

SENIOR MANAGERS AND SMES' PROPENSITY TO QUALITY IMPROVEMENT PROGRAMS – A COMPARATIVE ANALYSIS

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Introduction

More and more, researches carried out, over a number of countries, have been stressing the importance of quality improvement in firms' overall performance, whatever their size, the economic sector they operate in, or their localization, highlighting that this is a factor crucial for the success of every company and determines how they progress towards excellence or not. Firm's competitiveness can only come true, by profitably meeting customer's needs better than competitors [19]. Increasingly, critical changes in firms' competitive environment have been putting strong pressures on quality continuous improvement needs, accelerating breakthrough in quality management issues. It is no longer possible to ensure firms' viability through traditional production processes, where final inspection was responsible for identifying defective products.

Actual approaches, as TQM (Total Quality Management), are based on the principle that quality improvement is a never-ending objective and lies in developing processes able to provide uniform products and/or services that aim to satisfy or exceed customers' expectations. In fact, TQM can't be seen as a quick fix way, stressing that its success involves a long-term paradigm shift, through significant organizational changes [2]. TQM is an integrated management philosophy whose purpose is the quality continuous improvement not only in products/ /services, but also in firms' overall processes, allowing customers' satisfaction and promoting the efforts and responsibility of everyone in the organization [11]. Steele directed his own TQM's definition toward the concept of stakeholder, stressing that producing quality

means satisfying or exceeding stakeholders' expectations, and that quality improvement initiatives, ruled by TQM's principles, may look for reaching a balance between the different stakeholders' needs, through coordinated efforts from all collaborators, seeking at attaining firms' vision [16].

As stressed by Wallace [18], firm's competitiveness can only come true by profitably meeting customer's needs better than competitors. In fact, the quality of relationships with stakeholders and the firm's ability in meeting stakeholders' expectations drive firm's overall performance. The truth is that there are always a number of complex trade-offs in business decision making, and obviously the customer is not the only one whose requirements must be attended. The key is to align the business processes throughout the organisation to stakeholder-driven objectives to make sure that everybody is aiming for the same goals or vision and then to first improve those that most closely align with the vision and offer the greatest opportunity for improvement [4].

In fact, smaller organizations' main strengths and weaknesses are generally related to stakeholders' characteristics, as well as to relationship's nature between these and SME. Organizations are characterized by relationships with several groups and individuals – stakeholders, each one with enough power to affect its performance and/or with a specific interest in firm's performance. The concept focuses on a relationship based on a bi-directional exchange: stakeholders may not only be affected by the organization, but can also perform an important role in organizations' activities. Several stakeholders who influence directly firms' quality practices have been identified based on

literature review and highlighted by several national quality awards: Entrepreneur, Employees, Customers, Suppliers, and Society, among others.

Regarding stakeholders' role in quality continuous improvement, a literature review focussed on SME, showed many features whose research has not been sufficiently deepened, and need further developments. Thus researches focused specifically towards quality concerns in SME may represent a field where research can expand, for example regarding management's role, and mainly the possible influence that senior managers' personal academic education or training on quality management may have on his role in quality continuous improvement initiatives developed.

In their study, Young et al. explain that theoretically demographic characteristics depict both experiences and general background that shaped managers' cognitive base (beliefs, abilities and values) which influences decision-making [21]. Based on their results concerning the positive influence of CEO action on the organizational innovation process, Meyer and Goes stressed that it may be reasonable to suggest that senior managers' characteristics and strategic orientation can have some effects on organizational/technological innovation processes' implementation conducted to quality improvement [14]. Furthermore, other researches highlighted that top management's education level was positively related to organizational/technological innovation [8], [3].

1. Research's Objective and Methodology

This specific research was carried out as part of a wider project focused on how Portuguese manufacturing SME face quality improvement challenges and how their relationship with their main stakeholders foster or hinder their journey toward quality continuous improvement. Researchers concerned with organizational dimension highlight that there are significant operational differences between SME and large firms, enhancing that what applies to larger firms may not be suitable to smaller ones. Regarding research on quality management, few studies focused specifically on comparative analysis between SME and larger firms, and even less between smaller firms and medium-sized ones. This observation may be worrying, especially considering that, according

to literature, small firms and medium-sized ones are different in nature, and this can influence differently the way they act and perform.

Thus, the main aim of this research focused on a set of concerns regarding the role of SME' senior manager in planning/development of initiatives directed towards quality continuous improvement. These concerns ended up in the research's main focus and got materialized throughout the following purposes: (i) to explore the relationship between senior managers' characteristics within SME, and firms' propensity to develop quality improvement programs' implementation; (ii) to compare leadership related initiatives in small firms to those from medium-sized ones. Attending to these purposes and other arguments and concerns highlighted throughout research focusing on both SME and quality management literature, the following hypotheses were formulated: (i) Senior managers with specific training in quality management themes play a role more preponderant in planning and performing quality improvement programs; (ii) Among SME, firms' dimension influences leadership related initiatives.

