

INFORMATION FLOWS AND ENVIRONMENTS IN BUSINESS CONTEXTS: THE MEAT SECTOR CASE OF SALAMANCA/SPAIN

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ABSTRACT

Organizational environments are related to hierarchic levels existing in a determined organization, and they influence in the formal and informal flows origin and in their monitoring and/or extinction. Informational environments are a result of organizational environments, of which focus is information and knowledge. Information flows are a fundamental element to informational environments, in a way that there's no informational environments if there's no information flows. Informational flows are natural reflections from their environments, in terms of content and in the way they occur. This qualitative and quantitative research was developed in three stages, in a way to allow the comprehension of the phenomena related to information and knowledge environments and information flows that occur in the meat sector from the Province of Salamanca, Spain. We used Laurence Bardin's 'Analysis of Content', more specifically the 'Categorical Analysis' technique to data analysis. As data collection procedure we accomplished a field research, applying a questionnaire as an intentional sample of the meat industries segment from the Province of Salamanca, Spain. From data tabulation and analysis, we infer that information environments and flows are relevant to these companies business development, as well as we emphasized the need of information and knowledge management deployment, in a way to insure organizational processes quality, industrial chain production and companies competition to conquer potential markets.

Keywords: Informational Environment; Information Flows; Information Management; Records Management; Knowledge Management; Business Environment.

1 INTRODUCTION

The Spanish meat sector is one of the most important Spain economic segments. According to the 2009¹ data from the *Asociación Nacional de Industrias de la Carne de España* (ANICE), this industrial sector only loses to the automotive, oil and fuel industries and to the electrical energy production and distribution industry.

The slaughterhouses, cold stores, cutting industries and final product industries are a part of this economic segment productive chain, consisting of approximately 4 (four) thousand micro, small, medium-sized and large companies, which are spread in the Spanish territory, consisting of about 20% of the Spanish food sector. The sector represents 2% of the Spanish GDP and 14% of the Spanish GDP coming from the industrial sector. The sector employs about 90 thousand workers, which represents approximately 20% of the labor occupied by the Spanish food industry. The value relating to export is significant, as well as the product reach is also significant, once the segment is in stores worldwide. The Spanish meat export represents about 30% of the whole production, however only 7% of the total of the industrialized meat products are exported, this shows that is necessary to develop actions to obtain more sector competitiveness especially to the industrialized product added value (ANICE, 2009).

The creation of wrapped food is a Spanish tradition that creates not only commercial separation, but also cultural and gastronomic separation. It's important to remark that this economic segment generates jobs and income to the Spanish citizen and is a sector that contributes to the country economic and social strengthening, once it represents about 20% of the total of jobs generates in Spain. The JCyL meat industry hires 36.15% of the local workers, besides, it is biased toward a sustainable development since it makes possible to people that work in the industrial chain primary sector to remain in the rural area. The *Junta de Castilla y León* (JCyL) has the greatest number of sector industries, amounting 19.4% of the total of Spanish companies. At JCyL there are about 859 (eight hundred and fifty-nine) meat companies, 19.46% of the total existing in Spain, highlighting four provinces (states): Salamanca, Burgos, Valladolid and Segovia, as well as three production areas: the axis *Guijuelo/Salamanca*, the axis *León/San Andrés Del Rabanedo* and the axis *Cantimpalos/Segovia-Cillacastín*. Salamanca is the province with the greatest number of sector companies, with approximately 346 (three hundred and forty-six) companies².

