

HUMAN CAPITAL INVESTMENT THROUGH CONTINUING VOCATIONAL TRAINING – ROMANIA 1999 – 2015 DATA

Dana ICHIM SOMOGYI

Doctoral School of Economic Sciences, Faculty of Economic Sciences, University of Oradea, emasomogyi@gmail.com

Abstract: *The purpose of this paper is to present the aspects of continuing vocational training (CVT) that companies provide for their employees as a human capital investment. Enterprises provide CVT to address the continuing structural changes in the labour market that require development and update of the technical skills, abilities, attitudes and capacities of the employers. EUROSTAT and Romania National Institute of Statistics data were analysed to observe for the Romanian labour market the global participation rate in CVT courses, the distribution of enterprises by the economic activities, the average CVT courses length of time, the CVT's participant employer's average cost, the type of courses and the skills targeted. The following results of the descriptive analysis were found of the latest data, the 2010 – 2015 time period : the CVT's courses global participation rate increased by 3.5 % in 2015 compared to 2010; by the distribution of economic activities of the enterprises, financial and insurance, electricity, gas, steam supply, and information and communication activities registered the highest CVT rates, where transportation, storage and accommodation and food service activities registered the lowest rate; information and communication, electricity, gas, steam supply and mining and quarrying activities per participant employee had the highest hourly CVT courses cost. The recommendation is to increase the participation rate in CVT courses, to qualify employees according to the needs of the enterprise to perform and adapt among the multiple and permanent changes in the global economy. Thus, the employee could be apt to embrace the change and be flexible on the labour market and the employer could be able to manage the new technologies requirement for the prosperity of the individual and of the company.*

Keywords: *continuing vocational training, human capital, transversal employment skills*

JEL Classification: O15, J24, I25

1. Introduction

Continuous Vocation Training offered by the employer can upskill the employee to be apt and efficient for the new demands due to the continuing and rapid changes in the economic activities and the utilisation of the new digital technologies. Update existing skills and form new required abilities to improve the employee's job performance, thus the work results are more productive. On the job performance, an increase efficiency of the employee is reached by sustained training, upgrading the abilities necessary for the specific work environments.

To achieve company's sustainability and welfare the resilience and adaptability of the individual has to be brought forth. By participating at job specific training, the individual can become apt, flexible and better prepared for new job tasks due to the digital transformation that has been reshaping the labour market.

2. Theoretical overview

The role of CVT courses

The economic modernization challenges employers to best use the potential of the employees and to invest in the development of specific job skills to increase productivity and manage the upcoming economic challenges. (Becker, 2019, Pischke, 2001)

Due to utilisation of the digital technologies the demand for qualified human capital is rising, companies invest in training programs for the employees to obtain the required skills, to apply the obtained abilities and to best respond the rapid changes and ambiguity of the present and future challenges. (Harris and Clayton, 2020, Weber 2020)

Becker underlines the importance of training for the individual to be able to secure the occupational opportunities and be prepared to thrive through the labour market structural changes by upgrading the job skills, improving qualifications. (Becker, 2019)

Continue Vocational Training translates into learning environments for the employees mostly paid by the employer targeted toward the development of the needed abilities for the specific working environment. Businesses' strategic planning for the vocational training should become a continuous process, followed by ongoing evaluation of the skills shortage. Human capital is the greatest asset of a company, thus the need to upgrade and upskill to become a competitive and business by maintain a sustainable productivity of the employee. (Acemoglu and Pischke, 1999, Zwick 2005, Weber 2020)

The participation in CVT improves the ability of the employee to counter the implications of the rapid international labour market dynamics and of the switch to a digital workplace. (Schömann and Becker 1995, Zwick 2005)

Maintaining the individual's employment status during economic recession is a benefit of the CVT, through the enhancement of the employment capacities for a smooth and fast recovery. Schömann enumerates the benefits of the CVT not only for the employee but also for the employer, as income growth, human capital's improvement and job security. (Schömann et al. 1997)

3. Research Methodology

This paper seeks to highlight the aspects of continuing vocational training (CVT) that Romanian companies provide for their employees. Statistical data were analysed for Romania, latest data was found for the time period 1999 – 2015. EUROSTAT and Romania National Institute of Statistics data were analysed to observe for the Romanian labour market the global participation rate in CVT courses, the distribution of enterprises by the economic activities, the average CVT

courses length of time, the CVT's participant employer's average cost, the type of courses and the skills targeted.