Regarding the methodological procedures to be followed, since an early stage it was clear that data available was insufficient to perform the research plan initially designed. Thus, faced to such constraint, it was necessary to collect information directly in SME. Considering the lack of resources, the research's time horizon, and the nature of information needed to perform the study, the method chosen was the survey through questionnaire. In order to study firms' size factor, a distinction was made between small companies (fewer than 50 employees) and medium-sized companies (between 50 and 250 employees).

A questionnaire based, on previous case studies and a deep literature review focused on quality management and SME management was mailed to 600 Portuguese SME randomly selected from the pan-European AMADEUS database [Bureau Van Dijk], containing financial information on over 13 million public and private companies in 41 European countries. Out of the sample selected, a total of 95 questionnaires were completed and returned, performing a final response rate around 16 %, which can be considered satisfactory since many other studies analyzed during the

literature review and focusing on production/operations management or quality management, were based on similar response rates. Data gathered were submitted to a set of statistical analyses, using SPSS (Statistical Package for Social Sciences), and punctually, some of Microsoft Excel's statistics and data bases

tools. Univariate analyses were performed on analyses strictly descriptive, and bivariate analysis was used on analyses based on means comparison (Student's T test and Chi-square test). The table 1 summarizes the main methodological considerations which supported the research carried out.

Tab. 1: Research's Methodological Considerations

Time horizon	Cross-section analysis
Geographical focus	Portugal
Sector	Manufacturing firms
Firms' size	Small and medium sized (fewer than 250 employees)
Data collection	Questionnaire by mail
Sample definition	Sample randomly selected
Sample	600 firms
Response rate	95 Responses – 16 %
Statistical analysis	Univariate and bivariate analysis

Source: own elaboration

2. Results and Discussion

First of all, it was necessary to find out who were the senior managers in SME; as a result, a brief analysis was carried out, not only in terms of characterising these specific stakeholders, but also attempting to study specific issues concerning the nature of the relationship between SME and senior management. Accordingly, at a first place, it was necessary to ascertain who, in SME, performed senior management' role. Analysis of the data collected shows that in more than 80 % of the companies surveyed, the role of senior manager is performed by the entrepreneur himself or by one of the company shareholders (see table 5). This finding supports, to a certain extent, one of the central ideas evident in the literature focused on entrepreneurship and SME management, which concerns the preponderance of the role played by company owner(s) in SME' management. Data gathered also shows that almost 95 % of leaders are male and that the mean age is fifty years old (Standard Dev.: 9), varying between thirty and seventy five. Table 2 provides more detailed information, showing the distribution of companies according senior managers' mean age. Data shows that the mean age group with most senior managers is

the one between 44 and 50 years old, and therefore close to the mean already mentioned. However it is worth pointing out that 20 % of senior managers are over 57 years old.

As can be observed from table 3, more than 65 % of senior managers participated in the process of creating the respective companies. Therefore, data seem to suggest that most of senior managers have accompanied the company's development, in accordance with the observation made previously that in more than 80 % of companies, the role of senior manager is performed by the entrepreneur himself or one of the shareholders. Data analysis also show that at least 15 % of the capital owners were not founders, because they did not participate in the process of creating the respective companies.

Table 4 shows that most of senior managers have been in charge of the company for several years. In fact, observation of the table reveals that almost half the companies have been directed by the same person for more than fifteen years. This was predictable since the great majority of companies are directed by the owner(s) and more than half the companies surveyed were created more than twenty years ago.

Tab. 2: Senior Managers' Mean Age

Mean Age	Frequency	Percent	Cumulative percent
[30–36]	4	4.2	4.2
[37–43]	16	16.8	21.1
[44–50]	34	35.8	56.8
[51–57]	22	23.2	80.0
[58–64]	11	11.6	91.6
[65–71]	6	6.3	97.9
[72–75]	2	2.1	100.0
Total	95	100.0	

Source: own elaboration

Tab. 3: Participation of Senior Managers in Firms' Creation Process

The senior manager ...	Frequency	Percent	Cumulative percent
... didn't participated in firm's creation	33	34.7	34.7
... participated in firm's creation	62	65.3	100.0
Total	95	100.0	

