

## WORK COST IMPACT ANALYSIS IN FTSE MIB COMPANIES

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## **Abstract**

The aim of this research is to analyse the cost impact of the work factor of production on the financial statements of Italian companies listed on the FTSE MIB.

It emerged a correlation between salary costs and turnover. This is due to the human factor being a highly important input in the company's production process and influencing the revenues made by the company. In addition, a strong correlation emerged between the cost of salaries and wages and actual turnover, since the work factor of production represents a resource of primary significance within the process of production. Finally, a time variable correlation has arisen between the other personnel costs and turnover.

Due to the implications raised by this study, in its decision process, the management has to consider the human element as pivotal to a combination of production factors.

The research boundaries should be considered as a limitations of the research.

**Keywords:** work cost; work cost impact; salaries and wages costs; provisions for employee benefits and other personnel costs; listed Italian companies; FTSE MIB.

# 1. Introduction

The relations between companies and their environment can be represented by an “input-output” model (Ferrero, 1987), according to which a company is placed in the middle of an exchange wherein it receives a series of inputs from its environment, such as factors of production, duties and conditioning, which all represent external forces that can be either positive or negative (Giacosa, 2012). Following a physical and economic transformation process, the company produces a series of outputs, consisting of fully finished products and influences (conditionings) for the company’s context. The work factor of production falls within the above-mentioned inputs, and impacts the technical and organisational structure of the company (Ferraris Franceschi, 1995).

The aim of this research is to analyse the cost impact of the work factor of production on the financial statements of Italian companies listed on the FTSE MIB. Following a study of such cost in its various components, we have identified those factors with the biggest impact on the total work cost. We have analysed the salary cost and other entries relating to employees; and then we have examined whether there is any difference in terms of the impact of work cost with regards to the specific economic sectors of the companies under consideration.

The value of the research is linked to a series of aspects; firstly, the human factor represents a constitutive element of a company, as it is a stimulus to entrepreneurial activity. Secondly, the work factor represents the company’s driving force, gaining remarkable significance with regards to the company’s ability to combine all other inputs during the production activity process. Thirdly, these inputs have a different effect according to the economic sector considered; sectors with the highest labour intensity seem to be the most strongly influenced by the incidence of work cost. Given the importance of the work factor, a cost analysis of it is highly important, as it makes it possible to quantify its influence on other typical values within a company’s financial statements. From the analysis in the present study, a correlation between salary costs and operating costs, and between salary costs and turnover, has been identified. This is due to the human factor being a highly important input in the company’s production process and influencing the revenues made by the company through selling goods and services.

The current research differs from previous studies that have followed an empirical profile. Specifically, the present study uses a sample that is representative in terms of Italian listed companies. The reasons for this representation are as follows: their belonging to the FTSE MIB makes the sample very indicative, since it represents the benchmark index employed in the international context and the economic sectors in which the companies within the sample operate are very diversified, which thus fully reflects the Italian economic landscape. Last but not least, even in the context of stock market capitalization, the capitalization of companies listed on the FTSE Italia represents 82.81% of the capitalization of companies listed on the Italian stock market (as of 31 October 2013).

## 2. Literature

In the actual scenario characterised by high competition and pressure, companies’ processes, structures and strategies have been modified to reach a more flexible and lean structure. This allows the company to quickly react to competitor changes and to adapt their strategy in the best way accordingly. Companies are trying to achieve competitive advantages in new ways: “hard” elements (i.e. privileged access to resources) are modified into “softer” ones (i.e. human resources management, innovation, etc.) (Foss-Laursen, 2000; Laursen and Mahnke, 2000; Wilkinson, 2000; Ham and Kleimer, 2002; Bresciani et al., 2012).

