 31, 2014), which highlights the six main dimensions of successful initiatives in promoting entrepreneurial mind-sets in EU namely: Framework for policy development for entrepreneurship education; Support to Educational Establishments; Support to Teachers and Educators; Entrepreneurship activities in Schools and in Higher Education; Building links and opening education to the outside world; Communication activities (rising awareness, celebrating good practices, developing awards). The agenda is particularly interesting as it distinguishes the area of the application of each policy for the first time in seven main categories including: EU as a whole; Member states; Educational authorities; regional and local authorities; schools and universities; intermediary organizations and for businesses, entrepreneurs. Following that, the report by EUROPEAN COMMISSION, 2009. *Entrepreneurship in Vocational Education and Training Final report of the Expert Group,* available online at: http://ec.europa.eu/enterprise/policies/sme/files/smes/vocational/entr_voca_en.pdf (accessed December 31, 2014), builting on the Commission Communication *Fostering entrepreneurial mindsets through education and learning*, adopted in February 2006, entrepreneurship training should not be confused with general business or economic studies, as its goal is to promote creativity, innovation and self-employment. The report highlights a number of case studies for

entrepreneurship training for instance in Italy, the report mentions that entrepreneurship training is not included in the established national curriculum for vocational education, despite the fact that workforce-training programmes have been reformed since 1990s to address the low exposure to vocational training activities of SME employees. For instance, Law 53/2000 in Italy plays an important role by giving individual workers the right to participate in continuous training through the institution of a specific right to leave. In addition, Law 236/1993 finances in-company training, training of trainers, system actions, sectoral and territorial training plans promoted by the social partners and training on the request of individual workers who apply to regional authorities, e.g. see: OECD, 2014. *Italy: Key Issues and Policies*, OECD Studies on SMEs and Entrepreneurship, pp.138. Further details about the legislations in Italy are provided in chapter 3.

In Germany instead, although initial steps for entrepreneurship training have been taken, future modernisation of CVET should systematically include entrepreneurship, which is not yet included in all recognised VET courses and programmes still contain too little about business start-ups and entrepreneurship e.g. see: EUROPEAN COMMISSION, 2009. *Entrepreneurship in Vocational Education and Training Final report of the Expert Group,* available online at: http://ec.europa.eu/enterprise/policies/sme/files/smes/vocational/entr_voca_en.pdf (accessed December 31, 2014).

Looking ahead, EUROPEAN COMMISSION, 2012. *Report on the results of public consultation on The Entrepreneurship 2020 Action Plan,* available online at: http://ec.europa.eu/enterprise/policies/sme/files/entrepreneurship-2020/final-report-pub-cons-entr2020-ap_en.pdf (accessed December 31, 2014), collects input from stakeholders to take better future actions at EU, national and regional levels to promote entrepreneurship training. The report particularly focuses on promoting the spirit of entrepreneurship through recognizing the significant role of ICT as a mean to support new businesses and SMEs to thrive and growth for national economies. The study results conclude 10 measures to promote entrepreneurship training across Europe namely: "Reducing the number of administrative procedures, simplifying them and avoiding duplication of tasks; Make tax environment more favourable to early stage financing; Entrepreneurial behaviour, skills and mind-sets to be embedded in national/regional curricula at all levels – primary, secondary, vocational, higher education and non-formal education and training, alongside integration of work-based teaching and learning in all disciplines and curricula; Raising awareness of government administrations and their staff about entrepreneurial and SME challenges; Adequate child/dependent care facilities available; Reinforce loan guarantee and venture capital facilities; Offer support for new businesses to innovate; Speed up and simplification of licensing and other permit procedures; All young people to have one entrepreneurial experience before leaving secondary school (either as a formal part of the curricula or as an extra-curricular activity that is overseen by the school

or a non-formal education body); Targeted training, finance, internationalisation support programmes for high growth potential SMEs."

Building on the measures, EUROPEAN COMMISSION, 2013. *Entrepreneurship 2020 Action Plan, Reigniting the entrepreneurial spirit in Europe,* available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF, (accessed December 31, 2014), develops an action plan for decisive joint action to unleash Europe's entrepreneurial potential, to remove existing obstacles and to revolutionise the culture of entrepreneurship in Europe. The plan proposes three areas for immediate intervention: "Entrepreneurial education and training to support growth and business creation; Strengthening framework conditions for entrepreneurs by removing existing structural barriers and supporting them in crucial phases of the business lifecycle; Dynamising the culture of entrepreneurship in Europe: nurturing the new generation of entrepreneurs". The action plan concludes, a radical change of the European culture towards new notions about entrepreneurship is needed and entrepreneurs should be recognized as creators of jobs and prosperity. In addition, bringing about an entrepreneurial revolution is a joint task of the Commission and the Member States.

At an international level, much of the literature on entrepreneurship training has focused on outcomes demonstrating contribution of entrepreneurship training to SMEs performance, economic development and to the creation of better jobs, e.g. see: ILO, 2014, *Entrepreneurship and SME Management Training*, pp.4; THE WORLD BANK, 2014. *Entrepreneurship Education and Training Programs around the World*, pp.18; THE WORLD BANK, 2014. *Entrepreneurship Education and Training: Insights from Ghana, Kenya, and Mozambique* (World Bank Studies), available online at: https://openknowledge.worldbank.org/bitstream/handle/10986/18776/886570PUB0978100Box385230B00PUBLIC0.pdf?sequence=1 (accessed December 31, 2014), which highlights the significance of entrepreneurship training for potential and practicing entrepreneurs.

In addition to the above-mentioned reports, a series of papers have shed some light on organizations' willingness to develop entrepreneurship training, presuppose that the lack of training for entrepreneurs is the main reason for the failure of small and medium-sized enterprises, e.g. see: Bechard J.P., Toulouse J.M., 1998. *Validation of a didactic model for the analysis of training objectives in entrepreneurship,* Journal of Business Venturing, Vol. 13 Iss: 4, pp. 317–332; McKenzie D., Woodruff C., 2013. *What Are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World? The World Bank Research Observer*, available online at: http://wbro.oxfordjournals.org/content/early/2013/07/22/wbro.lkt007.full.pdf (accessed February 31, 2015), which the latter identifies entrepreneurship training as a mean to improve the performance of enterprises in terms of drawing sales and productivity improvements.

The role of management training on entrepreneurial development paths of SMEs is another significant area which was suggested by Evangelistaa P., Morvilloa A., 1998, *The role of training in developing entrepreneurship: the case of shipping in*

Italy, Maritime Policy & Management: The flagship journal of international shipping and port research, Vol. 25 Iss: 1, pp. 81-96, undertaken in Italian shipping enterprises aiming at increasing the level of entrepreneurial culture by means of selective, diversified interventions in management training so as to develop the factors required by the firm to recover competitiveness.
Investigation into entrepreneurship training in the literature also targeted analysing the course content, training methods, and profiles of trainers and trainees of SME e.g. see: Ladzani W. M., Van Vuuren J. J., 2002. *Entrepreneurship Training for Emerging SMEs in South Africa*, Journal of Small Business Management, Vol. 40 Iss:2, pp. 153–160, which discusses the analysing targets in SME service providers in the Northern Province, South Africa, emphasizing the importance of a comprehensive entrepreneurship-training program for successful small business enterprises. By the same token, Glaub and Frese (2011) suggest that different training content may influence different facets of business success e.g. see: Glaub, M., Frese, M., 2011. "*A Critical Review of the Effects of Entrepreneurship Training in Developing Countries*." Enterprise Development and Microfinance Vol. 22 Iss:4, pp. 335–53; Harper M., Finnegan G., 1998. *Value for money? Impact of small enterprise development*, Intermediate Technology Publications, London, which the former identifies entrepreneurship training an effective means of promoting entrepreneurship. The study evaluated 10 different entrepreneurship-training programs in developing countries namely AMT – Achievement Motivation Training Psychological training; EDP – Entrepreneurship Development Program; SYB – Start Your Business; GYB – Generate Your Business Idea; CEFE - Competency-based Economies through Formation of Enterprise; EMPRETEC - Emprendedores Technologia; Personal Initiative Training Psychological training; WEP – Women Entrepreneurship Programme; CEPE - Création d'Entreprises et Développement de la Petite Entreprise; TechnoServe Business Plan Competition.
Having said that, the following section looks more in detail the link of entrepreneurship training and SMEs performance.