Source: own elaboration

Tab. 4: Time Running the Firm

The senior manager runs the firm for ... years ...	Frequency	Percent	Cumulative percent
[1–5]	14	14.7	14.7
[6–10]	13	13.7	28.4
[11–15]	22	23.2	51.6
[16–20]	19	20.0	71.6
[21–25]	18	18.9	90.5
[26–30]	4	4.2	94.7
[31–35]	2	2.1	96.8
[36–40]	3	3.2	100.0
Total	95	100.0	

Source: own elaboration

Regarding, senior managers' training issues, table 5 shows that about half senior managers have a higher education level. It is worth highlighting here the small percentage of senior managers with primary education. That observation goes against several studies carried out one decade ago, some in Portugal and others in specific regions, reported in

Portuguese literature, where it was found that only a few senior managers had academic qualifications over secondary level [13], [17]. More recently, other investigations arrived at similar conclusions to this one, reporting higher levels of qualifications among senior managers [6]. Such considerations suggest that, across time, entrepreneurs' education level is

increasing, which seems reasonable, since Portuguese population's educational level has been rising through last couple of decades. The summarized information still reveals significant differences in the level of academic qualifications between two groups of senior managers. In fact, considering on one hand company owners (the entrepreneur or one of the partners/ /shareholders) and on the other, managers, significant differences are observed between

the two groups. Although there are similar patterns among owners, observation of the table reveals a great difference in cases where managers are in charge. Indeed, if regarding owners, there is a certain balance between secondary education and higher education, in the case of managers, the pattern changes significantly with almost 85 % of these having higher qualifications.

Tab. 5: Differentiating Senior Managers through Educational Level

SENIOR MANAGERS' LEVEL OF EDUCATION	SENIOR MANAGER			Total
	The entrepreneur	One of the partners/shareholders	A manager	
Primary Education	1	9	1	11
Secondary Education	7	30	2	39
Higher Education	6	24	15	45
TOTAL	14	63	18	95

Note: Chi-square test significance: 0.016

Source: own elaboration

Concerning specific training in quality management issues, analysis of the data collected (table 6), highlights the fact that more than a third of senior managers do not have any training directed towards quality improvement. Crossing this variable with the number of employees (reflecting firms' size) did not reveal any statistically significant difference, as the level of significance obtained for the chi-square remained very close to the unit. Significant differences may be expected between large companies and smaller ones, given the constant references to lack of resources by small companies. However, the data collected do not allow concluding that senior managers in larger companies have a higher knowledge level about quality management issues. Data reveal significant differences between senior managers regarding specific training in quality management. Considering on one hand company owners (the entrepreneur or one of the partners/shareholders) and managers on the other, there are significant differences between both groups. In fact, despite finding a certain balance between owners with and without training, information from table 6 shows great differences in training when managers

are in charge. Indeed, in this case, the percentage of senior managers with specific training in quality management issues rises to almost 90 %. Application of the chi-square test confirms those significant differences in statistical terms, showing a level of significance of 0.042.

These results, together with the information obtained from table 5, suggested a hypothetic strong relationship between academic qualification and specific training in quality. Crosstabulation and chi-square test's results are summarized in table 7. As can be seen, the relationship between both variables is statistically significant. Data show that the significance level obtained for the chi-square test is 0.009, clearly under a reasonable limit of 0.05. An analysis of the values shows that the percentage of senior managers with specific training in quality increases as the level of academic qualifications increases. This finding shows clearly that there is, a strong relationship between academic qualifications and specific training in quality, suggesting that senior managers with higher academic qualifications are more aware of the importance of training in quality improvement issues.

Tab. 6: Differentiating Senior Managers through Specific Training in Quality

SPECIFIC TRAINING IN QUALITY MANAGEMENT ISSUES		SENIOR MANAGER			Total
		The entrepreneur	One of the partners/ /shareholders	A manager	
NO	Count	6	27	2	35
	Row %	17.1 %	77.1 %	5.7 %	100.0 %
	Column %	42.9 %	42.9 %	11.1 %	36.8 %
YES	Count	8	36	16	60
	Row %	13.3 %	60.0 %	26.7 %	100.0 %
	Column %	57.1 %	57.1 %	88.9 %	63.2 %
TOTAL	Count	14	63	18	95
	Row %	14.7 %	66.3 %	18.9 %	100.0 %

Note: Chi-square test significance: 0.042

Source: own elaboration

Tab. 7: Senior Managers' Educational Level versus Specific Training in Quality Management Issues