Due to this, literature on human resources management has become more and more relevant since the ‘90s. Many scholars have focused on the relationship between human resources and firm performance, most of all in USA (Arthur 1994; Osterman, 1994; Huselid, 1995; Macduffie, 1995; Huselid, 1995; Koch and McGrath, 1996; Lazear 1996; Ichniowski and Shaw, 1999; Chadwick et al., 2014) and in Great Britain (Guest and Hoque, 1994; McNabb and Whitfield, 1997; Guest, 1999; Hiltrop, 1999) but also in China (Lin and Wu, 2014). It has emerged that human resource management has an important role in competition strategy, as it is a source of sustainable, long-term competitive advantage (Denisi and Smith, 2014; Meihami et al., 2014).

Over the past few years scholars have concentrated on the nature of the relationship between human resource management and performance (Arthur, 1994; Guest and Hoque, 1994; Kalleberg and Moody, 1994; Huselid, 1995; MacDuffie, 1995; Snell and Youndt, 1995; Delery and Doty, 1996; Boselie et al., 2001; Guthrie, 2001), between human resource management and strategy (Thrassou and Vrontis, 2006), on how the relationship between human resource management and performance works (Dyer and Reeves, 1995; Guest, 1997; Wright and Gardner, 2003; Rao, 2014) and on a systemic risk management model for SMEs under financial crisis (Mihai, 2012).

Finally, a recent trend in the literature concerns the multi-level and multi-dimensional approach. Past studies can be differentiated along two dimensions, focused on single or multiple practices and individual or the group or organisation (Wright and Boswell, 2001; Crocker and Eckardt, 2013). About the most extensive multi-level model of human resource management, Ostroff and Bowen (2000) and Bowen and Ostroff (2004) stated that human resource practices are considered a communication mechanism to persuade employees to engage in certain behaviours.

The work factor of production relates to human and intellectual activity, which, combined with other resources, allows the production of goods and services within the company. Companies transform, in an “economic” sense, human needs

through the use of human resources (Ferrero, 1987; Farneti, 2007). Several important studies regarding the organisation and management of personnel within companies have been conducted (Brusa, 1996; Jayasingam and Yong, 2013; Aksakal, 2013; Jeston and Nelis, 2014). A rich body of literature has considered the work factor of production from many different points of view. The sudden changes in the companies' labour request have been dealt with by many researchers, either generally or through specific analyses of different countries (Berman et al., 1994; Bertola and Rogerson, 1997).

Other studies have focused on the difficulties of integrating human resources into the work market, and have studied the role of the mediators operating in the market (Fitzgerald, 1998; Budgen, 2008; Jain, 2010). It can be seen from the existing literature that the work factor represents, from a financial point of view, a pivotal element for enterprises, constituting a discriminating factor for their competitiveness (Porter, 1995; Becker and Huselid, 1998; Chen and Lin, 2004).

Many researchers have dealt with the subject of work cost with regards to its impact on the company's balance sheet, either on a national (Dezzani et al, 2001) or an international level (Hermanson, 1992; Acemoglu and Pischke, 1999; Lev and Radhakrishnan, 2003). The effects of introducing international accounting principles (which were based on national accounting principles) on companies' balance sheets have also been considered (Haverals, 2007).

A particularly complex aspect of quantifying work cost is the end of service allowance. This subject has been considered by many authors (Amen, 2007; Morais, 2008; Dezzani et al., 2012). In particular, the employee benefits following suspending service allowance have been subject to several studies, which have focused their attention on the "corridor method" (Amen, 2007; Fasshauer et al., 2008) or the transition from "defined benefit plans" to "defined contribution plans" (Swinkels, 2006).

However, the existing literature provides no unified vision on the connection between work cost and financial obligations (Marino et al., 2000; Bauman, 2001). Several researchers agree on the temporary effects of financial obligations on work cost, but are divided when it comes to the permanent effects of these (Jackman et al., 1996; Nickell, 1997). Several researchers have also claimed that effects on work cost, either permanent or temporary, also depend on other institutional variables considered, such as the work reforms in the country under consideration (OECD Employment Outlook, 2012).

