DOES DISCUSSING WITH THE SUPERVISOR ENHANCE THE EFFECTS OF TRAINING?

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Abstract. In Italy, weak economic growth is primarily due to businesses' reluctance to invest, hindering both human and physical capital accumulation, which are key drivers of productivity and innovation. The capitalization of knowledge also contributes to creating virtuous exchanges between trained employees and their supervisors, allowing companies to derive growing benefits.
This study aims to investigate the likelihood of positive changes occurring in firms following training received by workers. Specifically, it examines the probability that the worker will experience positive changes in the company after completing the training course and in particular, it emphasizes the importance of discussing the training path with one's supervisor. To achieve these research objectives, we employ a probit model. The data from the ROLA survey will make it possible to analyse a significant sample of employees trained through Italy's largest interprofessional fund. The survey (conducted by Fondimpresa in collaboration with INAPP) is instrumental in understanding the impact of training funded by Fondimpresa and whether it achieves desired outcomes, such as supporting corporate investments, particularly in innovation and sustainability, and facilitating organizational and process innovation. This contribution demonstrates that discussing training content with the supervisor enhances the multiplier effects of training. The results of the estimates confirm that these effects are more pronounced when discussing training activities with one's supervisor after completing the training program.

1. Introduction and literature review

Organisational structures follow increasingly dynamic development paths to petachieve growth objectives (Hosseini *et al.*, 2018). Technological innovations embedded in the business environment are creating a new workforce increasingly characterised by high knowledge standards.

The most efficient and productive companies have highly engaged employees (Pourbarkhordari *et al.*, 2016). The rapid changes brought about by organizational and technological innovations together require leadership capable of combining traditional management characteristics with growing capabilities for employee involvement, in teams and individually.

The advantage of this approach is confirmed by the existence of a positive association between engaging leadership and employee work engagement[1] (Firouznia *et al.*, 2021). According to widespread literature, modern organisations need increasingly engaged employees. The so-called work engagement is a predictor of a plurality of performance indices: profit and productivity, organisational performance, but also elements related to service quality and customer loyalty (Sarti, 2014). The concept of work engagement is increasingly entering into organisational decision-making processes (Karatepe, Demir, 2014), as the identification of ways to involve workers ensures the realisation of growth paths and goals, thanks to the establishment of a widespread climate of trust (Engelbrecht *et al.*, 2017).

The leadership model based on human resource development is an essential element in improving employee competencies, fostering and supporting creativity and innovation in organisations (Gilley *et al.*, 2011). Developmental leadership is a driver of organisational innovation as it stimulates employee involvement and commitment. Despite the acknowledged importance of these aspects, as highlighted by Firouznia *et al.* (2021), there are still few studies that investigate the processes which enable engaging leaders to create an impact on employee performance and competencies. Bakker and Schaufeli (2008) emphasised the importance of Positive Organisational Behaviour, which helps to stimulate job involvement and career advancement (Luthans, 2002). Involved employees show increased energy in performing work and high levels of concentration (May *et al.*, 2004).

The analysis mentioned above reveals that participative leadership of supervisors is a predictor of "employee vigor and dedication", while instrumental leadership is positively correlated with employee vigor and absorptive capacity, understood as the total ability to concentrate on the task at hand with increased skill involvement. The participative approach implies that companies focus on investments to keep employees engaged and involved (Macey *et al.*, 2008). Furthermore, as stated by Harter *et al.* (2002), there is a positive association between commitment and particular business performance metrics. It examines the relationship between employee satisfaction and commitment and business unit performance, finding significant relationships between the magnitudes considered.

Nevertheless, the nature of many of the relationships between the variables considered remains to be clarified. It is recognised, for example, that engaging leadership plays a crucial role in fostering numerous internal company activities: creating connections between company areas, increasing motivation among work team members, encouraging a culture of continuous training and providing opportunities for skills development (Chaudhary *et al.*, 2018). In particular, employee discussion with leaders about training outcomes is a key engagement and

[1] "Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli *et al.*, 2002).

growth practice within an organisation. Therefore, engaged leaders give employees the opportunity to acquire new skills, increase their authority or responsibility and experience a challenging career (Anthony, 2017).

However, studies have shown that work resources such as peer exchange, confrontation with supervisors and learning opportunities are positively associated with work engagement (Bakker and Demerouti, 2007; Schaufeli and Salanova, 2007). Indeed, adequate and correct feedback facilitates learning and increases work competence (Meijman and Mulder, 1998). In short, work engagement leads to higher work performance and consolidates the results of company training by making them operational, thanks to continuous feedback between workers and managers (Kompier, 2003).