SENIOR MANAGERS' LEVEL OF EDUCATION		SPECIFIC TRAINING IN QUALITY MANAGEMENT ISSUES		Total
		No	Yes	
Primary Education	Count	8	3	11
	Row %	72.7 %	27.3 %	100.0 %
	Column %	22.9 %	5.0 %	11.6 %
Secondary Education	Count	16	23	39
	Row %	41.0 %	59.0 %	100.0 %
	Column %	45.7 %	38.3 %	41.1 %
Higher Education	Count	11	34	45
	Row %	24.4 %	75.6 %	100.0 %
	Column %	31.4 %	56.7 %	47.4 %
TOTAL	Count	35	60	95
	Row %	36.8 %	63.2 %	100.0 %

Note: Chi-square test significance: 0.009

Source: own elaboration

Turning now to the role played by senior managers in quality improvement, and beginning with an analysis of table 8, it can be observed that, due to lack of time, almost 20 % of senior managers choose to delegate all issues related to quality management. Nevertheless, many senior managers are concerned with the challenge of quality, since the information shows that almost 30 % of senior managers seem to be closely involved in quality improvement planning.

Data gathered regarding the percentage devoted to quality matters, completes, to a certain extent, what was observed above. In effect, a significant number of senior managers (near 50 %) devote a tiny part of their time (under 10 %) to issues related to quality improvement. The data analysis also highlights that 30 % of senior managers devote less than 5 % of their time and that 7.5 % delegate totally decision-making concerning quality management. Even so, it can be seen that around 30 %

Tab. 8: Senior Managers' Role in Quality Improvement Issues

Senior managers' role	Frequency	Percent	Cumulative percent
Total delegation due to lack of time	18	18.9	18.9
Partial delegation: processes are somehow monitored	51	53.7	72.6
High involvement in Quality issues	26	27.4	100.0
TOTAL	95	100.0	

Source: own elaboration

dedicate more than 20 % of their time, showing that, nevertheless, there is a group of senior managers who are quite worried with quality improvement. Performing a crosstabulation with the two previous variables confirmed the trustworthiness of data gathered, since the level of significance obtained for the chi-square test was 0.004, suggesting that senior managers supposedly closely involved in matters of Quality are also those who devote a greater part of their time to issues of quality.

Hypothesis H1 – *Senior managers with specific training in quality management themes play a role more preponderant in planning and performing quality improvement programs.*

Crossing the variable "Role of the senior manager in the area of Quality" with "Specific training in quality" showed a close relationship between the two variables, since the level of significance obtained for the chi-square test

was 0.01. Results presented in table 9 show that senior managers with training in the area of quality management are in general those who are more involved in the area of quality improvement. Such observation may be understood through two different interpretations: (1) senior managers with training in the areas of quality improvement know that their full involvement is important in developing quality systems, since it is an important aspect referred to throughout the literature on quality improvement; (2) senior managers who try to be closely involved in quality management issues are aware of the importance of having good training in this specific area to better monitor quality improvement process. In any case, the hypothesis raised can be confirmed, since results obtained clearly suggest that senior managers who had specific training in quality improvement issues play a role more preponderant in planning and development of quality improvement programs, through a greater personal involvement.

Tab. 9: Role of Senior Manager in Quality versus Specific Training in Quality

SENIOR MANAGERS' LEVEL OF EDUCATION		SPECIFIC TRAINING IN QUALITY MANAGEMENT ISSUES		Total
		No	Yes	
Total delegation due to lack of time	Count	12	6	18
	Row %	66.7 %	33.3 %	100.0 %
	Column %	34.3 %	10.0 %	18.9 %
Partial delegation: processes are somehow monitored	Count	17	34	51
	Row %	33.3 %	66.7 %	100.0 %
	Column %	48.6 %	56.7 %	53.7 %
High involvement in Quality issues	Count	6	20	26
	Row %	23.1 %	76.9 %	100.0 %
	Column %	17.1 %	33.3 %	27.4 %
TOTAL	Count	35	60	95
	Row %	36.8 %	63.2 %	100.0 %

Note: Chi-square test significance: 0.010

Source: own elaboration

There was yet another question in the questionnaire that aimed to get information about senior managers' understanding of the principles involved in Certification, on one hand, and in Total Quality Management on the other. Performing a crosstabulation between these two variables and the role of the senior manager in quality management issues revealed that both levels of significance obtained for the chi-square test were close to 0.000. Data summarized in table 10 show that nearly all senior managers involved (closely or partially) in quality improvement issues, understand the principles involved, both in Total Quality Management and ISO 9000 Certification.

Nevertheless, it should be emphasised that not all of those who understand the principles involved in certification and TQM, had specific training in quality management issues. In fact, results summarized in table 10 show that many senior managers understand the principles inherent in both philosophies, without having

any personal specific training. In fact, it may be observed that around 80 % of senior managers without any specific training in quality improvement issues appear to understand the principles involved in firm's certification. In addition, near 55 % of the same senior managers understand somehow the main principles inherent to Total Quality Management. The significant difference between percentages may be due to the higher communication and spread of the importance and advantages of certification throughout Medias, mainly explained by a higher interest and involvement of national organizations focused on quality awareness promotion and industrial associations.