Several models of work cost and taxation have been studied (Swenson, 1999), in particular the presence of taxation made up of a steady part and a proportional part (Lindbeck, 1996; Pissaderes, 1998). Some recent studies highlight the fact that the organic growth rate of employment changes as income tax and local tax vary (Zou, 1996; Gong and Zou, 2011). In addition, many theoretical studies have been conducted on the impact of the tax burden on labour costs (Felix, 2007 and 2009; Hasset et al., 2010; Dwenger, 2011).

Important quantitative analyses of the impact of the tax burden of work cost on companies' balance sheets have been conducted in Europe (Arulampalam, 2012), in USA (Liu et al., 2013) and in every single European country (Jacob, 2000; Marino, 2000; Buijink, 2002; Spengel, 2003; Dwenger, 2008; Symeonidis, 2008; Fuest et al., 2012), though without creating correlations between the work cost and other balance sheet values. In addition, work cost analyses have been combined with other macroeconomic analyses (OECD, 1999; Marino and Rinaldi, 2000). Other researchers have used an empirical method of analysis to consider work cost. Such researchers have basically identified two different methods: "(micro) backward-looking", which uses effective accounting data within existing companies (ex-post of the data); and "(micro) forward looking", which is based upon ex-ante data on the hypothetical future of the company (Jacobs and Spengel, 2000; Spengel and Lammersen, 2001).

The current research contributes to literature on the subject on an empirical level. It uses a highly representative sample in terms of Italian listed companies, which constitutes 82.81% of the total capitalization of the Italian stock market (as of 31 October 2013). Consequently the results portray the economic reality of the main Italian industrial companies listed on the FTSE MIB, thereby allowing an international comparison, since the FTSE MIB index is used internationally as the benchmark index of the Italian stock market. The research findings are pertinent to multiple economic sectors, since the companies within the sample operate in the most representative production contexts of the Italian production landscape. The variety of the economic sectors considered has allowed us to identify the different impacts of work cost in relation to the economic context in which the companies operate.

### **3. Methodology**

#### **3.1. The sample**

The Italian companies included in the sample are listed in the FTSE MIB. The FTSE MIB is the international benchmark index of the Italian stock market. It is made up of 41 private Italian companies of primary importance and high liquidity which operate in multiple economic sectors. This portrays the Italian economic landscape. The market capitalization of the companies belonging to the FTSE MIB constitutes around 82.81% of the total capitalisation of the Italian market (as of 31 October 2013).

We excluded banks, insurance and other financial companies, opting to analyse a sample consisting of companies operating in the industrial, rather than the financial sector. The sample is made up of 24 companies (Table 1), which represents 62.72% of the capitalisation of the FTSE MIB (as of 31 October 2013).

Table 1 - The sample (data in millions of Euros as of 31 October 2013)

Companies	Sectors	Stock Market Capitalization	% sample
A2A	Public services	2,608.55	1.13%
Ansaldo Sts	Automotive and industrial supplies	1,413.33	0.61%
Atlantia	Automotive and industrial supplies	10,670.38	4.64%
Autogrill	Travel and leisure	1,677.39	0.73%
Buzzi Unicem	Construction industry and materials	2,385.07	1.04%
Campari	Food and drink	3,738.19	1.63%
Diasorin	Health	1,927.2	0.84%
Enel	Public services	30,263.89	13.16%
Enel Green Power	Public services	8,893.28	3.87%
Eni	Oil and natural gas	66,943.04	29.10%
Fiat	Automotive and industrial supplies	7,208.07	3.13%
Finmeccanica	Automotive and industrial supplies	3,156.28	1.37%
Gtech	Travel and leisure	3,899.41	1.70%
Luxottica	Fashion	19,052.24	8.28%
Mediaset	Media	4,339.56	1.89%
Parmalat	Food and drink	4,456.14	1.94%
Pirelli & C.	Automotive and industrial supplies	4,986.36	2.17%
Prysmian	Automotive and industrial supplies	3,876.68	1.69%
Saipem	Oil and natural gas	7,555.76	3.28%
Salvatore Ferragamo	Fashion	4,210.93	1.83%
Snam	Public services	12,778.96	5.56%
Telecom Italia	Telecommunications	12,973.55	5.64%
Terna - Rete elettrica nazionale	Public services	7,275.86	3.16%
Tod's	Fashion	3,751.03	1.63%
Total amount for sample		23,0041.15	62.72% of FTSE MIB
Total amount for FTSE MIB		366,754.89	82.81% of Italian stock market
Total amount for Italian Stock Market		442,929.8	