3.1 Characteristic of CVT in Romania

Companies organize continuing education courses with the purpose of improving the employees' skills to better fit the needs of the enterprise. CVT courses' purpose is provide training by the qualified personnel for a group of employees for a specific period of time. The CVT courses take part in a classroom style setting or inside a training centre. By the classification of the organizer, the company itself or another organization, there are two times of CVT courses, internal or external.

There are other forms of CVT, planned periods of time, focused on for the professional development of the personnel, like on-site practical training for the use of specific work equipment and tools. (INSSE, 2017)

The following figures visualize the particularities of CVT of the Romanian companies.

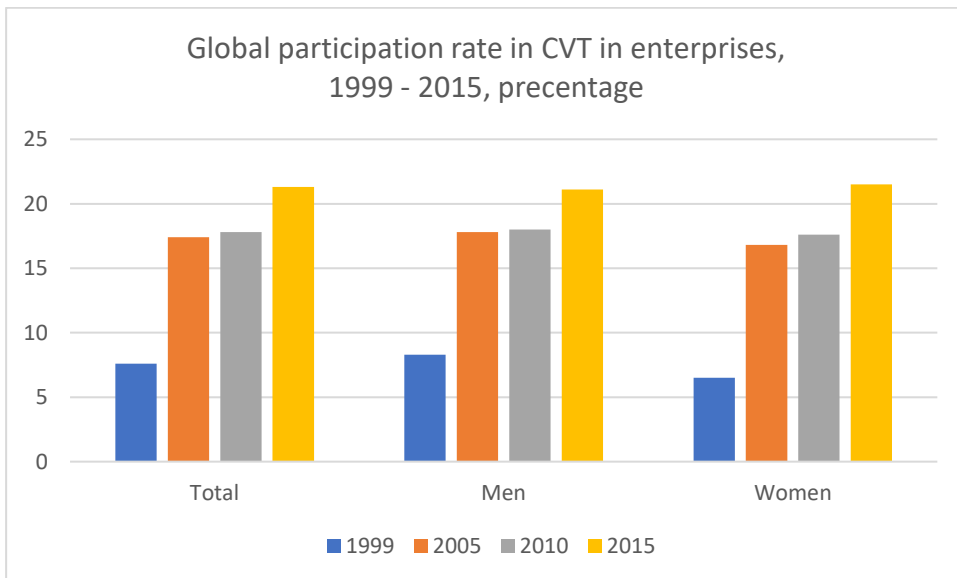


Figure 1: Global participation rate in CVT in enterprises, Romania, 1999 - 2015, percentage

Data source: INSSE, TEMPO online

A three-time boost can be observed in the date of the CVT participation rate, 7.6 % in 1999 to 21.3 % in 2015. Employers provide more training for the employee's skills upgrade to better react to the new economic challenges. Raising course also noticed for the employment rate, data for Romania for the same period of time, from 69.4 % in 1999 to 70.8 % in 2015.

Comparing statistical data for Romania and European Union, Romanian employees participate less into CVT courses. Romanian enterprises offer three times less training for their employees, but the gap considerable reduced by 2015, the percentage of persons employed in all enterprises was 23.0 % in 1999, 24.8 % in 2015. We can imply to believe that Romanian companies acknowledged the benefits of the CVT for the company's prosperity.