Although the considerations presented above suggest that there is, in fact, a certain relationship between knowledge acquired in the area of quality management and the role played by senior managers in quality improvement, there are still doubts concerning the relationship between those two variables.

Tab. 10: Specific Training in Quality Issues versus Certification and TQM Principles

SPECIFIC TRAINING IN QUALITY MANAGEMENT ISSUES		THE SENIOR MANAGER FULLY UNDERSTAND ISO 9000 CERTIFICATION PRINCIPLES			THE SENIOR MANAGER FULLY UNDERSTAND TQM PRINCIPLES		
		No	Yes	Total	NO	YES	Total
No	Count	7	28	35	16	19	35
	Row %	20.0%	80.0%	100.0%	45.7%	54.3%	100.0%
	Column %	87.5%	32.2%	36.8%	80.0%	25.3%	36.8%
Yes	Count	1	59	60	4	56	60
	Row %	1.7%	98.3%	100.0%	6.7%	93.3%	100.0%
	Column %	12.5%	67.8%	63.2%	20.0%	74.7%	63.2%
TOTAL	Count	8	87	95	20	75	95
	Row %	8.4%	91.6%	100.0%	21.1%	78.9%	100.0%

Note: Chi-square test significance: 0.002

Chi-square test significance: 0.000

Source: own elaboration

In fact, it can be supposed that senior managers with greater knowledge in the area of quality management may be more conscious about the need for processes' improvement to be monitored and supported regularly by top management. However, it can also be supposed that those senior managers, who try to monitor and support regularly quality improvement's processes, feel needs regarding information on the subject and look for specific

training actions in quality issues, to support their actuation.

It is also worth pointing out that the crosstab carried out between senior managers' understanding of TQM's principles and their academic qualifications revealed a level of significance for χ^2 of 0.029, clearly under 0.05. Therefore, data in table 11 suggest that, as the level of education increases, there is also an increasing of senior managers' understanding of the principles underlying TQM.

Tab. 11: Understanding of TQM's Principles versus Senior Managers' Training

THE SENIOR MANAGER FULLY UNDERSTAND TQM'S PRINCIPLES		SENIOR MANAGERS' LEVEL OF EDUCATION			Total
		Primary education	Secondary education	Higher education	
NO	Count	5	10	5	20
	Row %	25.0 %	50.0 %	25.0 %	100.0 %
	Column %	45.5 %	25.6 %	11.1 %	21.1 %
YES	Count	6	29	40	75
	Row %	8.0 %	38.7 %	53.3 %	100.0 %
	Column %	54.5 %	74.4 %	88.9 %	78.9 %
TOTAL	Count	11	39	45	95
	Row %	11.6 %	41.0 %	47.4 %	100.0 %

Note: Chi-square test significance: 0.029

Source: own elaboration

Tab. 12: Understanding of Certification's Principles versus Senior Managers' Training

THE SENIOR MANAGER FULLY UNDERSTAND CERTIFICATION'S PRINCIPLES		SENIOR MANAGERS' LEVEL OF EDUCATION			Total
		Primary education	Secondary education	Higher education	
NO	Count	3	2	3	8
	Row %	37.5 %	25.0 %	37.5 %	100.0 %
	Column %	27.3 %	5.1 %	6.7 %	8.4 %
YES	Count	8	37	42	87
	Row %	9.2 %	42.5 %	48.3 %	100.0 %
	Column %	72.7 %	94.9 %	93.3 %	91.6 %
TOTAL	Count	11	39	45	95
	Row %	11.6 %	41.1%	47.4 %	100.0 %

Note: Chi-square test significance: 0.055

Source: own elaboration

Regarding senior managers' understanding of the principles underlying certification, results from the crosstab reveal a statistically significant relation between variables, suggesting a certain trend, similar to the one observed in the case of TQM, although less significantly, possibly due to the same reason given above, which concerned the greater popularity of certification in the business world.

In addition, another variable may be considered as influencing senior managers' understanding of the principles inherent in TQM and Certification: age of the senior manager. In fact, although the analysed data did not reveal any

relation between age and senior managers' specific training in quality, concerning their understanding of the principles inherent in Certification and TQM, the crosstab showed levels of significance for the χ^2 around 0.002, in both cases, suggesting therefore that the youngest senior managers have a stronger grasp of quality management.

It should also be mentioned that, results from a crosstab between seniors' understanding of the principles inherent in TQM, and their participation in firms' creation process, showed a level of significance for the χ^2 around 0.037, suggesting statistically significant differences.