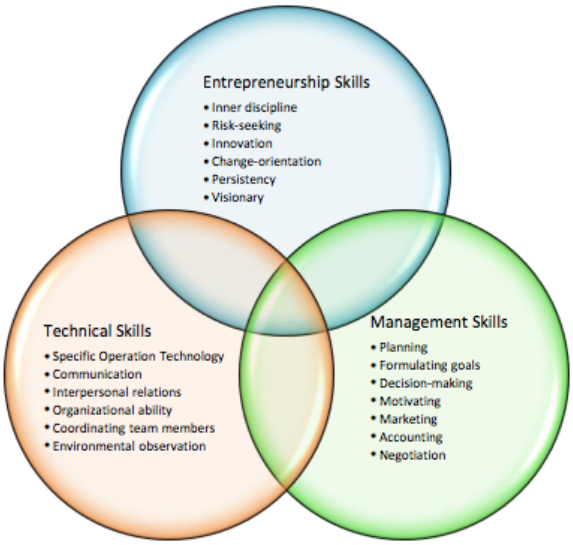
2.2. Required Skills for Entrepreneurship

Required skills for entrepreneurship convey strategic contents, which are necessary for promoting entrepreneurial approaches e.g. see: Afolabi B., Macheke R., 2012. *An Analysis of Entrepreneurial and Business Skills and Training Needs in SMEs in the Plastic Manufacturing Industry in the Eastern Cape Province, South Africa,* International Review of Social Sciences and Humanities, Vol. 3 Iss: 2, pp. 236-247, available online at*:* http://irssh.com/yahoo_site_admin/assets/docs/24_IRSSH-352-V3N2.202201424.pdf (accessed January 02, 2014). A review on the literature of entrepreneurship demonstrates that "Areas of Training" is composed of three main sets of skills: "Entrepreneurial Skills", "Management Skills", "Technical Skills" e.g. see: OECD, 2012. *"Skills development for SMEs and Entrepreneurship" Summary Report*, pp. 6 ; Ladzani W.M., van Vuuren J.J., 2002. *Entrepreneurship Training for Emerging SMEs in South Africa*, Journal of Small Business Management, Vol.40 Iss: 2, pp. 153–160; and Hisrich R.D., Peters M.P., 1992. *Entrepreneurship: Starting, Developing, and Managing a New Enterprise* – Irwin,

Boston, MA.

Entrepreneurial skills refer to those skills, which are required for creating and running new business ventures or innovative projects in existing firms. The skills are conveyed by a person's behaviour and are linked to personal- and interpersonal capabilities e.g. see: Nieuwenhuizen C., 2008. *Entrepreneurial skills*, Juta, Cape Town. PMCid. The skills include risk assessment; visionary; self-discipline, inner control, autonomy; creativity and innovation e.g. see: OECD, 2012, Skills development for SMEs and Entrepreneurship, pp.6; Ladzani W.M., van Vuuren J.J., 2002. pp.156). Figure 2 presents more specific examples of entrepreneurship skills. Further, the models presented in Tables 4 and 5 more or less are similar to figure 2 in terms of classification, but the latter provides more details.

Figure 2: Entrepreneurship Skill-Sets



Source: OECD, 2012. *"Skills development for SMEs and Entrepreneurship"*, available online at: http://www.oecd.org/cfe/leed/WORKSHOP%20SUMMARY%20REPORT_SKILLS%20FOR%20SMEs%20and%20ENTREPRENEURSHIP.pdf (accessed January 21, 2015).

Management skills as the second area of entrepreneurship skills are related to the basic competencies needed by managers e.g. see: Albarran A., 2012. *Management of Electronic and Digital Media,* Wadsworth Publishing; 5th edition, pp.12.
Researchers identify four broad areas of skills needed in the management process: business planning (including management and leadership training); marketing and promotion; finance and accounting; human resources e.g. see: Table 6.
Technical or professional technical skills as the third area of entrepreneurship skills can be described as the specific subjects as well as the most basic cognitive skills to obtain and retain subjects, e.g. see: Difei Sh., 2006. *"The enablers and barriers of providing professional practical skills education to rural elementary school students in Zhejiang, China"*. Retrospective Theses and Dissertations, pp.1, available online at: http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4022&context=rtd (accessed January 21, 2015).

Table 4: Skills Required for Entrepreneurship

Technical Skills	Business Management Skills	Personal Entrepreneurial Skills
Written and oral communication	Planning and goal setting	Inner control/discipline
Monitoring environment	Decision making	Risk taking
Technical business management	Human Relations	Innovative
Technology	Marketing	Change orientated
Interpersonal	Finance	Persistent
Listening	Accounting	Visionary leader
Ability to organise	Management	Ability to manage change
Network building	Control	
Management style	Negotiation	
Coaching	Venture Launch	
Being a team player	Managing Growth	

Source: Hisrich R.D., Peters M.P., 1992. *Entrepreneurship: Starting, Developing, and Managing a New Enterprise* – Irwin, Boston, MA.

Table 5: Content of Entrepreneurship Training

Motivation	Entrepreneurial Skills	Business Skills
Need for achievement	Creativity	Management/Leadership
Ability to inspire	Innovation	Business plans
Expectations of the high achiever	Ability to take risks	Financial skills
Obstacles or blocks	Ability to identify opportunities	Marketing skills
Help	Ability to have a vision for growth	Operational skills
Reactions to success or failure	Interpret successful entrepreneurial role models	Human Resources skills

Source: Ladzani Entr*epreneurship Training for Emerging SMEs in South Africa,* Journal of Small Business Management, Vol.*40 Iss: 2, pp. 153–160*.

Some researchers refer to technical skills as technical knowledge or hard skills, which are "primarily cognitive in nature and are influenced by an individual's "intelligence Quotient" (IQ) e.g. see: Rainsbury E., Hodges D., Burchell N., Lay M., 2002. *Ranking workplace competencies: Student and graduate perceptions* [electronic version], Asia-pacific Journal of Cooperative Education, Vol.3 Iss:2, pp.8-18. Further, technical skills include information technology/ e-commerce; legal courses (IP, patents, etc.); language courses; communication/social skills development, e.g. see: Table 7 for further details.

Table 6: Areas of Management Training

Areas of Management Training	Literature
Human Resource	Botha M., 2006
	EUROPEAN COMMISSION, 2006
	Solomon G., 2004
Business Planning	
	Kuene T.R., 2008
	EUROPEAN COMMISSION, 2006
	Ladzani W.M., van Vuuren J.J., 2002
	OECD, 2002
	Gibb, A.A., 1996
Marketing	
	EUROPEAN COMMISSION, 2014
	EUROPEAN COMMISSION, 2006
	Botha M., 2006
	Strydom J.W., 2005
	Solomon G., 2004
	OECD, 2002
	Marx S., Van Rooyen D., Reynerder H., 1998
	Gibb, A.A., 1996
Finance	
	Strydom J.W., 2005
	Solomon G., 2004
	Marx S., Van Rooyen D., Reynerder H., 1998
	Gibb, A.A., 1996

Source: Own elaboration based on literature review

Table 7: Areas of Technical Training

Areas of Technical Skills	Literature
Information and Technology/ E-Commerce	
	Mellett S., O'Brien E. 2014
	FIWARE, 2014
	EUROPEAN COMMISSION, 2015, 2012, 2009, 2006
	OECD, 2010, 2002
	Hamburg I., Engert S., 2007
Legal courses (IP, patents, etc.)	
	Buckner E., Hindman D., Huelsman J., Bergman Z., 2014
	Hatten T., 2009
	Van Rensburg L., 2008
	Meggison L., Byrd M., Meggison W., 2006
	Marx S., Van Rooyen D., Reynerder H., 1998
	EUROPEAN COMMISSION, 2006
	Marx S., Van Rooyen D., Reynerder H., 1998
Language courses	
	Bel Habib I., 2011
	OECD, 2014, 2013, 2009
	European Commission, 2011, 2006
	The European Parliament and of the Council, 2004.
Communication/Social skills development	
	Ly T., Marginson S., Do H., Do Q., Le T., Nguyen N., Vu T., Pham T., Nguyen T., 2014.
	Brien E.O., Hamburg I., 2014
	EUROPEAN COMMISSION, 2014
	Kureková L., Haita C., Beblavý M., 2012
	Xerri, MJ., Brunetto Y., 2011
	Sendag S., Odabas H. F., 2009
	OECD, 2002

Source: Own elaboration based on literature review

2.3. Control Variables

Two control variables were included in the analysis of the second chapter of this thesis. The variables have been traditionally considered in the literature as moderators of training and performance namely firm's size e.g. see: Aragon M.I.B., Jimenez D.J., Valle R.S., 2014. pp. 167; Kotey B., Folker C., 2007. *'Employee training in SMEs: Effect of size and firm type – Family and nonfamily',* Journal of Small Business Management Vol.45 Iss:2, pp.214–238. and access to financial capital of the company e.g. see: Brav O., 2009. *"Access to capital, capital structure, and the funding of the firm"*, The Journal of Finance, Vol. 64 Iss: 1, pp. 263-308.