Source: personal elaboration

### 3.2. Research questions and method

To reach the goals of this research, two main research questions were formulated:

- RQ1: Is there a correlation between the cost of salaries and wages and turnover achieved? Does this correlation vary by the economic sector in which the company operates?

- RQ2: Do the different provisions for employee benefits and other personnel costs, of which most are non-compulsory, vary as the turnover varies?

On the basis of the above research questions, the following hypotheses have been developed:

- H1 (paired with RQ1): There is a correlation between the cost of salaries and wages sustained and turnover achieved, since the human factor represents a source of particular significance with regards to the company's production process and the consequential turnover achieved. This is supported by the literature, which emphasises the role of human resources in generating turnover and value (Airoldi et al., 1994; Brusa et al., 1996 and 2013; Laursen and Mahnke, 2000; Wilkinson, 2000; Ham and Kleimer, 2002; Bresciani et al., 2012; Biancone and Scagnelli, 2009 and 2013; Gabrielli and Profili, 2012; Neirotti and Paolucci, 2013; Bhattacharya et al., 2014). Such a correlation should be more prominent in those economic sectors with high levels of labour. It is also supposed that such a relationship would be dependent on the sector, since higher or lower automation levels have a great influence on work cost. This is supported by the literature, which emphasises the different role of human resources in the different economic sectors (Bresciani et al., 2012).

- H2 (paired with RQ2): As turnover varies, the variability of the different provisions for employee benefits and other personnel costs change accordingly. Achieving high turnover makes it economically possible for the company to bear non-mandatory costs, such as employee benefits and other personnel costs, in the future. H2 is also supported by the literature (Lin et al., 2011; Amah, et al., 2013; Xavier, 2014; Lin et al., 2014).

The research methodology was organised according to the following phases:

a) Phase 1: Analysis of regulation and literature review. This entailed analysing the work cost regulation conducted by international institutions (IASB), with particular reference to IAS 19, Employee Benefits, and to the IFRS 2, Share-based Payment. This was supported by an in-depth study of the literature, which helped us to interpret the above-mentioned international accounting principles and understand their empirical application (in the context of previous studies) to specific samples.

b) Phase 2: Empirical analysis. This involved analysing the information derived from the sample. The research methodology did not include interviews, since the information provided in the consolidated financial statements was considered sufficient to answer the research questions.

For *RQ1*, before linking the costs of salaries and wages to turnover, we first identified the effects of salaries and wages on the operating costs, in order to verify whether salaries and wages represented a dominant element of the work cost. This means that the costs of salaries and wages represent the independent variable, while the turnover is dependent. After observing a strong Pearson correlation between the costs of salaries and wages and the operating costs, we explained the variability within these costs by calculating the average annual wage and comparing this information across different economic sectors. Then, we compared the costs of salaries and wages and the turnover, to verify their Pearson correlation.

For *RQ2*, we compared the other personnel costs incurred with turnover, as these costs differ from wages and salaries and social security costs. It means that the turnover represents the independent variable, while the other personnel costs are dependent. Then, we calculated the Pearson correlation between the other personnel costs and turnover.