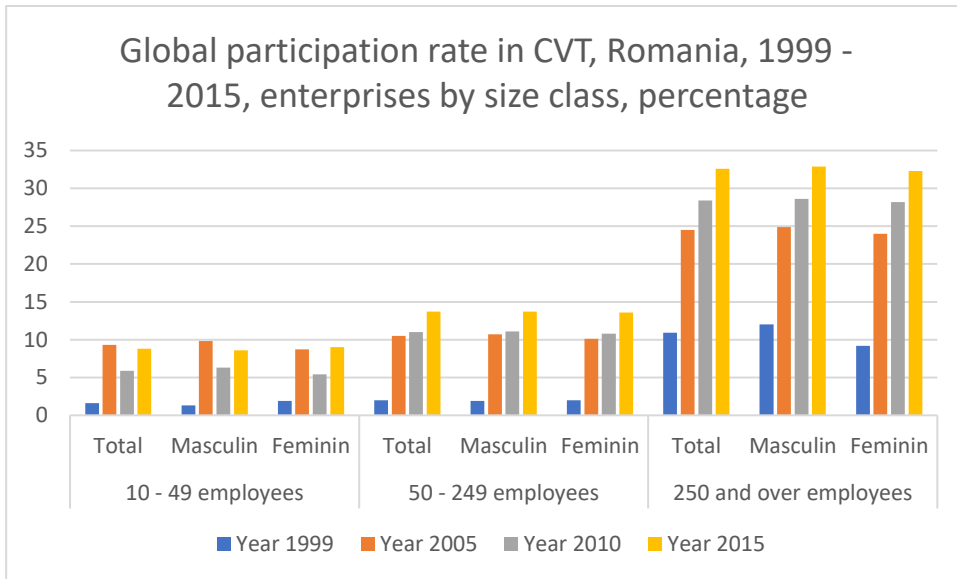


Figure 2: Global participation rate in CVT, Romania, 1999 - 2015, enterprises by size class, percentage

Data source: INSSE, TEMPO online

Considering the global participation rate in CVT, classification by men and women, a difference can be observed between the two records, the difference scaled down by 2015. The gap between men and women's participation to training is considerable reduced, in 2015 women's participation rate recorded a slight positive difference to men's participation, 21.5 % women's rate to 21.1 % men's CVT rate. (Figure 2)

As observed, large companies invested more into CVT courses to enhance the employee's performance, to upskills the employee, to raise the adaptation to the new technologies' requirements. Large companies usually provide more career development opportunities, therefore more training opportunities.

Classification by economic sectors, for the 1999 CVT rate was the highest for the employees of transport and storage sector, followed by real estate sector. Year 2005 brings a significant increase in participation in training financial, banking and insurance sector, as it grows quicker and requires continuous skills labour force.

Table 1: Participants in CVT courses by NACE Rev. 1.1 activity - % of persons employed in enterprises providing CVT courses, Romania

Year	1999	2005
Participants in CVT courses, NACE Rev. 1.1 activity	20.2	30.8
Industry - total	18.4	31.4
construction	13.9	23.1
Wholesale and retail trade and repair of motor vehicles	20.7	30.3
Hotels and restaurants	24.3	27.8
Transport and storage	32.7	*
Post and telecommunication	13.6	*
Transport, storage and communications	*	22.2
Financial, banking and insurance activities	16.8	63.7
Real estate transactions, rental and business services, collective, social and personal services	27.4	34.5
Other collective, social and personal services	*	24.4

Data source: EUROSTAT, data for Romania, * data not provided

The highest value of CVT rates were recorded by the financial intermediation and insurance economic sector, followed by real estate transactions and industry sector. The lowest global participation rates were registered among the construction, transport sector. These sectors provide more on-site practical training along side the use of specific tools and equipment rather than organized planned and specialized staff taught courses.