2.3.1 Organization Size

The organization size is considered a critical contingency in organisation theory and strategic management e.g. see: Lumpkin G.T., Dess G.G., 2001. *"Linking two dimensions of entrepreneurial orientation to firm performance: the moderating role of environment and industry life cycle",* Journal of Business Venturing, Vol. 16 No. 5, pp. 429-451. Organization size is measured with the number of employees e.g. see: Damanpour F., Evan W., 1984. *Organizational innovation and performance: the problem of organizational lag*. Administrative Science Quarterly, Vol.29, pp.392-409; Kimberly J.R., Evanisko M.J., 1981. *Organizational innovation: the influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations.* Academy of Management Journal Vol.24, pp.689-713.

2.3.2 Access to Financial Capital (AFC)

Access to financial recourses is a key issue for the development and growth of small and medium companies e.g. see: Theriou G., Chatzoudes D., 2015, pp.356. SMEs have different needs and face different challenges regarding their financing in comparison with large organisations. The latter have easier access to capital markets, something that the vast majority of small businesses have not. Moreover, the lack of equity capital makes SMEs to be more reliant on other sources of financing, with bank lending being the most significant one e.g. see: Brav O., 2009, pp.285; Faulkender M., Petersen M.A., 2006. *"Does the source of capital affect capital structure?"*, The Review of Financial Studies, Vol. 19 Iss: 1, pp. 45-79. Further, it is not the ownership of the financial resources, but the access to it is significant, e.g. see: Wiklund J., Shepherd D., 2005, pp.81.
Finally, in an era of post-recession, access to capital is still of paramount importance. At the European level, e.g. see: European Commission, 2015. *"Access to finance for SMEs"*, available at: http://ec.europa.eu/growth/access-to-finance/index_en.htm (accessed 12 January 2015), which indicates access to

finance is one of the most pressing problems facing SMEs. In 2014 and 2013, EU SMEs on average rated access to finance as the fifth most pressing problem they faced; it is mentioned by 14% of the SMEs as the most pressing problem. Micro enterprises consider the problem of access to finance the most pressing, whereas large enterprises find it least pressing. More innovative enterprises experience more access to finance problems than less innovative enterprises, see e.g. European Commission, 2014. *Survey on the access to finance of enterprises (SAFE) Analytical Report 2014,* available at:http://ec.europa.eu/DocsRoom/documents/7504/attachments/1/translations/en/renditions/native (accessed 12 January 2015).

2.4. Methods of Entrepreneurship Training

There are multiple ways to develop entrepreneurship skill sets for today's workforce namely combining formal, informal and non-formal training (often in-house or external training programs) e.g. see: Misko J., 2008. *Combining formal non-formal and informal learning for workforce skill development,* NCVER, Australian Industry Group, available at: http://files.eric.ed.gov/fulltext/ED503360.pdf (accessed 14 January 2015), which identifies the main methods of content delivery at the firm-level. The formal sets of training deliver a body of general, technical, vocational, or professional skills leading to formal academic or industry qualifications, licences, or accreditations.

Table 8: Methods of Entrepreneurship Development (Formal Set of Training/ Off the Job)

Author	Year	Methods of ET	highlights
Fromal Training			
Zieba K., Zieba M.,	2014	Formal Training	**the importance of formal training** and skills in knowledge economy and the lack of resources and abilities to train employees in SMEs.
Pajo K., Coetzer A., Guenole N.,	2010	Formal Training	indirect relationships between involvement in formal training and employee attitudes towards turnover intentions
O'Regan N., Stainer L., Sims M.,	2010	Formal Training	impact of formal training on performance, profitability and increased productivity in SMEs
EUROPEAN COMMISSION,	2009	continuous training and lifelong learnin	continuous training and lifelong learning for workers and managerial staff are regarded as crucial elements of competitiveness and one the other side, continuous training and qualifications are less likely to be available to employees working in SMEs than to those in large companies.
ILO,	2008	formal and informal training	improve the links between formal training institutions and informal sector workers
Westhead P., Storey D.,	1996	Formal Training	importance of formal training on performance, profitability, growth and survival in SMEs
Off the Job Training			
Ronald L. J., Bu-Rahmah M.J.,	2012	Off-the-job Training	off-the-job focuses on background information rather than on specific job information.
ILO,	2012	Off-the-job Training	off-the-job education and training should be a part of regulated apprenticeship systems.
European Commission	2006	Off-the-job Training	identifies On-the-Job Trainings (OJT) as the dominant training form in the practice of SME sector, compare to Off-the-Job Trainings (Off-JT).
Wood S.,	2004	Off-the-job Training	definition
Smallbone D., North D.,	1996	Off-the-job Training	Training in SMEs occurs more informal and on-the-job than involving sending employees on off-the-job training courses

Source: Own elaboration based on literature review

Given that, off-the-job training is perceived to be formal as it is more theoretical and by the book, but less up to date in method and equipment, more explanatory, detached, less time pressured, broader in scope and more group oriented and paced in nature e.g. see: Smith E., 2002. *Theory and practice: the contribution of off-the-job training to the development of apprentices and trainees*, Journal of Vocational Education & Training, Vol.54 Iss:3, pp.431-456, DOI: 10.1080/13636820200200208. For further details see Table 8.

Then, there are informal sets of training which are not formally structured and generally, on its own, do not lead to a formal qualification. It is generally acquired on-the-job through speaking with, listening to, or observing more knowledgeable or skilled individuals (including artists, musicians, actors) either at work or in the community e.g. see: Misko 2008, pp.13 and Table 9 for further details.

Further, formal/informal set of training, there are two more dimensions of "methods of training" namely "in-house orientation", "external orientation" e.g. see: Mehra A., Langer N., Bapna R., Gopal R.D., 2014, pp.759 (In-house training); Kitching J., Blackburn R., 2002, pp.20 (External training).

Table 9: Methods of Entrepreneurship Development (Informal Set of Training/ On-the-Job)

Author	Year	Methods of ET	highlights
Informal Set of Training			
CEDEFOP,	2014	informal set of training	definition
Van der Klink M., Boon J., Schlusmans K.,	2012	informal set of training	informal learning as an important phenomenon in the contemporary era of lifelong learning
Kock H., Ellström P.E.,	2011	(in)formal set of training	distinction between formal and integrated (informal) training
ezai G., Mohamed Z., Shamsudin M.N.,	2011	informal set of training	promoting informal agri-entrepreneurial training
Nübler I., Hofmann C., Greiner C.,	2009	(in)formal set of training	combining elements of formal education and training with informal training
Van der Klink M., Boon J., Van der Heijden B.,	2009	(in)formal set of training	informal learning activities, like networking, contributes significantly to the employability, while the impact of formal training appeared to be rather insignificant
Werquin P.,	2007	informal set of training	definition
Kotey B, Folker C,	2007	informal set of training	informal training is more consistent with the typical short-term strategic orientation of the SMEs
On the Job Training			
Konings J., Vanormelingen S.,	2015	on the job training	
Eurofound	2013	on the job training (italy)	
Sciulli D.,	2013	on the job training (Italy)	on the job training and flexibility
World Bank	2012	on the job training	imperfections in labour and capital markets, coordination and poor individual employee decision making as the main reasons training interventions including on the job training fail
OECD,	2012	on the job training	importance of on-the-job training provided by SMEs which is often not formally recognised.
Afolabi B., Macheke R.,	2012	on the job training	entrepreneurial skills can be acquired through learning on the job or training
Cooper C. L., Burke R. J.,	2011	on the job training	on the job training as the most common form of entrepreneurship training
Lyons P., Mattare M.,	2011	on the job training	correlation between workplace training and employee satisfaction and lower turnover and human performance as the main implications of OJT
OECD,	2010	on the job training	SMEs focus on the niche market and have unique required skills which make on-the-job training becomes an essential training approach for them.
Konings J., Vanormelingen S.,	2010	on the job training	impact of on-the-job training on firm performance namely productivity and wages.
Smallbone D., Welte F.,	2009	on the job training	Russian firms assess on-the-job training, as the most important source of job-related skills
EUROPEAN COMMISSION,	2009	on the job training	development of on-the-job training through several tools that can be facilitated by internal resources
Makó C., Szirmai P., Illéssy M.,	2006	on the job training	three different forms of on the job training namely "**learning by doing**", "**learning by interacting**", "**learning by using**
Harvie C., Lee B.C.,	2002	on the job training	the role of OJT in SMEs as a great contributor to the alleviation of skilled worker shortages, reduce unemployment and skills update as well as promoting entrepreneurship environment.