To further the analysis, the Pearson correlation ratio ( $p$ ) was used to identify a positive or negative correlation between the variables under examination in the various research questions. For this, it is necessary to specify the following conditions:

- if  $p > 0$  there is a direct correlation;
- if  $p = 0$  there is no correlation;
- if  $p < 0$  there is an indirect correlation;
- if  $0 < p < 0.3$  the correlation is weak;
- if  $0.3 < p < 0.7$  the correlation is moderate;
- if  $p > 0.7$  the correlation is strong.

c) - Phase 3: Delineation of the accounting effects of work cost. Following the analysis of the above-mentioned consolidated financial statements, we identified the accounting behaviours of the companies belonging to the sample, and delineated the main differences among the various economic sectors.

The study, which was conducted during 2010-2012, used consolidated financial statements and the AIDA database. Considering the research goals, an empirical methodological approach was preferred.

## 4. Findings

The findings are illustrated by following the:

- a) correlation between cost of salaries and wages and achieved turnover;
- b) variation of different types of provisions for employee benefits and other personnel costs and turnover variation.

### 4.1 Salaries and wages costs correlated to achieved turnover

To answer *RQ1*, we wanted to identify the effects of salaries and wages on operating costs, in order to verify whether salaries and wages represent a dominant element of the work cost. Table 2 displays mean, median and standard deviation of salaries and wages, operating costs and salaries and wages as % of operating costs for the sample.

Table 2 – Salaries and wages and operating costs (data in millions of Euros)

Companies	2012			2011			2010		
	Salaries and wages	Operating costs	%	Salaries and wages	Operating costs	%	Salaries and wages	Operating costs	%
Mean	1,045	16,350	13.49	996	14,198	13.12	962	11,919	14.23
Median	406	4,595	12.48	406	4,063	12.48	384	3,810	13.07
Std deviation	1,248	30,155	6.32	1,214	24,692	5.97	1,210	21,203	7.02

Source: personal elaboration

In 2012, the costs of salaries and wages accounted for a mean different share (13.49%) of the operating costs within the sample compared to 2011 (13.12%) and 2010 (14.23%). However, companies belonging to several sectors, such as Ansaldo

STS, Autogrill, Diasorin and Terna, strongly exceeded the mean. Other companies were also above the mean, such as Finmeccanica, Gtech, Pirelli & Co. and Saipem.

Companies, such as A2A, Eni and Enel, were strongly below the mean. These companies, which belong to the public services sector and the oil and natural gas industry, are characterised by a marked rigidity in terms of capital assets and a lower incidence of the human factor compared to the other production factors. The human factor represents a lower work cost in the context of operating costs.

The variability of the cost of salaries and wages in terms of operating costs is not only depicted by a comparison against the mean, but also with the median (12.48%), and the standard deviation (6.30%). A strong variability of wages and salaries against operating costs was also seen in 2011 and 2010.

The correlation between salaries and wages and operating costs is strong in the considered years, as shown by the Pearson correlations, which equalled 0.84 in 2012, 0.86 in 2011 and 0.84 in 2010 (Table 3). It means that the trend of salary and wages costs is an input which strongly influence the operating costs.

Table 3 – Pearson correlation between salaries and wages and operating costs

<b>Pearson correlation</b>	Salaries and wages 2012	Salaries and wages 2011	Salaries and wages 2010
Operating costs 2012	0.84		
Operating costs 2011		0.86	
Operating costs 2010			0.84

Source: personal elaboration

After verifying the strong correlation between the costs of salaries and wages and operating costs, it was necessary to explain the variability of these costs among the sample companies. For this purpose, we calculated the average annual wage (Table 4).

Table 4 – Average annual wage per employee (in Euros)

	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Data</b>	<b>Average salaries and wages</b>	<b>Average salaries and wages</b>	<b>Average salaries and wages</b>
Mean	43,576	39,727	41,729
Median	44,861	39,722	42,793
Std deviation	13,081	16,065	13,247

Source: personal elaboration

When considering companies with higher-than-average cost of salaries and wages compared to the mean, some of them showed a higher impact from work cost on operating costs compared to the mean (such as Ansaldo Sts and Terna), while another company (Mediaset) had a smaller impact from work cost on operating costs compared to the mean. Looking at companies with smaller-than-average cost of salaries and wages compared to the mean, some of them have a smaller impact from work cost on operating costs compared to the mean and in others this impact is higher. This means that the reduced influence of salaries and wages on operating costs is also linked to the higher value of the operating costs.