2 METHODOLOGICAL PROCEDURES

The research was developed in three stages, in the first one a bibliographic survey was done and, from the reading, analysis and reflection of the chosen texts, a theoretical frame was done to sustain this research object and phenomenon discussion. In the second stage the data acquisition was done. A questionnaire was created, with opened and closed questions, of which application was done in the meat industries of the Province of *Salamanca*, Spain. The industry selection happened through the *Cámara Oficial de Comercio e Industria de Salamanca* register, compound by 346 (three hundred and forty-six) industries. The city of *Guijuelo* is a highlight, since it has the largest number of industries registered in the *Cámara Oficial de Comercio e Industria de Salamanca*, with a total of 151 (one hundred and fifty-one), it constitutes a significant segment industrial complex, followed by the city of *Salamanca* with 23 (twenty-three) industries. We chose to select only the industries with an e-mail address, once we intended to mail the questionnaire. Therefore, we selected 141 (one hundred and forty-one) industries, 40.75% of the total of 346 (three hundred and forty-six) registered companies in the *Cámara Oficial de Comercio e Industria de Salamanca* register. This way, an intentional sample was defined, a non-probabilistic sample, but connected to the research objectives. The intentional sample can be used when the element set is significant in its extent, time, cost and complexity. We had an answer from 25 (twenty-five) industries, representing 73% of total of 141 (one hundred forty-one) selected industries. In the third stage the data and information analysis procedures were done. We chose the Bardin's 'Content Analysis' method (c1977) that has many techniques that can be applied to the academic-scientific researches; the most used ones in the field of science are: 'Lexical Analysis' and 'Categorical Analysis'. The Categorical Analysis (themes) approaches the break-up of the speech in categories, where the choice and delimitation criteria are guided by the themes investigation extent related to the research, identified in the researched subjects, that's why is qualitative (BARDIN, c1977, p.80-82).

This way, from the theoretical *corpus* constitution extracted from the literature analysis and from the questionnaire answers, we established *a posteriori* 4 (four)

categories to the analysis accomplishment, interpretation and inferences related to the researched object and: 1) Information Environments; 2) Information Flows; 3) Information Culture; 4) Information Behavior.

3 THEORETICAL REFERENCE

The organizational environments are made up of a set of elements: structure, processes, flows, communication, and culture, among others. The workflows are made up of information and knowledge directed toward the performed activities and tasks. According to Kock Jr., McQueen and Corner (1997, p.3, our translation) an organizational environment can be seen as the performance of specialized functions by organizational subjects, resource application and tools for the activities execution and, also the flows related to the developed activities and tasks.

Hedman and Kalling (2003, p.51, our translation) explain that there are three perspectives that offer a set of essential information and knowledge to the operation of any kind of organization: 1) clients, suppliers and competitors; 2) context, market and environment; 3) structure, processes, flows and resources, therefore, modern organizations are so complex from the information point of view, because they involve totally different universes that produce information and knowledge.

The environmental conditions offer bigger or smaller degrees of stability, influencing in the information flows dynamics and uniformity. People, key elements in this dynamic, are influenced by these conditions that influence the information flows. Besides, information flows are a result of organizational actions and they are connected to the internal and external environments. All the environment changes influence somehow in the existing information flows. The importance of the information management is a highlight in this context, since it provides people more agility and reliability to the access, achievement and use of information that will be used in different purposes.

According to Kishore, Zhang and Ramesh (2006, p.55, our translation) the communication among organizational agents is essential to any organization. In these terms, they highlight that the cross-functional organizational structure gives multiple integration among agents, sectors and work system. The stable environment

provides the existence of uniform flows, once they act in an integrated and standardized manner. This factor is connected to the appropriate work conditions and to the positive existing organizational culture, besides efficient communication resources, as we mentioned it before. Besides these factors, w it's important to highlight the produced products and provided services, the kind of existing clients and suppliers, the kind of market where the organization is and the competition level. On the other hand, the unstable environment makes the existence of non-uniforms flows possible, because it's the result of the instability of the organizational environment, here understood in the *lato* form, approaching the organization internal and external environment. This factor is connected to the inappropriate work conditions, to the existing negative organizational culture and to the inefficient communication resources. Besides these factors, the unpredictability and insecurity in the political, economic, legal and technological issues are remarkable. In this perspective the information and knowledge management may be seen as an answer to manage information and knowledge, making the information flows better.

The existing information flows in an organization may be formal (structured) or informal (non-structured). Kyriakopoulos and Ruyter (2004, p.1474-1483, our translation) classify the organizational information flows as internal and external. According to these authors, the internal flows occur when the organizational subjects are based in internal information sources, and the external flows occur when the organizational subjects are based in external information sources.