Table 2: Participants in CVT courses by NACE Rev. 2 activity - % of persons employed in enterprises providing CVT courses, Romania

Participants in CVT courses by NACE Rev. 2 activity - % of persons employed in enterprises providing CVT courses		
Participants in CVT courses, NACE Rev. 2 activity	2010	2015
Manufacture of coke oven products and crude oil products	92.2	69.3
FINANCIAL INTERMEDIARIES AND INSURANCE	64.2	67
Manufacture of basic pharmaceutical products and pharmaceutical preparations	70.6	60.1

Manufacture of computers and electronic and optical products	44.9	54.4
Manufacture of rubber and plastic products	62.7	54.1
Manufacture of beverages	61.8	51.3
Metallurgical industry	40	50.7
Manufacture of machinery, machinery and equipment n.c.a.	47.7	49.8
Manufacture of other non - metallic mineral products	50.6	49.3
Manufacture of road transport vehicles, trailers and semi-trailers	59.5	49.3
<i>Sectors recording the lowest CVT rate:</i>		
CONSTRUCTION	21.8	27.4
Manufacture of furniture	16.6	25.5
Woodworking, manufacture of wood and cork products, except furniture; manufacture of articles of straw and plaiting materials	29.2	22.7
Other industrial activities n.c.a.	25.5	20.2

Data source: EUROSTAT, data for Romania

By the distribution of economic activities of the enterprises, financial and insurance, electricity, gas, steam supply, and information and communication activities registered the highest CVT rates, where transportation, storage and accommodation and food service activities registered the lowest rate.

3.2 Specific characteristics for CVT courses for the period 2010 - 2015

Alongside the statistical data analyzation, specific data were found only for the years 2010 and or 2015. Data provided for Romania by EUROSTAT and INSSE.

Private training organizations and equipment supply companies were the most providers of the CVT courses, where union and professional trades providers were used the least. Companies tent to provide more external training than train its employees through internal courses. (INSSE)

Figure 3 shows, the largest the company is, the higher the costs are, as the highest the participation rate in CVT is. A large company constantly improves employee's productivity and adherence to quality standards to reach the targeted profit and secure the place in the market. By classification of economic sector, information and communication, due to rapid digital change and new technologies use, followed by the sector electricity, gas, steam supply and mining and quarrying activities per participant employee had the highest hourly CVT courses cost.

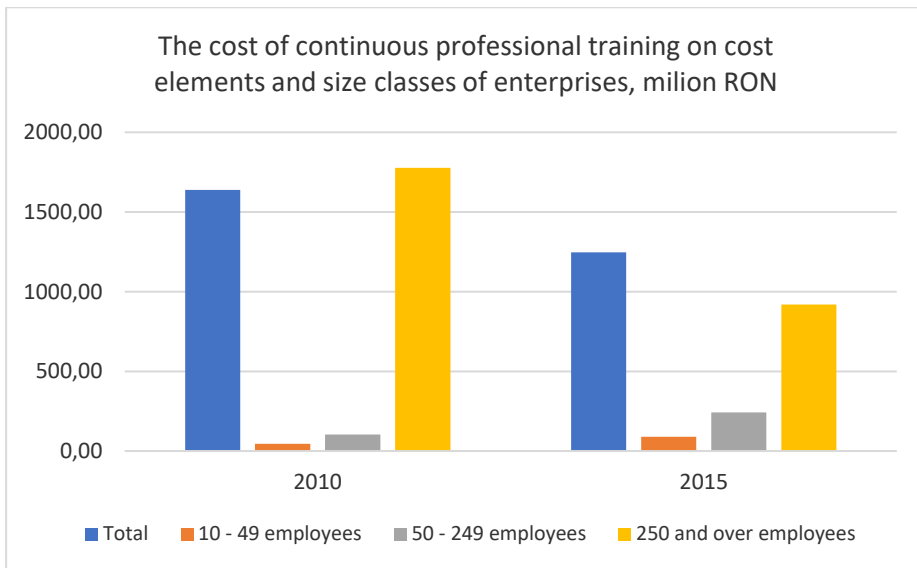


Figure 3: The cost of continuous professional training on cost and size classes of enterprises, Romania 2010-2015
 Data source: INSSE, TEMPO online

Figure 4 represents the classification of CVT average duration by enterprise's size class, as we can observe medium and large enterprises allocated more hours for the courses. By the time the CVT classes were held the majority took place during the normal working hours. By the size of the enterprise, the longest average time spent in training is held by the medium-sized companies, slightly higher than the large companies' recorded rate.