The above analysis of the effect of salaries and wages costs on operating costs serves as a foundation from which to address RQ1, showing a strong effect of salaries and wages costs. Therefore, we compared salary and wages costs to achieved turnover.

Table 5 shows a comparison between the costs of salaries and wages and the turnover (for 2012, 2011 and 2010), since this latter represents a variable regarding the scope of the business activity. We hypothesised that there is a correlation between the actual turnover and the cost of the salary and wages to achieve it. However, this hypothesis must be contextualised by reference to the sector in question: some companies use more labour, while others, which use more automated and technological systems, use less. Personnel costs can vary according to the different levels of personnel specialisation, which can have an impact on the hourly employee cost.

Table 5 – Comparison between salaries and wages and turnover

Companies	2012			2011			2010		
	Salaries and wages	Revenues	%	Salaries and wages	Revenues	%	Salaries and wages	Revenues	%
Mean	1,045	17,459	11.68	996	15,317	11.75	962	13,359	11.39
Median	406	4,843	11.03	406	4,399	10.13	384	4,277	10.27
Std deviation	1,248	32,471	5.17	1,214	27,549	6.19	1,210	24,150	4.95

Source: personal elaboration

The correlation between salaries and wages and turnover is strong in the considered years, as shown by the Pearson correlations, which equalled 0.82 in 2012, 0.82 in 2011 and 0.83 in 2010 (Table 6).

Table 6 – Pearson correlation between salaries and wages and turnover

Pearson	Salaries and wages 2012	Salaries and wages 2011	Salaries and wages 2010
Turnover 2012	0.82		
Turnover 2011		0.82	
Turnover 2010			0.83

Source: personal elaboration

Companies that are furthest from the average belong to the public services and oil and natural gas industries (A2A, Enel, Enel Green Power, Eni and Snam). These companies are far below the average in this regard. Reasons for this include the marked rigidity of capital assets and the lower impact of the human factor (which produces a lower work cost) compared to other production factors.

With particular attention to economic sectors, we calculated a Pearson correlation between salaries and wages, on one side, and turnover, on the other. We found that the correlation is higher for the following sectors, which are characterized by high market demand:

- Food and drink;
- Oil and natural gas;
- Travel and leisure.

*The above results serve to confirm H1*; there is a correlation between the cost of salaries and wages and actual turnover, since the work factor of production represents a resource of primary significance within the production process, influencing the company revenues. This correlation is higher for those sectors characterized by high market demand, such as food and drink, oil and natural gas and travel and leisure. As other scholars affirmed (Laursen and Mahnke, 2000; Wilkinson, 2000; Ham and Kleimer, 2002; Bresciani et al., 2012; Neirotti and Paolucci, 2013; Bhattacharya et al., 2014), human resources structure and strategies impact on generating turnover and value for the company; in addition, the human element role is influenced by different economic sectors, due to their different importance of labour costs.

## 4.2 Different types of provisions for employee benefits and other personnel costs correlated to turnover

*RQ2* related to the other personnel costs. The personnel costs involved are derived from the profit and loss account, and differ from wages and salaries and social security costs. They generally include provisions for employee benefits and other generic personnel costs.

As in the previous analysis, the non-homogeneous data arise due to the diversity of the companies within the sample and the differences in terms of numbers of employees. In order to verify *H2*, we have to compare the other personnel costs incurred with all the operating incomes and turnover (Table 7).