The paper is structured as follows: the next paragraph presents the ROLA (Survey of Worker and Company Opinions) survey from which the data are extracted. The third paragraph presents descriptive statistics, the model used, and estimates with a territorial focus. The fourth paragraph concludes.

2. Data and methodology

The ROLA[2], conducted annually, targets a representative sample of workers who have participated in training courses financed by Fondimpresa[3] and managers who assume the role of training supervisors. ROLA is conducted by Fondimpresa in collaboration with INAPP. The survey is carried out using CAWI methodology. It aims to capture perceptions from the main beneficiaries of training—workers and companies—to assess the effectiveness and utility of training funded by Fondimpresa. ROLA involves online questionnaires completed by both workers and companies. The collected data is aggregated and used to produce the National Evaluative Monitoring Report (Ferri and Iencenelli, 2022; Ferri and Iencenelli, 2024). This survey is instrumental in understanding the impact of training funded by Fondimpresa and whether it achieves desired outcomes, such as supporting corporate investments, particularly in innovation and sustainability, and facilitating organizational and process innovation.

The data we will use in this work pertains to the latest available wave, that of 2022. After explaining in descriptive terms how workers interact with their supervisor to discuss training, we estimate a probit model that is useful for

[2] For further details regarding the ROLA survey please refer to Ferri and Iencenelli (2022); Ferri and Iencenelli (2024).

[3] Fondimpresa is a National Interprofessional Joint Fund for Continuing Training, one of the main tools of financing corporate training in Italy.

understanding how discussing with one's supervisor can influence the probability of changes occurring within the company.

3. Descriptive statistics and model estimates

Synergy with manager turns out to be one of the most important aspects in consolidating the effectiveness of corporate training provided to employees (Tab. 1). This is because if the worker is the one who implements the skills acquired through training, the training manager plans the training courses based on the needs of the organization and the staff, to fill any knowledge gaps. In our sample, 46.27% of respondents spoke with the manager before and after training, while almost 19% never spoke, revealing a lack of involvement and strategic vision in management participation. The involvement of the entire class group[4] is quite common (54.35%).

Table 1 – *Discussion between the worker and the supervisor regarding the training path (frequencies and percentage).*

Did you talk to your manager about the training path?	Freq.	Percentage (%)
Yes, before the training to discuss what it would offer	1151.2	14.31
Yes, after training in the application of the new knowledge in the work activity	1676.32	20.84
Yes, both before and after training	3721.54	46.27
No, never	1493.94	18.57
Total	8043	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied

It is an important factor because it favors a context of collaborative learning and constructive exchange. In this way, active participation in the teaching process is encouraged, increasing the motivation of individuals (Tab. 2). This is a fundamental process for improving work performance and organizational efficiency.

According to the worker's classification, the data in Table 3 shows a balanced situation regarding the consultation both before training, to share expectations about the added value of the courses to be attended, and afterward for the application phase of the newly acquired knowledge. The noteworthy fact is that a greater share of middle managers (20.17%) declare that they do not share the training phase with their supervisors, who are the top managers. This result is attributable to the role

[4] The class groups involved are variable depending on the company, generally there are at least four workers per class. It is assumed that individuals are at the same level of knowledge regarding the subject they are being trained on.

characterized by greater autonomy, including decision-making, often at the forefront of training decisions.

Table 2 – *Involvement of the class group in the training process (frequencies and percentage).*

Class Groups Involvement	Freq.	Percentage (%)
Not at all	175.27	2.18
A little	745.77	9.26
Enough	4375.06	54.35
A lot	2753.90	34.21
Total	8050	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied.

Table 3 – *Discussion with the supervisor regarding the training path based on Job Classification (frequencies and percentage).*

Job classification	Yes, before the training	Yes, after training	Yes, both before and after training	No, never	Total
Workman	242.07	409.89	968.04	363.45	1983.45
	12.20	20.67	48.81	18.32	100
Office worker	787.09	1062.52	2323.43	939.42	5112.45
	15.40	20.78	45.45	18.38	100
Middle management	122.04	203.92	430.07	191.07	947.10
	12.89	21.53	45.41	20.17	100
Total	1151.20	1676.32	3721.54	1493.94	8043
	14.31	20.84	46.27	18.57	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied

Analyzing the age groups, it emerges that 20.94% of those over 50 have never spoken with their supervisor about training (Tab. 4). This outcome does not necessarily represent a reluctance to share but it could be quite attributable, among other factors, to a role with greater autonomy or a lower interest in updating skills when nearing retirement.