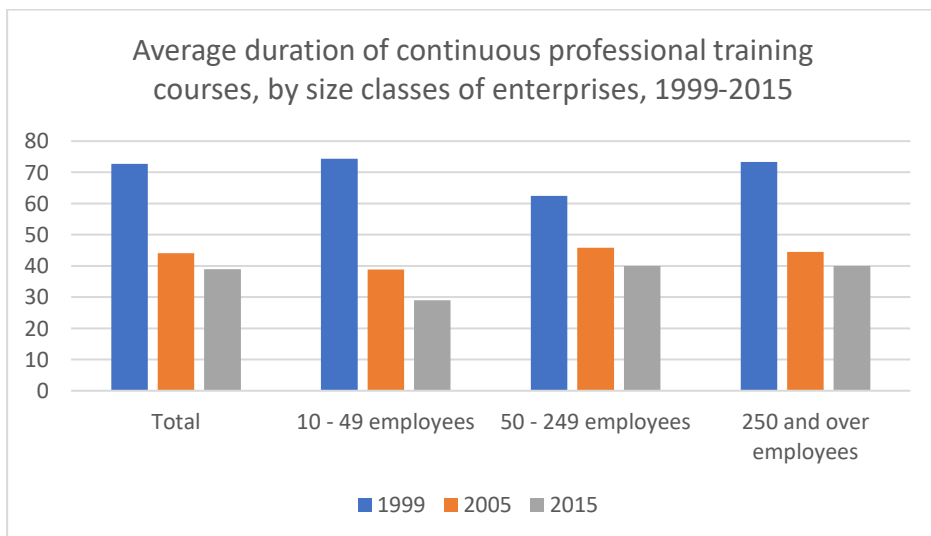


Figure 4: Average duration of continuous professional training courses, hours per participant, by size classes of enterprises, hours per participant, Romania 1999-2015
 Data source: INSSE, TEMPO online

The highest average hours per participant was recorded for electricity and heat production, supply of gas and hot water, 62 hours per participant in 2015 compared to the 23 hours per participant national average. Hotels and restaurants sector's average rate was 21 hours per participant, 2015 data recorded 18 hours below the national average, average national rate was 39 hours per participant. (INSSE data)

3.3 Main reasons for not supplying CVT courses

Table 3: Enterprises not providing training by reason for non-provision, % of non-training enterprises, Romania

Eurostat data for Romania	2005	2010	2015
People recruited with the skills needed	79.5	62.7	78.3
Existing qualifications, skills and competences corresponded to the current needs of the enterprise	86.4	64.4	83.5
High costs of CVT courses	52	29.7	34
Focus on IVT rather than on CVT	:	1.5	5.4
Major CVT efforts made in recent years	2.8	2.5	5.6
Lack of suitable CVT courses in the market	19.6	4.1	8
Difficult to assess enterprise's training needs	24.1	3.8	6.7
High workload and limited / no time available for staff to participate in CVT	32.2	14.4	26.1

Data source: EUROSTAT, data for Romania

The first four reasons for not providing CVT were the already existing the skills needed of the employees, individuals recruited with the necessary qualifications, high costs of CVT and not enough time for the employee to participate to CVT. Table 3 pinpoints a significant decrease, at least two times, in the reason of lack of courses availability, thus an increase in the offer of specific training courses.

3.4 Specific and transferable skills targeted by the CVT

CVT courses aimed to develop the following specific skills: technical, practical or job-specific capacities, office administration abilities, customer handling and management skills. There is an increased orientation of the CVT courses towards digital basic and advanced skills and companies have shown a significant interest in the development of transversal employment skills like: team working, problem solving aptitudes; foreign language skills, oral and written communication, numeracy and literacy skills (INSSE, 2017)

For the data analysed, there were not observed main differences by the classification of size of the enterprise, most targeted main skills were technical, practical or job-specific, global rate 72.3 %, team working 51.2 % and problem-solving skills 47.0 %, thus we can see the importance of transversal employment skills for the working environments of each economic sector. (INSSE data)

4. Conclusion

The vocational program training curriculum entails to be earmarked not only on formation of the abilities but also to prepare the individual to conquer the unplanned situations and unprecedented circumstances.