Petrauskas (2006, p.442, our translation) explains that the information flows are important to facilitate the connection among different organizational levels. This way, the structural flows linked to the organization organogram facilitate the movement of information to the upper level that processes it to the next upper level, in a way that people who work in the last level may make decisions. As of decisions made, return information that permeate the lower levels, in order to support the activities and tasks, both tactical and operational, to be developed. The formal information flows traffic data and information, subsidizing the knowledge construction in the organization subjects, aiming an action. This dynamic facilitates more agility to the decision makers, as well as more assertive conditions to the organizational subjects that execute activities and tasks in the tactical and operational levels. The

information flows may be crucial to the competitive organizations that depend on the answer speed to critical situations.

Taylor (1986, p.14-15) clarifies that information value is directly proportionate to the use context. Indeed the information needs of the cognize characterize the information value to this individual in the context and in the action to be accomplished. Taylor believes that from the individual information necessity, a process is started to mediate the received existing information and its use/application, to a determined aim, in a determined context.

The existing information flows in the organizational environments are naturally produced by the very people and sectors acting in it, from the accomplished activities, tasks and decisions. In the flow course, the same information can be used to other objectives, and in this case, the jargon is adjusted and other values that originally the information didn't have may be or not added, this means that information is changeable and not static such as it is in other information environments. This characteristic makes organizational environments extremely complex in the information and data creation, sharing, access and use.

Each of the levels produces information, and therefore, different information flows of which application is diverse and will essentially depend on the produced information contents, on the objectives linked to the reason they were produced, as well as the use objectives by other people and sector, this factor that will value the information importance and relevance. Besides that, the information flows, in each of the organization levels have bigger or smaller impact in certain activities.

Behrman and Carley (2003, our translation) explain that the information flows are fundamental to the “[...] communication, cooperation and coordination among sectors that are considered organizational ‘knots’[...] and help to identify possible bottlenecks in the information flows from the existing “knots”. For this reason, one of the information management activities is linked to the information flows mapping, of which representation will enable to observe the information producers, the created documentary kinds, the exchange of documents/information, the *gaps* that occur throughout the flow, the leader influence in the information sharing.

Information crosses the information flows and facilitates different reactions in the organizational subjects, this depends on each person's information needs and it

will depend on the possibility of the appropriation or non-appropriation of relevant information to the developed activity/task. Valentim (2008, p.21) emphasizes that the information phenomena in organizational environments may exist from different perspectives and may meet needs/demands: functionalist (information as an object–**proof**), structuralist (information as power– **subjugation**), humanist (information as emancipation– **decision**) and interpretative (information as significance – **new knowledge creation**).

The structured information flows (formal) are characterized by their visibility and constituted in the repetitive developed activities and tasks in the organizational environment, they are supported by procedure rules and clear specifications and registered in different supports, they circulate in different media and, besides that, there is information management by one person or many people, whose responsibility refers to the information treatment, organization, storage, preservation and dissemination, in a way that the access, appropriation and use may be effective.

The non-structured flows (informal) may also be called knowledge flows, that are, according to Gupta and Govindarajan (1991, p.773, our translation) understood as any competence, ability or strategic value capacity transference. The kind of existing content in these flows is related to the organizational processes, such as *know-how*, *know-why*, *know-when*, expertise, among others. The informal or non-structured information flows are characterized, almost always, for their invisibility, therefore they are constituted in the organizational subject individual and group experience results and they are supported by the organizational learning and by the knowledge sharing/socialization among people. To this kind of flow is necessary the knowledge management of which work is accomplished by all people who work in the organization, once the responsibility refers to the socialization and sharing of the individual and group experiences.

Shin, Holden and Schmidt (2001, p.342, our translation) suggest that the greatest barrier to the use of knowledge created in the organizational environment refers to the blocked channels and flows between the knowledge provider and the knowledge seeker and it's necessary to the organization to structure itself in a way to allow the organizational subjects access to this kind of flow.