In any case, dialogue with supervisors should be promoted and supported as it allows for a better understanding of both the company's and individual employees' needs and potential, enabling the customization of training and the evaluation of its planned outcomes.

Table 4 – *Discussion with the supervisor regarding the training path based on worker's age (frequencies and percentage).*

Age groups	Yes, before the training	Yes, after training	Yes, both before and after training	No, never	Total
Under 30	73.99	120.78	272.91	95.22	562.90
%	13.14	21.46	48.48	16.92	100
From 30 to 50	696.27	1050.51	2254.76	847.77	4849.30
%	14.36	21.66	46.50	17.48	100
Over 50	380.94	505.04	1193.88	550.94	2630.80
%	14.48	19.20	45.38	20.94	100
Total	1151.20	1676.32	3721.54	1493.94	8043
%	14.31	20.84	46.27	18.57	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied

The territorial analysis reveals that in Southern Italy, compared to other macro-regions of the country, there is greater sharing of training outcomes both before and after the training activity (Tab. 5). This can be largely attributed to the organizational structure of Southern Italian companies, which is more hierarchical and personal, characterized by the direct and continuous involvement of supervisors in the daily interaction with employees to align their skills with the final objectives.

Table 5 – *Discussion with the supervisor regarding the training path by geographic area (frequencies and percentage).*

Geographic Area	Yes, before the training	Yes, after training	Yes, both before and after training	No, never	Total
North	730.31	1085.15	2141.37	866.61	4823.44
	15.14	22.50	44.40	17.97	100
Centre	177.96	316.03	576.54	341.99	1412.51
	12.60	22.37	40.82	24.21	100
South	242.92	275.15	1003.64	285.34	1807.05
	13.44	15.23	55.54	15.79	100
Total	1151.20	1676.32	3721.54	1493.94	8043
	14.31	20.84	46.27	18.57	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied

Shifting the focus to the productive sectors, it is noted that in the construction industry, over 50% of respondents have spoken with their supervisor about training both before and after the courses. This percentage is nearly matched in the healthcare

sector (49.15%). It is worth highlighting that almost 27% of respondents in the transportation sector did not share their training experiences with their supervisor at all (Tab. 6).

Table 6 – *Discussion with the supervisor regarding the training path by economic sector (frequencies and percentage).*

Economic sector (ateco)	Yes, before the training	Yes, after training	Yes, both before and after training	No, never	Total
Industrial manufacturing	303.23	518.52	1151.30	479.68	2452.72
	12.36	21.14	46.94	19.56	100
Other manufacturing	275.67	307.31	767.92	209.04	1559.95
	17.67	19.70	49.23	13.40	100
Construction and other non-manufacturing enterprises.	78.10	94.55	227.27	46.74	447.55
	17.65	21.13	50.78	10.44	100
Trade, hotels and restaurants	105.61	182.68	436.62	125.61	850.52
	12.42	21.48	51.34	14.77	100
Business Services	135.82	211.60	444.22	234.87	1026.52
	13.23	20.61	43.27	22.88	100
Healthcare	123.52	82.25	296.20	100.66	602.63
	20.50	13.65	49.15	16.70	100
Transportation, storage and comunication	112.64	255.76	395.89	288.25	1052.54
	10.70	24.30	37.61	27.39	100
Production and distribution of electricity, gas and water	15.70	23.66	2.11	9.10	50.57
	31.05	46.79	4.17	17.99	100
Total	1151.20	1676.32	3721.54	1493.94	8043
	14.31	20.84	46.27	18.57	100

Source: Authors' elaboration on ROLA data 2022. Note: Sampling weights applied

As already introduced, a probit model was used for the analysis. The response variable of the model is 'Did the employee perceive the presence of at least one (positive) change in the company after the training process?'. The response variable

is binary, equal to 1 when the individual perceives changes, and 0 otherwise. Among the trained workers, 81.68% reported having noticed at least one change in the company, while 18.32% did not notice any change. The empirical results from the probit[5] model in Table 7 show that talking to one's supervisor after the course increases the probability of positive changes[6] occurring for the employee[7].

Specifically, these changes are organizational, with an increase of 25 p.p.. Training plays a central role in these organizational changes, contributing in various ways to facilitate transitions and support new company initiatives aimed at optimizing production times and methods. Consequently, these organizational changes are fundamental to increasing company competitiveness and adapting to market conditions.

Furthermore (Table 7), the variable concerning the alignment of training content with company needs is also statistically significant; indeed, the more training meets the company's needs, the more it is associated with changes within the company (17.7 p.p.).