Source: Own elaboration based on literature review

In-house training involves bringing in a trainer to a location of choice, in order to deliver a customised training programme to the whole team, e.g. see: Roberts C., 2015. *The benefits of in-house training,* Veterinary Nursing Journal, Vol.30 Iss:3, pp.86-88, DOI: 10.1080/17415349.2015.1009724.

According to Richardson (2004) for all workers, non-formal training (that is, in-house training or its equivalent) is the most common form of training after informal on-the-job training e.g. see: Richardson S., 2004, *Employers' contribution to training*, NCVER, Adelaide.

This is also supported by Mawer & Jackson (2005) who found that the majority of small-to-medium sized companies in their study were involved in substantial amounts of unaccredited, structured and semi-structured workshops and seminars, e.g. see: Mawer, G & Jackson, E 2005, Training of existing workers: Issues, incentives and models, NCVER, Adelaide and Table 10.

External training describes the situation that the employer lacked the skills and knowledge to provide the training in-house; hence those resources had to be sought externally, e.g. see: Kitching J., Blackburn R., 2002, pp.27. An overview of the entrepreneurship literature on external training underlines that fact that it often employed to solve a long-term problem however there are also some exceptions, (see: pp.27).

Furthermore, common reasons for pursuing external training include the provision of continuous professional development for professional workers and training to meet some external standard usually backed up by legislation, e.g. see: David Storey,Paul Westhead 1994,pp.3; Kitching J., Blackburn R., 2002, pp.27. For further details see Table 11.

Table 10: Methods of Entrepreneurship Development (In-house training)

Author	Year	Methods of ET	highlights
In-house Training			
Department of Education, Training and Employment, Queensland,	2014	In-house training	three options of in-house training namely: **Option 1:** a registered training organisation delivering a customised course. This type of training can be a combination of on-the-job and/or classroom delivery. The assessment of the quality of the training rests with the registered training organisation. **Option 2:** in house staff provide some or all of the training in house, but the final assessments, issue of qualifications and the quality of the training are conducted by a registered training organisation. **Option 3:** in-house staff conduct most training and assessment in house, with the support and assistance of a registered training organisation.
Mehra A., Langer N., Bapna R., Gopal R.D.,	2014	In-house training	the performance implications of in-house training namely about worker productivity, labour turnover business performance, profits, growth and survival in the market
Jones P., Pickernell D., Beynon M., Packham G.,	2013	In-house training	**in-house training** as the most effective methods of **formal** training
Jones P., Pickernell D., Beynon M., Packham G.,	2013	In-house training	impact of in-house training on worker productivity. In addition, "Somebody within the workplace providing on the job training", "Learning by doing/in-house training by staff", "by a private training provider outside of the workplace" and the business profitability outcome.
Dewhurst H., Dewhurst P., Livesey R.,	2007	In-house training	postulate productivity, quality, labour turnover and financial advantages as the outcome of in-house training in SMEs
Aragon-Sanchez A., Barba-Aragon I., Sanz-Valle R.,	2003	In-house training	
Kitching J., Blackburn R.,	2002	in-house and external training	strong employer preference and default position' for workforce training is in-house training.
Hill R., Stewart J.,	2000	In-house training	**in-house training** as the most effective methods of **informal** training
Westhead P., Storey D.,	1996	In-house training	in-house training in SMEs as a mean to benefit small firm performance profits, growth or survival in the market as implications of,

Source: Own elaboration based on literature review

Table 11: Methods of Entrepreneurship Development (External training)

Author	Year	Methods of ET	highlights
External Training			
Cotterill R.,	2004	External training	external training courses as a good option, for obtaining qualifications that need to be considered by SMEs managers
Kitching J., Blackburn R.,	2002	External training	*importance of external training for owner-managers. *employers prefer externally provided training namely because 'Lack of in-house skills', 'only/best option' 'possibility of free or subsidised training' as the most commonly reported reasons either for owner-managers or employees.
OECD,	2002	External training	confirms the relationship between firm size and the provision of external training
OECD	2013	External training	SMEs in most OECD countries do not use external training centres for their workforce development

Source: Own elaboration based on literature review

2.5. Entrepreneurship and SMEs Performance

Entrepreneurship is an important element of high-performed SMEs e.g. see: Knight G.A., 2001. *"Entrepreneurship and strategy in the international SME"*, Journal of International Management, Vol. 7 Iss:3, pp. 155-171. The study by Wiklund J., Patzelt H., Shepherd D.A., 2009. *"Building an integrative model of small business growth",* Small Business Economics, Vol. 32 Iss: 4, pp. 351-374, discusses that the economic growth is the result of firms penetration in new markets creating new jobs for employees. Furthermore, entrepreneurship leads to its possible usefulness to renew established businesses and to increase their capability to compete in their selected markets e.g. see: Zahra S.A., 1996. *"Governance, ownership, and corporate entrepreneurship: the moderating impact of industry technological opportunities",* Academy of Management Journal, Vol. 39 Iss: 6, pp. 1713-1735. As a result, firms gain access to different abilities, skills and resources e.g. see: Zahra S.A. and Garvis D.M. 2000. *"International corporate entrepreneurship and firm Evidence from performance: The moderating effect of international environment hostility"*, Journal of Business Venturing, Vol. 15 Iss: 5-6, pp. 469-492.

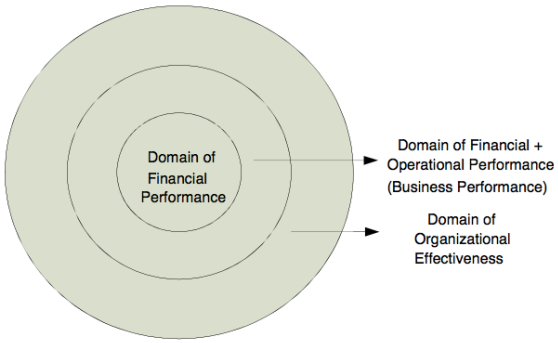
Having said that, an important element of entrepreneurship development is "Areas of Training" e.g. see: Prokopenko J., Pavlin I., 1991. *Entrepreneurship Development in Public Enterprises*, International Labour Organization, pp.169, which is used to refer to the required skills that firm needs to promote entrepreneurial activities. According to Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research Vol. 36 Iss: 1, pp.15-23, companies that have a strong background on training provision for their employees may achieve high financial performance. Research, also, suggests that entrepreneurial determinants can affect the success of the firm's entrepreneurial activities e.g. see: OECD, 2009. *Measuring Entrepreneurship A Collection of Indicators* 2009 Edition, OECD-Eurostat Entrepreneurship Indicators Programme, pp.10, available online at*:* http://www.insme.org/files/3862 (accessed January 29, 2015), In particular, size of the enterprise seems to moderate the relation between the content (Areas of Training) and firm performance e.g. see: Nikandrou I., Apospori E., Panayotopoulou L., Stavrou E.T., Papalexandris N., 2008. *Training and firm performance in Europe: the impact of national and organizational characteristics,* The International Journal of Human Resource Management, Vol. 19 Iss: 11, pp. 2057–2078; Storey D., Westhead P., 1994, pp.4-5. An important variable is also considered the availability and easy access to financial capital (AFC) e.g. see: Theriou G., Chatzoudes D., 2015. *Exploring the entrepreneurship-performance*

relationship: evidence from Greek SMEs, Journal of Small Business and Enterprise Development, Vol. 22 Iss: 2, pp. 352 - 375, available online at: http://dx.doi.org/10.1108/JSBED-03-2013-0024 (accessed February 04, 2015). According to Rao V., Joshi H. G., 2010. *Entrepreneurship Training in the Apparel and Fashion Design Sector through Distance Mode: A Strategy for Facing the Challenge of Growing Unemployment in India,* International Journal of Educational Research and Technology, Vol. 1 Iss:2, pp.99 – 108, the relationship between "Areas of Training" and firm performance is moderated by the AFC. Moreover, although "Areas of Training" is a widely used element in entrepreneurship research, it is insufficient in explaining the improvement of firm performance as delivery methods have the greatest impact on the final performance and the outcome of the training e.g. see: Walker E., Redmond J., Webster B., Le Clus M., 2007. *Small business owners: too busy to train?* Journal of Small Business and Enterprise Development, Vol.14 Iss: 2, pp.294-306. Therefore, "Methods of Training", which illustrates the techniques, organisational procedures and ways which companies deliver training is also considered an important variable in the entrepreneurship-performance link e.g. see: Walker E., Redmond J., Webster B., Le Clus M., 2007, pp.7.