According to Bordia, Kronenberg e Neely (2005, p.6-8, our translation) any

complex and multifunctional process, such as innovation, requires intense information exchange, thereby is necessary to have efficient communication of which dynamic happens through real communication channels, but it also requires cultural and encouragement mechanisms to promote the aim to seek and share information

The information and knowledge flows may be developed not only in the organizational environment, but also in the scope of any economic segment productive chain. In this perspective, Christopher (2000, our translation) mentions that shared information among companies of a determined productive chain are only totally enjoyed when there is process integration involving producer, clients, suppliers and other related agents, once integration facilitates greatest information transparency to the strategy set establishment.

4 RESULT PRESENTATION

The 25 (twenty-five) participant industries in the research have significant path in the meat industry, once most of them have been operating in the market for more than twenty years. This shows that it's a consistent business in economic terms, therefore most part of industries is consolidated in the market.

In relation to the information flows, 52% of the researched subjects mentioned that they occur from top to bottom. However, 36% of the researched subjects emphasized that flows occur in every way, depending on the activity and/or context, essential factor to the information and knowledge sharing in organizational environments. Focusing on small companies this happens frequently, once there's more proximity among people, precisely because work division is not vertical.

Communication among people/sectors in an organization may happen by the use of different resources. When there's a more formal structure, communication flows through the documentation that disseminates decisions, procedures, norms and directions. This may happen through printed matters and through technologies.

Organizational culture crosses all the organizational environment and its essence are the principles and values that govern people who act there. Informational culture is part of this universe with focus on informational and knowledge matters. It's considered extremely important to any kind of organization

effect work focused on informational culture because it may facilitate positive behaviors related to information and knowledge search, access, sharing, appropriation and use. This way, we verified what values, believes, rituals and existing norms related to information and knowledge.

In terms of value, 92% of the researched mentioned that in the company they act there's valorization of people and/or sectors that create information and knowledge. Regarding believes, 84% consider that in the company they work information and knowledge are considered supply to any kind of activity and/or task. However, 12% of the researched subjects told that information and knowledge are considered power elements. This is a reality that can be applied to other economic segments because information and knowledge really are competitive differentials that a person and/or sector may hold over another.

In relation to rituals existing in the company related to information and knowledge creation, sharing and use, such as, for example, promotions related to who shared an idea that succeeded or that created important innovation to the organization, most of researched (68%) told that they don't exist. This happens mainly because the research participant companies' don't have career and performance plans, essential elements to the definition of promotion or awarding criteria.

We observed that 60% of the research subjects told that there were no rules and/or procedures applied to activities and tasks related to information and knowledge creation, sharing, appropriation and use, contributing with the fact that there were no rituals about it. Rituals usually are value, believes and rules reflections established in the organizational environment. When there are no norms to clearly define what's valued, believes are not produced about the matter itself and, as a result, there will be no rituals related to believes, there's a dynamic to informational culture creation because it depends on clear norms to create values that influence on personal believes that start conducting rituals to share this believes and values in the organizational environment. This way, regardless of the company size it's possible to establish clear norms to disseminate organizational values related to information and knowledge, creating an informational culture favorable to these two elements.

Leaders are key elements to relationship nets because they develop

behavior patterns so we tried to verify how the leaders shares information with the other company collaborators. Most of the researched subjects (48%) mentioned that leaders allow only information they find necessary to the other organization members and only 20% of the researched highlighted that leaders allow all information necessary to the group. Leaders have the essential role in terms of information and knowledge, so, if the leader shares only information that he or she may find necessary to other collaborators, he or she will influence in the group informational behavior and, probably, organization collaborators will reproduce the same values, believes, rituals and norms.

In terms of informational needs of the researched subjects, it's clear that strategical information (22%) are essential to the development of activities and tasks. We verified what the facilities to supply informational needs were: 17% of them highlighted that the organizational conditions and information and communication technologies were important to decrease this informational deficiency. We also highlight that 14% of the researched mentioned that the specialized knowledge they have is a decisive factor to supply this informational deficiencies. In this perspective, we observe that most of the researched have great experience in the meat sector, knowledge is fundamental in an informational gaps context.