In fact, the data obtained suggest that from those senior managers who participated in the firm's process of creation, about a third do not understand the principles underlying TQM, whereas from those who did not participate in the process, only about a tenth do not understand the principles underlying TQM. The same tendency is suggested in the case of certification, although the test carried out did not highlight substantially different statistical differences.

Most of researches carried out in the field of TQM show that top management's lack of commitment represents the main cause for TQM failure. For example, according to Crosby, management is responsible for at least 80 % of quality problems in an organization, stressing that the only way to improve is through an effective leadership from management [4]. As claimed by Flynn et al., top management's actions and behaviour concerning objectives' definition, communication, performance measurement/assessment, and employees' participation fostering, are critical issues in quality management [5]. Fynes underlines that top management should promote continuous improvement, teamwork and customer service, and should also act accordingly [7]; the author reinforce such idea, claiming that the absence of such visionary approach to leadership may represent one of the principle obstructing factors to the implementation of quality improvement programmes. Ahire et al. share similar opinions, stressing that "leader" must help employees to have a clear perception about organization's strategies and operations [1].

Hypothesis H2 – *Among SME, firms' dimension influences leadership related initiatives.*

In order to clarify some issues inherent to leadership, and to test the hypothesis formulated, a set of propositions (based on the literature review), was included in the questionnaire sent to SME, which had to be weighted attending to a scale from "Fully suitable" (5) to "not suitable at all" (1), assessing how each one corresponded to an initiative currently implemented in SME. One of the purposes of this study was to check if these propositions presented significant differences according to firms' dimension. Thus, beside a descriptive analysis, a T test was also

performed. Data analysis allowed information summarized in table 13, which enhance for each proposition, both means and standard deviations for each one of the two groups of firms, frequencies recorded for each of the variables (for each of the scale levels), as well as the results of the appropriate mean's comparison statistical test.

Before going on with the hypothesis analysis, it was important to highlight some previous considerations about the frequencies and means obtained. Therefore, from results, summarized in table 13, it may be seen that all the means obtained are above 3.20, suggesting that initiatives related to leadership are an important aspect regarding quality improvement in SME. It can even be observed that, in most cases, means exceed the value of 4, that is, between the levels of "very suitable" and "fully suitable". Furthermore, it should also be noticed that the first 2 initiatives are "fully suitable", in more than half the SME. The data gathered seem, therefore, to suggest that attending to the characteristics of the SME' hierarchical structure, leadership may be an important factor in quality improvement.

Finally, it is now important to ascertain if, in SMEs, different companies act similarly, trying to consider the legitimacy of the hypothesis formulated. Attending to results of the T test, it may be observed that from the 12 variables considered, differences statistically significant between small firms and medium-sized ones (for levels of significance of 0.05 and 0.1) were found in 5 cases: (i) Senior management foster initiative spirit; (ii) Senior management foster efforts oriented towards quality improvement; (iii) Communication is encouraged between employees of different functional levels; (iv) Senior management tries to spread firm's values throughout hierarchical functional levels; and (v) Senior management maintain contact with employees outside the firm. Data in table 13 also show that means are higher in small firms than in larger companies, not only in the cases where significant differences were found, but also in the other cases, suggesting, therefore, that the issue of leadership has greater expression in smaller companies, regarding quality improvement. Accordingly, attending to the results obtained, the hypothesis was partially confirmed. In fact, the results suggest that, although small firms generally record

Tab. 13: Initiatives Related to Leadership in Quality Improvement and Firms' Size – T test Results