2.5.1. SMEs Performance Measurement

The overview of the SMEs performance literature also underlines the various SMEs-performance measurements that have been applied in the entrepreneurship literature. The majority of these studies did not provide any justification for the selection of measures used see e.g. Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research Vol. 36 Iss: 1, pp.15-23, which mentions while precise measurement is crucial to understanding SMEs performance, there has been no agreement among entrepreneurship scholars on the assignment of an appropriate set of measurements.
In another research study, Venkatraman N., Ramanujam V., 1986. *"Measurement of Business Performance in Strategy Research: A Comparison of Approaches."* Academy of Management. The Academy of Management Review Vol. 11 Iss: 4, pp.801, suggest a classification scheme that explains the domain of business performance. The study considers business performance as a subset of the overall concept of organisational effectiveness, arguing that comprehensive business performance covers not only financial performance but also operational performance. The latter includes indicators related to technological efficiency such as market share, product quality and marketing effectiveness (Figure 3).

Figure 3: The Domain of Business Performance



Source: Venkatraman N., Ramanujam V., 1986. *"Measurement of Business Performance in Strategy Research: A Comparison of Approaches."* Academy of Management. The Academy of Management Review Vol. 11 Iss: 4, pp.801.

Moreover, figure 3 illustrates financial performance as the core of the organisational-effectiveness domain. Even though financial measurement is necessary to measure SMEs performance, it is not sufficient to assess total business performance e.g. see: Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research, Vol. 36 Iss 1, pp.15-23. Therefore, to capture different aspects of SMEs performance, multiple measures, i.e., financial and non-financial, should be employed see e.g. Wiklund J., Shepherd D., 2005. *"Entrepreneurial Orientation and Small Business Performance: a Configurational Approach."* Journal of Business Venturing, Vol. 20 Iss: 1, pp. 71-91; Knight G., 2000. *"Entrepreneurship and Marketing Strategy: The SME Under Globalization."* Journal of International Marketing, Vol.8 Iss: 2, pp.12-32.

The entrepreneurship literature has applied financial measurement only to assess business performance, e.g. see: Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research Vol. 36 Iss: 1, pp.15-23, which reviews fifty-one published entrepreneurship studies from 1987-1993, identifying three dimensions of financial performance that were frequently employed: efficiency, growth and profit.

Efficiency includes return on investment (ROI), return on equity (ROE), return on assets (ROA), return on net worth and gross revenue per employee. Growth comprises change in sales, employees and market share. Profit consists of return on sales, profit margin and pre-tax profit. It is worth mentioning that both studies by Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research Vol. 36 Iss: 1, pp.15-23, and Venkatraman N., Ramanujam V., 1986. *"Measurement of Business Performance in Strategy Research: A Comparison of Approaches."* Academy of Management, The Academy of Management Review Vol. 11 Iss: 4, pp.801, differ on how to classify financial-measurement dimensions such as ROI, ROE, and ROA. The former categorise these dimensions as an efficiency measurement, while the latter classify them as profit. Several entrepreneurship studies supported Venkatraman and Ramanujam's (1986) concept of business performance by using both financial and operational measurements to develop a comprehensive assessment of SMEs performance e.g. see: Stam W., Elfring T., 2008. *Entrepreneurial orientation and new venture performance: The moderating role of intra-and extra industry social capital,* Academy of Management Journal, Vol. 51 Iss: 1, pp.97–111, available online at:

http://www.bm.ust.hk/mgmt/staff/papers/Wouter/Stam%20%26%20Elfring%20(2008)%20EO%20and%20social%20capital.pdf (accessed January 21, 2015), which measures financial performance as well as technological performance namely in terms of speed in products and services development, quality of product and services. In another study Knight G., 2000. *"Entrepreneurship and Marketing Strategy: The SME Under Globalization."* Journal of International Marketing, Vol.8 Iss: 2, pp.12-32, employed market share as well as other financial instruments to examine the performance of 268 SMEs in Canada.
According to Dess G. G., Robinson R. B., 1984. *Measuring organizational performance in the absence of objective measures: The case of the privately held firm and con-glomerate business unit*, Strategic Management Journal, Vol. 5: pp. 265–273, SMEs performance can be assessed objectively as well as subjectively. Subjective measures are particularly useful for assessing the broader, nonfinancial dimensions of performance, generally more accessible than objective indicators, and have been shown to exhibit strong reliability and validity. Objective measures, on the other hand, are less prone to common method bias and are especially helpful in assessing a financial performance e.g. see: Stam W., Elfring T., 2008. *Entrepreneurial orientation and new venture performance: The moderating role of intra-and extra industry social capital,* Academy of Management Journal, Vol. 51 Iss: 1, pp.97–111, available online at:http://www.bm.ust.hk/mgmt/staff/papers/Wouter/Stam%20%26%20Elfring%20(2008)%20EO%20and%20social%20capital.pdf (accessed January 21, 2015). A potential drawback for objective indicators is that they are often difficult to obtain e.g. see: Lyon D. W., Lumpkin G. T., Dess G. G., 2000. *"Enhancing Entrepreneurial Orientation Research: Operationalizing and Measuring a Key Strategic Decision Making Process."* Journal of Management Vol.26 Iss: 5, pp.1055-1085, which mentions there are at least two possible reasons for this difficulty. First, SMEs commonly do not have accounting records for their business. Second, even if they do, respondents may be reluctant to provide them to the researcher, as financial details are a sensitive matter to disclose such information, e.g. see: Dess G. G., Lumpkin G. T., Covin J. G., 1997. *"Entrepreneurial Strategy Making and Firm Performance: Tests of Contingency and Configurational Models."* Strategic Management Journal Vol.18 Iss: 9, pp.677-695; Chandler G. N., Hanks S. H., 1993. *Measuring the performance of emerging businesses: A validation study.* Journal of Business Venturing, Vol. 8, pp.391–408. The former supports the use of subjective measures as previous research implied that subjective measures of performance are generally consistent with objective measures. In a similar note, Runyan R., Droge C., Swinney J., 2008. *"Entrepreneurial Orientation versus Small Business Orientation: What Are Their Relationships to Firm Performance?"* Journal of Small Business Management Vol.46 Iss: 4, pp.567-588, highlights the advantage of subjective over objective measurements, mentioning in subjective or self-report measurements, more respondents are expected to answer the questions, especially for financial indicators, than in objective measurements. Furthermore, according to Lyon D. W., Lumpkin G. T., Dess G. G., 2000. *"Enhancing Entrepreneurial*

Orientation Research: Operationalizing and Measuring a Key Strategic Decision Making Process." Journal of Management Vol.26 Iss: 5, pp.1055-1085, "research using single-respondent self-report can be an appropriate and necessary means of operationalising key constructs when carefully performed".

It is worth to mention that subjective measurement is conducted by comparing a firm's current performance with its previous performance e.g. see: Becherer R. C., Maurer J. G., 1997. "*The Moderating Effect of Environmental Variables on the Entrepreneurial and Marketing Orientation of Entrepreneur-led Firms.*" Entrepreneurship: Theory and Practice Vol.22 Iss:1, pp.47-58, or with competitors' e.g. see: Wang C. L., 2008. "*Entrepreneurial Orientation, Learning Orientation, and Firm Performance*." Entrepreneurship: Theory & Practice Vol.32 Iss: 4, pp.635-657; Madsen E. L., 2007. "*The Significance of Sustained Entrepreneurial Orientation on Performance of Firms – a Longitudinal Analysis*." Entrepreneurship and Regional Development 19(March), pp. 185 – 204.

Other entrepreneurship studies have measured a firm's outcomes by contrasting them not only with prior performance but also with competitors' e.g. see: Wiklund J., Shepherd D., 2005. *"Entrepreneurial Orientation and Small Business Performance: a Configurational Approach."* Journal of Business Venturing, Vol. 20 Iss: 1, pp. 71-91; Knight G., 2000. *"Entrepreneurship and Marketing Strategy: The SME Under Globalization."* Journal of International Marketing, Vol.8 Iss: 2, pp.12-32.

A more comprehensive comparison is conducted by Runyan R., Droge C., Swinney J., 2008. *"Entrepreneurial Orientation versus Small Business Orientation: What Are Their Relationships to Firm Performance?"* Journal of Small Business Management Vol.46 Iss: 4, pp.567-588, who assessed the performance of 267 small businesses in various industries in the US, using: (1) comparison with their previous performance; (2) comparison with their major competitor; and (3) comparison with similar firms in the industry. This performance comparison approach is encouraged by Smart D. T., Conant J. S., 1994. *"Entrepreneurial Orientation, Distinctive Marketing Competencies and Organizational Performance."* Journal of Applied Business Research Vol.10 Iss: 3, pp.28-38, as it provides significant information in evaluating the extent to which firms have achieved their objectives.