In terms of barrier, ICT were mentioned as essential elements to facilitate speed to informational searches, such as information access. Time is a present barrier, especially to small companies' managers, because most of the time they develop more than one role and also, that don't have informational competence to act efficiently.

In terms of how the researched subjects interact when they need to solve an organizational problem, we observed that interaction happens in the company internal environment, more specifically: with the boss (24%), with the person they work for; with employees (19%), with people who manage; coworkers (26%), with people that have professional relationship in the company environment. Interaction with the external environment happens with 24% of the researched subjects, more specifically: with specialists (people from different areas that have necessary experience/knowledge to solve the problem); and people that are connected to formal or informal nets where they participate. This shows that time and technology

are really a barrier, as they mentioned it previously, once to interact with the external environment is necessary to have technological structure that facilitates that or available time to run to university specialists, associations, research institutes, governments. In this sense, it's necessary to highlight the importance of managers' participation in social networks, in a way they can access quickly people with specialized knowledge, aiming the information and knowledge exchange to problem solutions.

In terms of information sharing ways in the organizational environment, we verified that is more common, among the researched companies, the informal conversations (11%) and meetings (10%), if it facilitates an important interaction among organizational actors, on the other hand it can facilitate the loss of information, if it's not properly systematized. We highlight that, in this case, knowledge management may be applied to the researched companies aiming act with informal flows, facilitating the systematization of knowledge created in talk and meeting environment.

Considering the important information sharing the researched subjects mentioned, in their majority, (44%), that they communicate the company director, besides, they also communicate coworkers (21%). Information and knowledge sharing is related to present values in the company informational culture. This way, culture is responsible for creating new positive values in terms of information and knowledge, establishing a trustworthy relationship among organizational actors. Besides, the decision-making process may be more dynamic, when the organizational members have access to important information to be applied in the decision-making process, as well as to the development of activities and tasks that must be developed in the working routine. Another relevant issue related to this refers to the decrease of internal competition among people and sectors and the increase of cooperation, the people development of a cooperative informational behavior.

Aiming to verify the company conditions in the utilized information and communication technologies, we questioned if the company had a managerial information system (MIS). Most of the researched subjects (52%) informed that the company has a managerial information system. 28% of these ones acquired a ready

commercial software and implanted it in their companies; 20% adapted the commercially acquired software to the companies' needs, and only 12% developed an internal managerial information system. Mentioning SIG 8 (eight) companies told that they have this kind of system, but only 4 (four) companies mentioned that they had Intranet.

The quality of the meat sector products is fundamental, especially to their insertion in international markets. In this sense, we tried to know what product quality norms are used by the researched companies. The ISO 9001³ norm is used by 11 (eleven) companies; the ISO 22001⁴ norm is used by 4 (four) companies; the ISO 14000⁵ norm is only used by 1 (one) company; and the OHSAS 18001⁶ norm that specifies the requirements to a Health and Work Security manage system (HWS), designated to allow that an organization controls the risks to HWS and improves its development related to HWS, is used by 2 (two) companies. The implementation of quality standards is a practice companies may accomplish in their companies, once they are related from product quality to environment issues. In this perspective, it's evident that the meat sector productive chain is highly pollutant such as, for example, slaughterhouses, and it's necessary to take special care with this kind of company residues. Other researched subjects also told that companies use specialized specifications, such as, for example, BRC⁷, of which standard is mandatory to the United Kingdom suppliers; IFS⁸, oh which standard was developed by German distribution companies, aiming to establish the audit requirements to food suppliers. In 2003, French distribution companies gathered IFS and contributed to the current norm version⁹.

However, we observe that some companies that participated the research didn't use basic norms, such as ISSO and 9001, that establishes criteria to get quality certification by diverse national and international organisms, and 22001, that establishes directions to food security and, however, it is fundamental to companies considering that they use different manufacturing processes and finally ISO 14000 that has directions to the environment management towards a production environment, once as it was previously mentioned, some industries that a part of the productive chain are highly pollutant.

4.1 Informational Environments

Organizational environments structure is extremely important, as highlights Ballestero Alvarez (2000, p.120), as he defines and establishes responsibility, authority, command, function and work division, the functional relationship in a determined organization. Organizational structure, however, is essential because it defines the communication media and information flows in a determined environment, as well as it influences in the formality and/or informality with they occur.