It is important to note that the variable related to the duration of training courses is also significant. The greater the number of hours in the courses completed, the more likely company changes are to occur (+0.14 p.p.). A female employee decreases the probability of change in the company (2.8 p.p.). The number of the training course hours increases the probability of changes occurring in the company (0.1 p.p.). Moreover, being an employee of a medium-sized company decreases the

[5] The probit model is a type of regression used to model binary outcome variables. It assumes that the probability of the outcome is linked to the predictors through the cumulative distribution function (CDF) of the standard normal distribution (Categorical Data Analysis 3rd Edition by Alan Agresti). STATA software was used for the analyses.

[6] In the ROLA survey the company changes considered are: Reduction of hierarchical levels; Increased sharing of data and information between different company areas; Greater participation in process/product innovation processes; Expansion of the contents of work positions, greater discretion and decision-making autonomy, greater participation in planning and control processes; Adoption of approaches such as Lean Manufacturing, Six Sigma, Agile, Total Quality Management, World Class Manufacturing etc.; Greater diffusion of the culture of safety at work and/or its application; Greater understanding and communication in a foreign language and improvement of dialogue with colleagues, suppliers and foreign customers; Greater awareness and effectiveness of activities that fall within the scope of circularity and environmental sustainability; Greater efficiency in the use of new operating/management systems; Improvement of processes and procedures related to quality system; Increase in levels of automation and/or digitalisation of processes (also through the use of applications for data analysis); Improvement of production activities (e.g.: welding, packaging, etc.)

[7] In the probit model, the values described are marginal effects, which indicate the change in the probability of the outcome for a one-unit change in the independent variable, expressed in percentage points (p.p.). It is important to note that if the independent variable is a proportion or a categorical variable (including dummy variables), the interpretation of the marginal effects will differ.

probability of changes in the company (-4.2 p.p.) compared to employees of smaller companies.

Table 7 – *Probability of encountering changes in the company (beta coefficients, and standard errors in brackets).*

Variables	Company Changes
	b/se
Yes, before the training to discuss what it would offer (vs. No never)	0.1534***
	[0.0323]
Yes, after training in the application of the new knowledge in the work activity (vs. No never)	0.2531***
	[0.0259]
Yes, both before and after training (vs. No never)	0.2059***
	[0.0258]
Women	-0.0283*
	[0.0155]
Involvement of Class Groups, a little (vs. Not at all)	-0.0194
	[0.0649]
Involvement of Class Groups enough (vs Not at all)	0.0924
	[0.0586]
Involvement Class groups a lot (vs. not at all)	0.0815
	[0.0598]
Contents in line with company requirements, a little (vs. Not at all)	-0.0645
	[0.0972]
Contents in line with company requirements, enough (vs. Not at all)	0.1342
	[0.0940]
Contents in line with company requirements, a lot (vs. Not at all)	0.1777*
	[0.0950]
Training Course hours	0.0014***
	[0.0004]
Employees (50 to 249) (vs. up to 49)	-0.0419**
	[0.0174]
Employees (Over 250) (vs. up to 49)	-0.0058
	[0.0204]

Source: Authors' elaboration on ROLA data 2022.
Other variables included in the model: Educational qualification (secondary school diploma, Diploma, Bachelor's degree);Age; ATECO Code; Geographic Area (North, Centre,South); Contract classification; Econimic Sectors
*Note: Statistical significance: *** at 1%, ** at 5% and * at 10%. Sampling weights applied. The total number of observations is 7,974.*

4. Conclusions

The study provides a picture of the importance of leardership in employee involvement within organisations and in corporate relations. The organisational change requires leadership that is able to combine traditional management characteristics with increased employee engagement skills, in teams and individually. There is, therefore, a positive association between engaging leadership and the work engagement shown by employees (Firouznia *et al.*, 2021).

Our research confirms what is already widely shared in the literature about the importance of the continuous confrontation between the functional organisational manager and the human resource he or she employs, both in identifying the training course necessary to increase performance and in enhancing the effect of the training administered to also bring about a possible change in job description. The greater the synergy, the more significantly the course increases the likelihood of changes in firms. The positive effect generated by making people more involved in achieving the company target has a significant impact on learning levels. As is widely confirmed in the literature, "development leadership" is a driver of organisational innovation as it stimulates employee involvement and commitment. Confrontation with managers enables employees to experience sustainable employability through the delegation of challenging tasks that increase the sense of belonging and self-efficacy (Schaufeli, 2015). In conclusion, training programs improve employees' skills and facilitate the implementation of innovations within the company. Our study shows that the benefits of such programs increase when the training results are shared with the manager.

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