	FIRM'S SIZE									
		N	Mean	Std. Dev.	Percentage in each level					Signif.
					5	4	3	2	1	
Senior management has regular contacts with plant operators	Small	30	4.73	0.45	73.3	26.7				0.192
	Medium	65	4.57	0.61	63.1	30.8	6.2			
	TOTAL		4.62	0.57	66.3	29.5	4.2			
Senior management maintain direct contact with employees in general	Small	30	4.63	0.56	66.7	30.0	3.3			0.176
	Medium	65	4.42	0.79	53.8	38.5	4.6	1.5	1.5	
	TOTAL		4.48	0.73	57.9	35.8	4.2	1.1	1.1	
An effort is made for quality objectives to tie in with those of the company	Small	30	4.43	0.68	53.3	36.7	10.0			0.406
	Medium	65	4.31	0.68	41.5	49.2	7.7	1.5		
	TOTAL		4.35	0.68	45.3	45.3	8.4	1.1		
Senior management foster initiative spirit	Small	30	4.50	0.57	53.3	43.3	3.3			0.010*
	Medium	65	4.03	0.90	33.8	41.5	20.0	3.1	1.5	
	TOTAL		4.18	0.84	40.0	42.1	14.7	2.1	1.1	
Senior management foster communication between hierarchical levels	Small	30	4.30	0.65	40.0	50.0	10.0			0.291
	Medium	65	4.11	0.89	33.8	50.8	10.8	1.5	3.1	
	TOTAL		4.17	0.82	35.8	50.5	10.5	1.1	2.1	
Senior management foster efforts oriented towards quality improvement	Small	30	4.43	0.57	46.7	50.0	3.3			0.040*
	Medium	65	4.05	0.94	35.4	41.5	18.5	1.5	3.1	
	TOTAL		4.17	0.86	38.9	44.2	13.7	1.1	2.1	
Communication is encouraged between employees of different functional levels	Small	30	4.33	0.66	43.3	46.7	10.0			0.056**
	Medium	65	4.00	0.83	27.7	50.8	15.4	6.2		
	TOTAL		4.11	0.79	32.6	49.5	13.7	4.2		
Senior management tries to spread firm's values throughout hierarchical functional levels	Small	30	4.40	0.56	43.3	53.3	3.3			0.006*
	Medium	65	3.92	0.85	24.6	50.8	16.9	7.7		
	TOTAL		4.07	0.80	30.5	51.6	12.6	5.3		
Senior management maintain contact with customers outside the firm	Small	30	4.10	0.99	36.7	50.0	3.3	6.7	3.3	0.605
	Medium	65	4.00	0.81	26.2	53.8	13.8	6.2		
	TOTAL		4.03	0.87	29.5	52.6	10.5	6.3	1.1	
Senior management foster teamwork	Small	30	4.03	0.85	30.0	50.0	13.3	6.7		0.590
	Medium	65	3.92	0.96	32.3	35.4	26.2	4.6	1.5	
	TOTAL		3.96	0.92	31.6	40.0	22.1	5.3	1.1	
Everyone contributes towards development and communication of firm's values	Small	30	4.07	0.74	26.7	56.7	13.3	3.3		0.306
	Medium	65	3.88	0.88	24.6	44.6	26.2	3.1	1.5	
	TOTAL		3.94	0.84	25.3	48.4	22.1	3.2	1.1	
Senior management maintain contact with employees outside the firm	Small	30	3.50	1.07	23.3	20.0	43.3	10.0	3.3	0.083**
	Medium	65	3.06	1.16	9.2	27.7	36.9	12.3	13.8	
	TOTAL		3.20	1.14	13.7	25.3	38.9	11.6	10.5	

Note: Each initiative was weighted, in a scale from "Fully suitable" (5) to "not suitable at all" (1), assessing how each one correspond to an initiative currently implemented in SME.

95 SME

* p <= 5 %

** p <= 10 %

Source: own elaboration

higher means than the others, there are only significant differences in about half of the initiatives considered.

Conclusion

Summary and Final Considerations

According to several researchers (e.g. [10], [15]), regarding change processes, a unique catalyst is frequently sufficient in SME, allowing them to be more flexible regarding the implementation of new management philosophies and approaches. Furthermore, as stressed by Haksever, in many SME the business is frequently run by the entrepreneur who assumes most of management's functions [9], and as highlighted by Ghobadian and Gallear regarding leadership, entrepreneurs' global vision of firms represent a great benefit in SME [12]. Regarding this particular sample, results computed show that in a significant part of inquired SME, the senior manager's role is played by the entrepreneur or one of the owners. Such observation corroborates one of the main ideas expressed in literature focused on entrepreneurship and small business management: the preponderance of the role played by owners in SME management. Results also suggest that most of senior managers remain running SME' development for several years, frequently since firms' creation.

Results suggest that some of SME senior manager's characteristics may influence significantly the way firms are dealing with quality improvement matters. In fact, if some specific characteristics like senior manager's nature, time running the business, or his participation or not in SME's creation, don't seem to influence firms' propensity to quality improvement, some other characteristics may play a significant role. At a first instance, data suggest clearly that SME' propensity to quality improvement depends somehow on senior managers' age, showing that, in general, younger senior managers have a deeper knowledge about quality management and these seem to manifest a higher commitment level towards quality improvement. Furthermore, results also suggest that SME where senior managers have a higher education level and specific training on quality management may have a higher propensity to quality improvement. Furthermore, the data also suggest that senior managers' understanding

of the purpose and principles of both TQM and ISO 9000 influence SME' propensity to develop initiatives oriented toward quality improvement. Such observation reinforce even more the idea that knowledge acquired from training in quality management may have a significant influence in SME' predisposition to embark on projects based on TQM or/and ISO 9000 standards. Data collected seems to corroborate results from other research projects [20] which suggested that specific training in quality management influences somehow the initiatives focused on quality improvement implemented in firms, and that senior managers' lack of understanding of the purpose and principles of both TQM and ISO 9000 may be one of the main obstacles to the planning and development of measures aimed at improving quality, based on such principles. Finally, data gathered also suggest that attending to SME' hierarchical structure characteristics, leadership issues assume high importance in quality improvement practices in such organizations. Furthermore, results suggest that current leadership initiatives assume a higher preponderance in smaller firms.