Sundström and Deacon (2002, our translation) explain that there are three kinds of organizational structure related to the associated information flows: 1) 'functional', characterized by information flows of which dynamic crosses different organizational levels, but the decision-making is centralized; 2) 'departmental', characterized by information flows of which dynamic doesn't cross the different organizational levels, it happens in a determined sector and, however, the decision-making is centralized in the sector itself; 3) 'net', characterized by information flows of which dynamic crosses all different organizational levels and the decision-making is decentralized.

In terms of the researched companies informational environments we observed that even the majority of researched mentioned that it's a hierarchical structure, that follows the established session commands from top to bottom, we observe that they have a functional-hierarchical structure because they are in most of the cases small companies, and they follow the authority established by the held post and also by area/sector and this is a factor that makes a more effective interaction among people and sectors possible.

Information and knowledge cross the environment in a more dynamic way, however, the subsequent processes from the informational environment may be harmed because the organizational structure is informal, once it requires more attention to information and knowledge management, there's need for clear normative to the information systematization, and also to knowledge sharing, otherwise it will certainly happen loss of important information to the decision-making and development of activities and tasks.

4.2 Informational Flows

Informational flows occur in a dynamic way, influenced by the most informal structured of the researched companies, this way communication, as a result, flows occur formally or informally, depending on the situation. It is evident that communication and flows don't respect the company hierarchy, and as it was demonstrated in literature, communication media and flows occur in every way/direction, from top to bottom, from bottom to top, horizontal and also transversal.

Informational structure influences the communication media and the information flows, so a company that structure itself informational, will be able to count on systematic informational flows, so they can make use of information and knowledge created in a more effective way. Information flows are inherent in the company existing communication media, that's why the functional structure is beneficial from the dynamic, speed and integration point of view, but on the other hand it is a little fragile concerning information and knowledge systematization and preservation to latter access, exactly for this reason it's necessary to the company to invest information and knowledge management in order to have a better management of these two elements. For this, the company must establish information creation, sharing and use politics, by normative directions that define each organizational subject responsibility, authority and function, the way that this informational routine must be developed, as well as how to apply control mechanisms and feedback to managers, whose aim is constant policy, normative instructions improvement, and as a result, communication media and informational flows.

Through communication media and informational flows it's possible to understand how the administrative actions happen, where there are and why the bottlenecks and/ or *gaps* in the decision-making process happen, the involving developed activities and tasks and information and knowledge influence in this dynamic. Besides it's possible to observe what are the most active sectors and people in terms of information and organizational knowledge creation, sharing and use.

Another aspect related to informational flows is ICT, once technology

application in business environment is fundamental. Nowadays there are many technological resources, from the simple ones to the more sophisticated, in any way companies need to structure themselves in a more modern way in terms of information and communication technologies use. Bresnen *et al.* (2003, p.161, our translation) mention that information and communication technologies are important resources to communication among people and sectors, because they formalize information flows. This way, the use of simple resources, such as e-mail, may and must be adopted to the sharing of information created in the organizational environment. These authors highlight that personal contact, through the use of nets it's also an efficient way to share information and knowledge, so, the use of forums, chats and sites are essential to debate relevant matters to the organization business. In this perspective, we observed that many companies don't have sites, and it cannot be justified by the fact that they are small companies, since we have, nowadays, many tools to sites creation and maintenance in the Web environment, and most of them are extremely accessible. Sites are important tools to the company communication with clients, suppliers, investors, because from their access it's possible to know products and services, as well as to establish contact. Besides, the company may use this tool to commercialize their products and services, what makes its growth possibilities bigger.