From the year 1999 we can see a boost in the CVT participation rate by three times as companies increased the opportunities of further training. The greatest provision of CVT was granted by large companies for the employees, thus, the lowest interest in CVT was seen in small ones.

The CVT indicator data collection is done every five years; thus, the latest data is provided for the year 2015. To capture the provision of CVT, we can correlate the CVT rate with the most recent data for the adult participation in education and training rate, last four weeks indicator, classification by NACE activity and participation rate of employees in training. Further research of the Romanian data will be applied to point out and discover the motivation of the seven times increase in the participation rate of employees in education and training, from a decreasing trend of 1.8 percent in 2015 toward 1.1 % in 2020 to a jumping 7.5 % in 2021. (EUROSTAT data for Romania)

The recommendation is to continuously increase the participation rate in CVT courses, to qualify employees according to the needs of the enterprise to perform and adapt among the multiple and permanent changes in the global economy. Thus, the employee could be apt to embrace the change and be flexible on the labour market and the employer could be able to manage the new technologies requirement for the prosperity of the individual and of the company.

Further research is required to best pinpoint the reason for not providing CVT for the employee, alongside finding ways to best suit the companies' needs, including applying for national and European funding for the courses and partnership between companies and training providers. We plan to analyse the future published data for the CVT year 2020 and correlate it with the participation rate of employees in training, last 4 weeks, and the participation rate in non-formal education for job related training, to bring awareness of the importance of training and finding the role of implementing flexible learning environments fit for the individual's needs to better adapt to labour market changes.

References:

1. Acemoglu D, Pischke J-S (1999) *Minimum Wages and On-the-job Training*, NBER Working Paper No. 7184. <https://doi.org/10.3386/w7184>

2. Becker R. (2019) *Economic change and continuous vocational training in the work history: a longitudinal multilevel analysis of the employees' participation in further training and the effects on their occupational careers in Germany, 1970–2008*, <https://doi.org/10.1186/s40461-019-0079-x>
3. Harris and Clayton (2020) *The value of vocational education and training*, International Journal of Training Research, 18:3, 185-190, <https://doi.org/10.1080/14480220.2020.1860309>
4. Pischke J-S (2001) *Continuous training in Germany*. J Popul Econ 14(3):523–548, <https://doi.org/10.1007/s001480000040>
5. Schömann et al (1997) *Further education and occupational careers in East Germany: a longitudinal study on participation in further education and its impact on employment prospects*. In: Dunn T, Schwarze J, eds. Proceedings of the 1996 international conference of German socio-economic panel study user Vierteljahreshefte zur Wirtschaftsforschung, Vol 66. Duncker & Humblot, Berlin, pp 187–196. https://www.econs.tor.eu/bitstream/10419/141177/1/vjh_v66_i01_pp187-196.pdf, last accessed 27th May 2022
6. Schömann, K, Becker, R (1995) Participation in further education over the life course. ESR 11(2):187–208. <https://www.jstor.org/stable/522573>, last accessed 27th May 2022
7. Zwick, J (2005) *Continuing Vocational Training Forms and Establishment Productivity in Germany*, German Economic Review 6(2): 155–184, https://www.academia.edu/52844998/Continuing_Vocational_Training_Forms_and_Establishment_Productivity_in_Germany?auto=citations&from=cover_page, last accessed 27th May 2022
8. Weber, T et al, Eurofound (2020), *Labour market change: Trends and policy approaches towards flexibilisation, Challenges and prospects in the EU series*, Publications Office of the European Union, Luxembourg
9. EUROSTAT data, last accessed 27th May 2022
10. INSSE data, Tempo Online, last accessed 27th May 2022
11. INSSE, 2017, *Caracteristici ale formării profesionale în întreprinderile din România 2015*, <https://insse.ro/cms/ro/content/caracteristici-ale-form%C4%83rii-profesionale-%C3%AEn-ntreprinderile-din-rom%C3%A2nia-%C3%AEn-anul-2015>, last accessed 27th May 2022