Table 7 – Other personnel costs and turnover (data in millions of Euros)

Companies	2012			2011			2010		
	Other personnel costs	Revenues	%	Other personnel costs	Revenues	%	Other personnel costs	Revenues	%
Mean	124	17,459	0.71	116	15,317	1.09	158	13,359	1.21
Median	86	4,843	1.78	55	4,399	0.90	62	4,277	1.05
Std deviation	143	32,471	0.44	160	27,549	0.72	239	24,150	0.51

Source: personal elaboration

The percentage impact of provisions for other employee costs as part of the operating incomes falls into a very restricted range. The mean was 0.71% in 2012, 1.09% in 2011 and 1.21% in 2010, while the median was 1.78% in 2012, 0.90% in 2011 and 1.05% in 2010. Some companies (such as Finmeccanica, Gtech and Mediaset) have higher-than-average other employee costs compared to the mean in 2012, due to completing a retirement scheme programme and other forms of employee incentives.

The correlation between other personnel costs and turnover was strong in 2010, with a Pearson coefficient equal to 0.94; on the other hand, in 2012 and 2011 such correlation was moderate, with a Pearson coefficient equal to 0.63 in 2012 and 0.64 in 2011 (Table 8).

Table 8 – Pearson correlation between other personnel costs and turnover

Pearson	Other personnel costs 2012	Other personnel costs 2011	Other personnel costs 2010
Turnover 2012	0.63		
Turnover 2011		0.64	
Turnover 2010			0.94

Source: personal elaboration

From this information, *H2 can be confirmed*. The correlation between the other personnel costs and turnover was strong in 2010 and moderate in 2012 and 2011. This shows a variability of the above-mentioned correlation. As a consequence, particularly with regards to 2012 and 2011, we can say that a variation in turnover is not related to a change in the other personnel costs within the same company. However, an analysis on a wider time horizon would allow us to better verify the non-existence of such a correlation. As other scholars affirmed (Lin et al., 2011; Amah, et al., 2013; Xavier, 2014; Lin et al., 2014), the achievement of high turnover makes it possible to support non-mandatory costs, such as employee benefits and other personnel costs.

## Conclusion

From the analysis in the present study, H1 has been confirmed: a correlation between salary costs and operating costs, and between salary costs and turnover, has been identified. This is due to the human factor being a highly important input in the company's production process and influencing the revenues made by the company through selling goods and services.

A strong correlation emerged between the cost of salaries and wages and actual turnover, since the work factor of production represents a resource of primary significance within the process of production, influencing the company in terms of revenue. In particular, the sectors characterized by high market demand (such as food and drink, oil and natural gas and travel and leisure) have a higher correlation.

Finally, a time variable correlation has arisen between the other personnel costs and turnover. H2 can be confirmed. Specifically, the correlation is strong in 2010, and moderate in 2011 and 2012. When the correlation is strong it means that upon when turnover varies, other personnel costs, which are non-mandatory by law, change accordingly. When the correlation is moderate, variations in turnover are not related to variations in other personnel costs within the same company. Nevertheless, in the case of either a strong or a moderate correlation, the achievement of economic benefits in terms of turnover makes it possible for the company to sustain future non-mandatory costs, such as provisions for employee benefits.

The implications raised by this study reflect the results obtained. The research results illustrate that the human factor represents a constitutive element of a company, as it is a stimulus to entrepreneurial activity. In its decision process, the management has to consider the human element as pivotal to a combination of production factors: it represents the company's driving force, awarding exclusivity to the entire system and allowing it to function. On top of this, it blends in

with the company's means, generating a unitary and inseparable entirety, in a coordinated, complementary and dynamic manner. Given the importance of the work factor, the management has to consider the relevance of a cost analysis, as it makes it possible to quantify its influence on other typical values within a company's financial statements.

The research boundaries should be considered as a limitations of the research. We didn't analyse the impact of personnel specialisation on the work cost, bearing in mind the differences between the various economic sectors: such variable could change the analysis results, as it could influence the average unitary cost for every employee. In addition, the considered time horizon (3 years) would limit the variability evaluation of the correlations among the different values. We compared only Italian companies without verifying the different impacts of the work cost components in European countries.

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