Sadiq and Orłowska (s.d., our translation) affirm that working flows systems may be implanted to the processes, activities and tasks monitoring, once this kind of resource promotes a dynamic guided to information creation and systematization. Besides, it's evident that this kind of resource also facilitates information monitoring and course, indicating sector, person and action being accomplished. From the researched companies we observed that few of them had information systems and this factor is determinant to the loss of information and knowledge created in its environment, since there's no monitoring related to access, organization, course, sharing, storage, preservation and use. This way, it would be necessary to sector companies to search deploy this kind of system, aiming to decrease information and knowledge loss, as well as they could create organizational memory, that is so important to innovation, to defend themselves in legal processes and also, to know their own history.

Information management and knowledge management are management models that act since the information creation (formal flows) and knowledge creation (informal flows) and, however, they can be deployed by companies with interest in managing all processes involving these very important elements to contemporary organizations that want to be more competitive.

4.3 Informational Culture

In relation to informational culture of the researched companies we observed that there's an agreement about the importance of value people and sectors that create information and knowledge to the company business, as well as they affirmed that there's a belief that information and knowledge are important bases to the organizational development..

Schein (2001, p.45) explains that organizational culture is “[...] the sum of all certainties shared and considered right learned by a group in their history course”, as well as he highlights the leader importance to the culture creation and guidance. In this perspective, informational culture is not being correctly shared in some of the researched companies, once may researched subjects affirmed that there was no leadership in the sector and/or organization and leaders are essential to share values and organizational believes. The lack of leaders is worrying from the point of view of culture because it depends on this kind of collaborator to share values and believes in the work environment.

In the same way, informational culture depends on rituals and rules to facilitate information and knowledge creation, sharing and use to the development of activities and tasks. It's evident that rules and/or procedures created in the company environment are tools that provide culture consolidation, once they supply collaborators the necessary clarity to act from values, believes, rituals established in the company.

Informational culture depends on the organization existing leader behavior, therefore researched companies may observe if there's really lack of leadership in their sectors so they can remedy this error. For this it's important to highlight that it's possible to form leaders, that the company may train people that work in it to develop

leadership abilities.

Informational culture is made of values of which principles manage the organization related to information/knowledge, such as, for example, valuing people who create and share information/knowledge; believes of which perceptions and feelings – conscious or non-conscious – related to information/knowledge are determinants, such as, for example, believe that information means power; rituals, of which leaders actions and behavior related to information/knowledge are imitated by the other organization members, such as, for example, share an important piece of information to an area/sector; rules of which procedures and directions are essential to the systematization of information/knowledge created in the organizational environment, facilitating the subsequent recovery.

4.4 Information Behavior

Information behavior, according to Davenport and Prusak (1998, p.110), refers to the behavior and attitude patterns developed by people in a determined work environment that show the information directions and conduct. In this perspective, information behavior expresses itself from the organizational structure, the communication media and information flows, as well as from the existing information culture in a determined work environment. Each organizational subject information behavior is influenced directly by the existing leader behavior. This way, according to Kanaane (1999, p.171), there are three behavior levels in an organizational environment: the individual behavior that refers to the individual reactions and conduct; the group behavior that refers to the multiple influences from the organizational environment dynamic; and the organizational behavior that refers to the organizational context general manifestations. This way, we defend that there are three behavior levels related to information/knowledge in a determined organizational environment: organizational behavior related to information/knowledge; group behavior related to information/knowledge and individual behavior related to information/knowledge.

Organizational information behavior is related to politics, rules and instructions to information and knowledge and they affirm what the organization

(owner and/or shareholders) values in this scope. This is essential because leaders follow these politics and rules. In this level it gets obvious what are the principles that manage the organization in information and knowledge terms. On the other hand, the group information behavior is based on the organizational information behavior and it widely shared by the organization existing leaders, as well as they influence the other existing members. In this level the values and rituals related to information and knowledge are done. Finally, the individual information behavior is based on the group information behavior expressed by the leaders, in this environment believes and myths related to information and knowledge are consolidated. Believes and myths may be changed in long term, depending on the organizational and group information behavior.

According to Jarvenpaa and Staples (2000, p.135, our translation) the belief that information and knowledge sharing is the organization expected and valued behavior may be acquired and/or reinforced from organizational rules and procedures, which means that information culture is about a large organizational principle and the information and knowledge sharing is about a specific organizational rule.