In previous entrepreneurship studies, growth has also commonly been used as a proxy for SMEs performance, as it is considered more accurate and relatively easier to obtain than accounting measures of financial performance e.g. see: Wiklund J., Shepherd D., 2005. *"Entrepreneurial Orientation and Small Business Performance: a Configurational Approach."* Journal of Business Venturing, Vol. 20 Iss: 1, pp. 71-91. Furthermore, growth is a crucial indicator not only for business survival, but also for policy-makers, as business growth indicates the availability of more job opportunities e.g. see: Watson J., 2007. *"Modelling the Relationship Between Networking and Firm Performance."* Journal of Business Venturing Vol. 22 Iss: 6, pp.852-874.

At the global level, a recent report by OECD has evaluated various dimensions influencing growth in small firms, measuring SMEs performance, e.g. see: OECD, 2012. *"Skills development for SMEs and Entrepreneurship"* Summary Report, pp.5, which highlights the criteria (see: figure 4), emphasising the need to

take into account the multidimensional nature of SMEs performance related to entrepreneurial activity or process e.g. also: Lumpkin G. T., Dess G. G., 1996. *"Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance."* Academy of Management. The Academy of Management Review Vol.21 Iss:1, pp.135-172.

The latter infers that using one performance dimension may lead to favourable outcomes; conversely, using different dimensions may result in unfavourable outcomes. Therefore the authors suggest that in measuring SMEs performance, researchers should consider the nature and characteristic of the business. If the measurements that are commonly applied are not suitable for the nature and characteristics of the object of study, specific performance measurements must be developed.

Figure 4: Factors influencing growth in small firms

ENTREPRENEUR	FIRM	STRATEGY
Motivation	Age	Workforce Training
Unemployment	Sector	Management Training
Education	Legal form	External equity
Management experience	Location	Technology
Number of founders	Size	Market positioning
Prior self-employment	Ownership	Market adjustments
Family history		Planning
Social marginality		New products
Functional skills		Management recruitment
Training		State support
Age		Customer concentration
Prior business failure		Competition
Prior sector experience		Information and advice
Prior firm size experience		Exporting
Gender		

Source: OECD, 2012. *"Skills development for SMEs and Entrepreneurship" Summary Report*, Local Economic and Employment Development (LEED), OECD Publishing, available online at: http://www.oecd.org/cfe/leed/WORKSHOP%20SUMMARY%20REPORT_SKILLS%20FOR%20SMEs%20and%20ENTREPRENEURSHIP.pdf (accessed January 21, 2015)

It is worth to note employing entrepreneurship training in SMEs not only impacts the firm performance but also has some other consequences, which will be discussed, in the following sections.

The latter infers that using one performance dimension may lead to favourable outcomes; conversely, using different dimensions may result in unfavourable outcomes. Therefore the authors suggest that in measuring SMEs performance, researchers should consider the nature and characteristic of the business. If the measurements that are commonly applied are not suitable for the nature and characteristics of the object of study, specific performance measurements must be developed.

It is worth to note promoting training in SMEs not only impacts the firm performance but also has some other consequences, which will be discussed, in the following sections.

2.6. Other Impacts of Entrepreneurship Training

2.6.1. Increased Firm Productivity

In many countries SMEs play important roles in outputs, exports, and employment. Therefore, governments have used various policy instruments to promote productivity of SMEs namely through training of workers. There are a number of reports, which offer insights into the relationship between effective workplace training activities in SMEs and desired firm-level outcomes like productivity, quality, sales and profits e.g. see: Murphy G. B., Trailer J. W., Hill R. C., 1996. "*Measuring Performance in Entrepreneurship Research."* Journal of Business Research Vol. 36 Iss: 1, pp.15-23; Douglas Watt and Kurtis Kitagawa, 2009. *Workplace Learning in Small and Medium-sized Enterprises: Effective Practices for Improving Productivity and Competitiveness,* The Conference Board of Canada*,* available online at: http://www.ccl-cca.ca/pdfs/OtherReports/CBofC-WorkplaceLearning-SME-OverviewReport.pdf (accessed February 04, 2015). The latter study envisages the direct link between workplace learning and training with performance management activities and productivity. The paper concludes if the workplace learning and training activities back the business issues it can guarantee the productivity.

In another study in Korea, the evolution of an innovative training program and its effects on productivity and firm performance in Korean SMEs is discussed e.g. see: Lee K.W., 2009. *Productivity Increases in SMEs: With Special Emphasis on In-Service Training of Workers in Korea,* SP discussion paper, No. 0917, available online at: http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Labor-Market-DP/0917.pdf (accessed February 04, 2015), which explains how the Government of Korea tested a pilot in-service training project, encouraged SMEs to organize themselves into training consortiums (TCs), and provided them with institutional and technical assistance by financing employment of training specialists who manages human resources development of TC-member SMEs.

In Italy e.g. see: Hall B. H., Lotti F., Mairesse J., 2009. *Innovation and productivity in SMEs: empirical evidence for Italy,* Small Business Economics, Vol. 33 Iss: 1, pp. 13-33, which highlights the link between innovation success and productivity measures. The study investigates the data on Italian SMEs from the "Survey on Manufacturing Firms" conducted by Mediocredito-Capitalia covering the period 1995–2003, identifying that international competition and R&D intensity, along with investment in equipment, enhances the likelihood of having both process and product innovation. The report concludes these kinds of innovation have a positive impact on firm's productivity and performance, especially process innovation while among SMEs, larger and older firms seems to be less productive.

In Germany, e.g. see: Zwick T., 2005. *Continuing Vocational Training Forms and Establishment Productivity in Germany*, German Economic Review, Vol. 6, Iss: 2, pp.155-184, available online at: DOI: 10.1111/j.1465-6485.2005.00125.x

(accessed January 21, 2015), which looks at the establishment productivity through different continuing vocational training forms in Germany. The study uses the IAB panel data, and concludes formal external courses have the largest and formal internal courses and quality circles have a smaller positive impact on productivity. The results also unveil that the self-induced learning, participation at seminars and talks and job rotation do not enhance productivity while training on the job has a negative productivity impact. The case of Germany also is discussed in the study of Grund C., Martin J., 2012. *Determinants of further training – evidence for Germany,* The International Journal of Human Resource Management, Vol. 23 Iss: 17, pp. 3536-3558, available online at*:* http://ftp.iza.org/dp5315.pdf or DOI:10.1080/09585192.2011.654347 (accessed February 13, 2015), which mentions that the productivity depends on individual characteristics like schooling or age, but also on the individual motivation of the employee. It argues that employees on higher levels are on average higher motivated and more productive and firm benefits especially from the increased individual productivity, if the trained employee works many hours.

From a global context, a recent report by OECD discusses "Growth potential" SMEs focuses on productivity enhancing skills via competence-building skill sets of business planning, management and also on technical skills e.g. see: OECD, 2013. *Skills Development and Training in SMEs*, pp.17, which discusses that the low levels of training participation by staff within SMEs impact the employees' productivity and firm performance. See also: ILO, 2008. *Conclusions on skills for improved productivity, employment growth and development*, ILO Cataloguing in Publication Data, Geneva, available online at: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_103457.pdf (accessed February 13, 2015), which debates that training and skills development by itself neither lead to improved productivity nor better performance. The report continues other critical factors including employment and productivity policies to influence the demand side of the labour market; respect for workers' rights; gender equality, health and safety standards; good labour relations and social dialogue; and effective social protection should be put in place. Consequently the report states everyone has a role to play.

The usual criticism of most studies which review productivity is that they do not usually take into account individuals' and firms' characteristics that likely also affect productivity and are strongly correlated with training (e.g. workers ability) e.g. see: Almeida R., Cho Y., 2012. *Employer-Provided Training: Patterns and Incentives for Building Skills for Higher Productivity,* Book Chapter: The Right Skills for the Job? pp. 105 - 132, Washington, DC: World Bank publishing, available online at: http://dx.doi.org/10.1596/9780821387146_ch04 (accessed February 13, 2015), which discusses the positive correlation between the incidence of job training at the worker or firm level higher productivity. The study argues at the worker level, wage returns to workers may be as high as 20 percent per training episode. Whereas at the firm level, the incidence of job training is

linked to higher firm productivity, a more schooled workforce, and more frequent technology adoption.