This research provided contributions both at a theoretical and a managerial level. It may contribute to theory expansion because it explored specific management issues focused on the role played by SME' senior managers in quality management and contributes to improve our understanding about the importance of their formation and training on making quality improvement programs effective and successful, issues not discussed broadly in literature. The paper is of particular interest, since even if many organizations adopt new management philosophies and approaches such as TQM, literature shows that a smaller number are able to sustain its success. This study may contribute with new insights for a better understanding of why such phenomenon occurs. Furthermore, this research may represent a starting point for future researches, especially focused on differences between small firms and medium-sized ones.

Limitations and Future Research Directions

This research approached critical issues to quality improvement in any SME; as found through an extensive literature review, such concerns may be a field where research can extensively expand. Some of the results reported here

corroborated conclusions of other researches; other findings, largely supportive to our original purposes, may provide potentially fruitful avenues for further research; however they have to be interpreted in the light of a number of limitations.

First of all, the study focused exclusively on manufacturing SME; thus special care is needed when attempting to generalize results to other economic sectors. Furthermore, the research focused on a specific national context: Portugal. In fact, being part of a wider project specifically focused on Portuguese manufacturing SME, the survey population is limited to those firms. As a result, conclusions might not be generalizable to firms in other economic sectors, and other countries. Therefore, in order to test the external validity of such findings, further researches directed at other sectors, and carried out in different countries would be welcome. Furthermore, relying upon self-reports of single informants might potentially affect somehow findings with respondent biases. A multiple-informant approach, through a set of case-studies would enhance the internal validity of findings.

It is obvious that more research is needed to fully understand the importance of Leadership in SME regarding quality issues. For example, data gathered suggest that, attending to SME' hierarchical structure, leadership issues may assume high importance in quality improvement issues, and that leadership initiatives assume a higher preponderance in smaller firms, probably due to benefits gained through a lean structure and a familiar atmosphere. Such evidences may suggest that if, at an early stage, leadership initiatives assume a higher preponderance in smaller firms regarding quality improvement, benefiting from entrepreneurs' global vision of firms, as firms grow, entrepreneurs may begin to focus on specific functions, delegating others, like quality management issues. Nevertheless, such reasoning can only be confirmed through different research approaches, longitudinal in nature, which may gain additional insights from the dynamic growth process. Further researches based on longitudinal case studies, may capture such hypothetical reasoning.

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Abstract

SENIOR MANAGERS AND SMES' PROPENSITY TO QUALITY IMPROVEMENT PROGRAMS – A COMPARATIVE ANALYSIS**Luís António Fonseca Mendes**

The main aim of this research focused on a set of concerns regarding the role of SME senior manager in planning/development of initiatives directed towards quality continuous improvement. These concerns ended up in the research's main focus and got materialized throughout the following purposes: (i) to explore the relationship between senior managers' characteristics within SME, and firms' propensity to develop quality improvement programs' implementation; (ii) to compare leadership related initiatives in small firms to those from medium-sized ones. Attending to these purposes and other arguments and concerns highlighted throughout research focusing on both SME and quality management literature, the following hypotheses were formulated: (i) Senior managers with specific training in quality management themes play a role more preponderant in planning and performing quality improvement programs; (ii) Among SME, firms' dimension influences leadership related initiatives.

For this purpose, a questionnaire based, on previous case studies and a deep literature review focused on quality management and SME management was mailed to 600 Portuguese SME randomly selected from the pan-European AMADEUS database. From the sample, around 16 % of questionnaires were completed and returned. Results suggest that if some specific characteristics, like senior manager's nature, time running the business, or his participation or not in SME creation, doesn't seem to influence firms' propensity to quality improvement; some other characteristics may play a significant role. For example, factors like age or specific training on quality management may determine, or at least influence, somehow, senior manager's attitude and commitment towards quality improvement. Furthermore, attending to SME hierarchical structure characteristics, leadership issues assume high importance in quality improvement practices in such organizations. Moreover, results suggest that current leadership initiatives assume a higher preponderance in smaller firms.

Key Words: Senior manager, leadership, quality improvement, SME, stakeholders.

JEL Classification: D21, D22, M11.