In the Salamanca meat industries case it will be necessary to first develop politics and rules to the information and knowledge creation, sharing and use. In the next moment, it will be important to try to develop abilities in the collaborators leadership, in a way to facilitate a positive influence related to the information and knowledge creation, sharing and use.

Kirk (1999, our translation) highlights that information management and knowledge management, as management models, have potential to contribute with organizational development, however they depend on internal conditions that involve structure and information flows, information culture, different kinds of information management, the value attribution and information ethics.

Generally the meat economic segment companies from the Province of Salamanca have conditions to develop themselves in information. As previously mentioned, information and knowledge are bases to any business growth and, in this case, there is a great possibility this companies will occupy new markets creating more profit to the company and more jobs and money to the local population. For

this, it's necessary to have information ability to subsidy the decision process, as well as short, medium and long term strategies planning.

5 FINAL CONSIDERATIONS

From the data and information obtained in the field research, it's possible to observe that the Province of Salamanca meat industries lack concrete actions to the information and knowledge management, that's why they don't know contemporary management models focused on information and knowledge, more precisely the directed to the information environment and flow that let the business activities stronger.

This reality is related to the size of companies that took part in the research universe, most of them are small, besides we verified that the ICT are not present to support the activities and tasks developed by them, it's a decisive factor to the information and knowledge management in this kind of organization.

The formal and informal flows existing in companies cross the media in a dynamic way but there's no systematization of the business relevant information. This has effect in the decision making process, especially in the long term planning because the action strategies are fundamental to the company be aware of the business opportunities, besides it can prepare itself in a proper way to the external environment changes, and predict risks that may affect the company in medium and long term. This way, the information flows exist, but they don't support the researched companies created information and knowledge management.

Obviously, there's a difference among the existing information environments, but they are not significant to communication and information flows once they are small companies with a modest structure. In this way, collaborators interact and don't need a specific information structure to their acting area or sector. However, the kind of information they need is related to the responsibilities, functions, activities and accomplished tasks, decisive factor to make an efficient information management possible.

Generally the researched industries have positive values to information and knowledge, in terms of information/knowledge creation, sharing, dissemination,

appropriation and use, however as the information culture initially depends on leaders to disseminate principles and values in the organizational environment, and for this companies it's obvious the lack of leadership, this is an aspect that can and should be improved by managers. Leadership is determinant to the constitution of formal and informal information and knowledge flows and as previously mentioned, it's important to the dissemination of values companies may find relevant. This matter must be more discussed by the researched companies, once it's obvious the lack of leaders in most of them. Besides, in the companies with leaders, their role is shy when it comes to information.

Information culture influences information flows, once it's adjusted to the environment characteristic and communication media. In this way, companies may use tools to manage media and information flows using *workflow software* that have proved efficiency to small companies. In the researched companies case the application of this kind of *software* could also contribute to facilitate information flows, once the information dynamic occurs in every way and for that reason, relevant business information gets loss.

Organization processes depend on strategical information and planning, as previously mentioned by the researched subjects and this shows that companies depend on information flows that go through all sectors in a dynamic way, so they can make decisions and create plans in different organizational levels. Lastly, we highlight that information and knowledge management may encourage new flows and consolidate the existing ones, that's why we suggest to this economic segment companies use this management models, facilitating more production and competitiveness to the organization.

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NOTES

¹ Latest data available in the *site* from *Asociación Nacional de Industrias de la Carne de España* (ANICE). Available: <<http://www.anice.es>>.

² Data from the *Cámara Oficial de Comercio e Industria de Salamanca* – 2012.

³ ISO 9001 - Standards: establish criteria that must be accomplished to get quality certification.

⁴ ISO 22001 – Guidance to the ISO 9001 norm adaptation to food safety.

⁵ ISO 14000 – Guidance to environment management.

⁶ OHSAS 18001 – is the acronym to *Occupational Health and Safety Assessment Services*.

⁷ BRC - is the acronym to *British Retail Consortium* (BRC).

⁸ IFS - is the acronym to *International Food Standard* (IFS).

⁹ Source: <http://www.bureauveritas.pt/>.



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