2.6.2. Increased Innovation

There are numerous studies consider the impacts of entrepreneurship training and skill policies on innovation e.g. see: Jones B., Grimshaw D., 2012. *The Effects of Policies for Training and Skills on Improving Innovation Capabilities in Firms*, Nesta Working Paper No. 12/08, available online at: www.nesta.org.uk/wp12-08 (accessed February 13, 2015), which offers a relevant conceptual background for understanding inter-linkages between components of skills systems and innovation. The study argues training and skills policies are usually part of a wider policy effort that seeks to improve economic growth and employment participation rather than being specifically designed and implemented with the goal of strengthening innovation capabilities at the firm or sector levels. The research concludes although the linkages between skills and innovation can be identified in principle, the mechanisms through which they interact in the real world economy remain somewhat opaque.

The report points out that companies with lower budget of training are better to invest on 'generic' or 'adaptable' skills which are less costly compare to advanced skills as the low-risk response to the formulation of policy for innovation.

This fact is also highlighted by the study of De Saá-Péreza P., Díaz-Díazb N.L., Ballesteros-Rodrígueza J.L., 2012. *The role of training to innovate in SMEs,* Vol.14 Iss: 2, pp. 218-230, Innovation: Management, Policy & Practice, available online at: DOI:10.5172/impp.2012.14.2.218 (accessed February 13, 2015), which investigates the role of training to improve the knowledge required to innovate in SMEs. In particular, the research integrates the theoretical approaches of HRM and knowledge management to focus on how training can be critical to articulate the organizational knowledge assets necessary to innovate. The study concludes training per se has a negative effect on the innovative capacity of SMEs and only if interacts with the knowledge assets of the firm it becomes positive and highly significant.

In another study, Jones B., Grimshaw D., 2012. *The Effects of Policies for Training and Skills on Improving Innovation Capabilities in Firms*, Nesta Working Paper No. 12/08, available online at: https://www.nesta.org.uk/sites/default/files/the_effects_of_policies_for_training_and_skills_on_improving_innovation_capabilities_in_firms.pdf (accessed February 03, 2015), examine the impacts of training policy on innovation. The study considers the investment on scientific/technical skills and knowledge at both intermediate and high levels as a risky investment, and given the fast-changing technologies, arguing firms should produce and develop highly trained individuals who have a mix of general problem-solving abilities and scientific/technical skills, combined with some experience of the challenges of business and project management. This mixture of general and scientific/technical skills is supported by a number of studies e.g. see: McAdam R., Keogh W., 2004. *Transitioning*

Towards Creativity and Innovation Measurement in SMEs, Creativity and Innovation Management, Vol.13 Iss: 2, pp. 126–139, available online at: DOI: 10.1111/j.0963-1690.2004.00300.x; Macdonald S., Anderson P., Assimakopoulos D., 2008. *Education and Training for Innovation in SMEs: A Tale of Exploitation*, ch. 13 in , European Universities in Transition, Edward Elgar, http://EconPapers.repec.org/RePEc:elg:eechap:13021_13, which mention the transition dynamics towards creativity and innovation in SMEs is not only the result of training but includes a complex mix of cause and effect rationale, incremental change and radical change, concluding managers must facilitate an eclectic approach to creativity and innovation measures.

At the European level, the European Commission funds education and training for SMEs in the depressed regions of the EU, arguing that education and training will produce the desired innovation, e.g. see: Macdonald S., Assimakopoulos D., Anderson P., 2007. *Education and Training for Innovation in SMEs, A Tale of Exploitation*, International Small Business Journal, Vol. 25 Iss:1 pp.77-95, available online at: doi: 10.1177/0266242607071782. The report discusses the effectiveness of the funding provision in the UK in 2000 and concludes that the universities providing education and training services benefited from the scheme, rather than the participating SMEs.

Despite that, a number of studies suggest that firms pursue continuous innovation strategies experienced more employment growth, higher profitability, and better sales dynamics than those that adopted occasional innovation approach. In addition, market growth of continuous innovating firms realized faster pace than other type of firms e.g. see: Lal K., Dunnewijk T., 2008. *Entrepreneurship and Innovation Strategies in ICT SMEs in Enlarged Europe (EU25)*, UNU-MERIT Working Paper Series, No. 2008-016, United Nations University-MERIT, Maastricht. The study concludes that European innovation policies should focus towards continuous innovation activities with due attention at human resource development policies.

Attention is also given to variables have the highest impact on the degree of novelty of innovation of established SMEs namely variables related to learning by doing, learning by training and learning by interacting, e.g. see: Amara N., Landry R., Becheikh N., Ouimet M., 2008. *Learning and novelty of innovation in established manufacturing SMEs,* Technovation, Vol. 28 Iss: 7, pp. 450–463, available online at: http://dx.doi.org/10.1016/j.technovation.2008.02.001 (accessed February 13, 2015), which contributes to advance knowledge on the degree of novelty of innovation in manufacturing SMEs. The results confirm that various types of learning impact on the presence (or absence) of innovation as well as on the degree of novelty of innovation in SMEs. The study also provides some practical implications for owners and managers of established SMEs and for policy makers.

2.6.3. Increased Competitiveness

Various papers highlight the role of training in firm's competitiveness e.g. see: Sum V., 2011. *Integrating training in business strategies means greater impact of training on the firm's competitiveness,* Research in Business and Economics Journal, pp.1-19, available online at:

http://www.aabri.com/manuscripts/11771.pdf (accessed February 15, 2015), which uses the resource-based view of the firm as the theoretical background. The study investigates whether the integration of training in the firm's business strategies increases the impact of training on the firm's competitiveness. A regression analysis of the data obtained from a survey of training professionals employed in small, medium, and large firms across three different industries reveals a statistically significant positive relationship. Attention is also drawn to factors affect training usefulness and competitiveness e.g. see: Diamantidis A.D., Chatzoglou P.D., 2012. *Evaluation of formal training programmes in Greek organisations*, European Journal of Training and Development, Vol. 36 Iss: 9, pp.888 – 910, available online at: DOI: http://dx.doi.org/10.1108/03090591211280955 (accessed February 15, 2015), which mainly develop a new model to explore the relationships between a trainer's performance, training components, outcomes of the learning process and training usefulness, employing the structural equation modelling approach by using data from Greek SMEs employees who have participated in different training programmes. By the same token, Kong E., Chadee D., Raman R., 2013. *Managing Indian IT professionals for global competitiveness: the role of human resource practices in developing knowledge and learning capabilities for innovation,* Knowledge Management Research & Practice Vol. 11, pp. 334–345, available online at: doi:10.1057/kmrp.2012.21 or http://www.palgrave-journals.com/kmrp/journal/v11/n4/full/kmrp201221a.html (accessed February 15, 2015), which deals with how human resource practices namely training contribute towards the competitiveness of people based-knowledge intensive organisations in developing countries. The study results suggest that the human resource practices and the development of knowledge and learning capabilities are the main drivers of innovation and competitiveness.

At the international level e.g. see: Froy F., Giguère S., Meghnagi M., 2012. *Skills for Competitiveness: A Synthesis Report*, OECD Local Economic and Employment Development (LEED) Working Papers, OECD Publishing, available online at: http://dx.doi.org/10.1787/5k98xwskmvr6-en or http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=285 (accessed February 15, 2015), which discusses the importance of local skills strategies for competitiveness of SMEs, through highlighting sub-regional variation in the supply and demand for skills. The study classifies the local economies into four categories of low, high, shortage and surplus skills, which is useful to policy makers in identifying the 'bigger picture' regarding the balance of skills demand and supply at local level.

In Italy, e.g. see: Destefanis S., 2012. *"Skills for Competitiveness: Country Report for Italy"*, OECD Local Economic and Employment Development (LEED) Working Papers, 2012/04, OECD Publishing, available online at: http://dx.doi.org/10.1787/5k9bb1vhzmr2-en (accessed February 15, 2015), which provides a useful guidance to local administrators in the development of policies directed at raising the level of workforce skills and increasing competitiveness.

The policies include focusing on demand of skills instead of only supply by supporting innovation and R&D using public finances; responding to firms' needs regarding skills demand and supply in a more efficient way and avoiding skill mismatch; more supply of vocational training.

APPENDIX

Questionnaire

This survey is part of a PhD project being undertaken In Italy and Germany in collaboration with [country agency] The project looks at Entrepreneurship Training (ET) development in Small and Medium-sized Enterprises (SMEs). Your assistance in completing the survey will therefore be very valuable for identifying those factors related to the development of ET promoting competitiveness, innovation and performance in SMEs.

This survey should be completed by someone in your business responsible for Human Resources and/or training. If this is not you please forward it to the appropriate person. The survey consists of 15 mostly multiple-choice questions and will take approximately 20 minutes to complete.

The survey is divided into four sections: – the first section asks for some details about your business and employees. Section two asks about your business's development of Entrepreneurship Training activities. Section three asks about outcomes of these activities on your business's performance. Section four refers to your business collaborative activities and barriers for entrepreneurship training development.

Your privacy is important to us. All information is kept confidential.

SECTION 1 – ABOUT YOUR BUSINESS and EMPLOYEES

Q.1. To what extent you would say you are responsible for human resource issues in your business, including training and skills development for staff? Is it...

○ All of your role ○ A major part of your role ○ A minor part of your role ○ Not relevant

Q.2. Are your products or services primarily sold/offered…

○ Locally / Regionally ○ Nationally ○ Internationally ○ Don't know

Q.3. How long has your business been in operation?

○ Less than 1 year ○ 1-4 years ○ 5-9 years ○ 10 years or more

Q.4. What is the main sector your business operates in?

☐ A – Agriculture and forestry ☐ B – Manufacturing ☐ C – Construction ☐ D - Wholesale and retail trade ☐ E - Hotels and restaurants ☐ F – Transport and storage ☐ G - Financial intermediation ☐ H - Real estate and renting ☐ I - Public administration ☐ J – Education ☐ K - Health and social work ☐ L - Other social and personal service activities ☐

Q.5. How many employees does your business have? (Approximately)

Number of employees now

○ 1-9 employees ○ 10-49 employees ○ 50 to 249 employees

Q.6. Majority of your staff are in which following age groups (approximately)?

○ Less than 24 years old ○ 24 to 49 years old ○ 50 to 64 years old ○ 65 years old and over

Q.7. Has your business made changes in the past 12 months in terms of introducing:

	Yes	No	Don't Know
A **new product/service** (or a substantially changed product/service)?			
A new way of producing an existing product/service (e.g. a **new operational process**)?			
Changes to the way your firm does things such as a new or substantially changed accounting system or human resource management system (e.g. a **new management process**)?			

Q.8. Training plans

	Yes	No	Not Applicable	Don't Know
Q.8.1. Does your business have formal training plans for employees				
Q.8.2. Does your business have an annual budget for training expenditure (e.g. formal/informal training; on/off the job; covering direct costs)?				

Q.9. Over the last 12 months, have the following increased, stayed about the same or decreased at this business?

	Decreased Significantly	Decreased Slightly	Stayed the Same	Increased Slightly	Increased Significantly
The proportion of employees provided with training					
Expenditure on training per employee					
The emphasis placed on informal learning instead of formal learning					
The emphasis placed on delivery by external providers instead of in-house providers					
The level of satisfaction concerning your firm's **Access to Financial Capital** (AFC)					
The average profits in relation to your major competitors					

SECTION 2 – YOUR FIRM'S INDUSTRY ENTREPRENEURSHIP TRAINING (ET) ACTIVITIES

Questions in this section refer to any entrepreneurship training activities namely leveraging "*Entrepreneurial Skills"*; "*Management Skills"* and "*Technical Skills"* in your business, even if has supported or provided only to one employee during the past 12 months. The section also asks about methods used to teach entrepreneurship training in your business.

Q.10. Did your business provide in the past 12 months, any of the following training activities to your employees? (Mark as many as apply)

	Never	Rarely	Sometimes (Specific need)	Regularly (Weekly/Monthly)	Almost Always
Management Skills					
Business planning (including management and leadership training)	○	○	○	○	○
Marketing and promotion	○	○	○	○	○
Accounting and finance	○	○	○	○	○
Human Resources	○	○	○	○	○
Technical Skills					
Information and Technology/ E-Commerce	○	○	○	○	○
Legal courses (IP, patents, etc.)	○	○	○	○	○
Language courses	○	○	○	○	○
Communication/Social skills development	○	○	○	○	○
Entrepreneurial Skills					
Inner control/Self-discipline/ Autonomy	○	○	○	○	○
Creativity/ Innovation	○	○	○	○	○
Risk Taking	○	○	○	○	○
Proactiveness/ Opportunity identification	○	○	○	○	○

Q.11. How the following methods of providing training are typically employed in your business?

Mark as many as apply. Note: To continue survey, please ensure you also answer the "Other" question.

	Never	Rarely	Sometimes	Regularly	Almost Always
Formal set of Training					
Off-the-job (training away from the individual's immediate work position)					
Informal set of Training					
On-the-Job (during working hours)					
In-House Training					
Within the firm					
External Training					
Outside the firm e.g. at an external training provider					

SECTION 3 – OUTCOMES OF YOUR FIRM'S INDUSTRY ENTREPRENEURSHIP TRAINING (ET) ACTIVITIES

This section explores the outcomes of training activities in the last 12 months (or more if any) and the impacts on your business performance.

Q.12.How has the following outcomes by promoting any of those ET activities in your business changed?

	Decreased Significantly	Decreased Slightly	Stayed the Same	Increased Slightly	Increased Significantly
Productivity	○	○	○	○	○
Innovation (new/improved products or services or new/improved management processes)	○	○	○	○	○
Competitiveness	○	○	○	○	○

Q.12.1. How has performance changed in your business as a result of using ET activities?

	Decreased Significantly	Decreased Slightly	Stayed the Same	Increased Slightly	Increased Significantly
Firm Performance					
Compared to previous years (since 2012), **sales** of our products in 2015 are now...	○	○	○	○	○
Compared to previous years (since 2012), our **revenue** in 2015 is now...	○	○	○	○	○
Compared to previous years (since 2012), **market share** of our products in 2015 in terms of Euro are now...	○	○	○	○	○
Compared to previous years (since 2012), our **net profit** in 2015 is now...	○	○	○	○	○
Compared to previous years (since 2012), the number of **full-time** employees in our firm in 2015 has changed to...	○	○	○	○	○
Compared to previous years (since 2012), the number of **part-time** employees in our firm in 2015 has changed to...	○	○	○	○	○
Compared to previous years (since 2012), our average **quality** of products and services in 2015 is now…	○	○	○	○	○
Compared to previous years (since 2012), our average late product **deliveries** in 2015 are now...	○	○	○	○	○
Compared to previous years (since 2012), the number of **complaints** about our products in 2015 is now...	○	○	○	○	○

SECTION 4 – MOTIVATION AND BARRIERS FOR ENTREPRENEURSHIP TRAINING AND SKILLS DEVELOPMENT

Q.13. Please indicate to what extend the following incentives can motivate your business to provide entrepreneurship training?

Reasons categories: Public Incentives/Government programs; Private Incentives (including facilitation/promotion/information of training); and In-house incentives

	Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential
Public Incentives/Government programs					
International (e.g. EU policies)	○	○	○	○	○
National (country specific government programs)	○	○	○	○	○
Regional (regional programs)	○	○	○	○	○
Local (council / local government programs)	○	○	○	○	○
Country regulations (e.g. training levies, training requirements)	○	○	○	○	○
Collective agreements (trade unions)	○	○	○	○	○
Industry sector association services/activities	○	○	○	○	○
Chambers of Commerce services/activities	○	○	○	○	○
Private Incentives					
Industry clusters services/activities	○	○	○	○	○
Business networks activities	○	○	○	○	○
Local networks activities	○	○	○	○	○
In-house incentives					
Production needs	○	○	○	○	○
Service requirements	○	○	○	○	○
New product / service development	○	○	○	○	○
Adjustments to financial constraints	○	○	○	○	○
Need to increase employee skills level	○	○	○	○	○

Q.14. Where there any training activities that you would have liked to have carried out but did not in the last 12 months?

[IF "NO", SKIP TO SECTION Q.14.1.]

Yes	No	Don't Know

Q.14.1. What were the reason(s) that you did not carry out this training? Please differentiate between medium-high and low skilled employees (mark as many as apply).

	For High-Medium Skilled	For Low Skilled	Don't Know
High costs/too expensive			
People recruited with skills needed (initial training sufficient)			
Lack of public financing			
Impossible to interrupt production/no time			
Difficult to assess enterprise needs			
Staff not willing to participate in training			
Training is too difficult to implement			
Risk of poaching after training			
Too difficult to identify suitable training providers			
Too difficult to access training (location; availability at a suitable time)			
Other barriers (please specify)			

Q.15. Please indicate how often does your business collaborate with each of the following organizations to promote ET activities?

	Never	Rarely	Sometimes	Regularly	Almost Always
Industry Training Organisations / Sector Skills Councils					
Universities/ Further education colleges					
Trade Unions					
Chambers of Commerce					

	Never	Rarely	Sometimes	Regularly	Almost Always
Industry Training Organisations / Sector Skills Councils					
Firms from value-chain (suppliers, clients)					
Government departments					
Private Consultants and paid advisors					
Private training providers					
Local councils					
Local community organisation					