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**STRATEGIC VALUE CREATION AND VALUE CAPTURE PROCESS.
A COMPARATIVE STUDY WITHIN U.S. COMMERCIAL AIRLINE
INDUSTRY**

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***Strategic Value Creation and Value Capture Process. A Comparative
Study Within U.S. Commercial Airline Industry.***

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INTRODUCTION

This dissertation entitled “Strategic Value Creation and Value Capture Process. A Comparative Study Within U.S. Commercial Airline Industry” deeply analyzes the issues of value creation and capture, with a glimpse on the human resources, working at the operational level of the major U.S. commercial airline companies.

The interest on this theme affords its roots on previous works entitled “Human resources’ value creation and value capturing: a literature review” presented at Strategic Management Society Annual Meeting (2012) and “A literature review on value creation and value capturing in strategic management studies” published in the Journal Corporate Ownership & Control (2014). Both of them are written with Professor Valentina Della Corte.

In particular, the purpose of the present research is to discover how human resources create value, understanding at what level resides the created value, to after analyze if the so created value is appropriated by the source who generates it.

This dissertation is articulated into four chapters: a first section is devoted to the identification of literary background (chapters one and two) while the second section (chapters three and four) deals with the empirical analysis of the airline industry. In the second section the attention is focused on the process through which pilots, co-pilots, flight attendants, maintenance, passenger, cargo and aircraft handling create and capture value.

The *first chapter* presents the research project, underlying the scientific motivation that leads to the outlying of the current dissertation.

The meaning of the concept “value” is discussed in this chapter to demonstrate the huge complexity of this research issue.

Chapter one, indeed, underlines the lack of a definition of the concept of value as strategic management scholars focus the attention on the antecedents of value creation rather than of its definition.

Furthermore, this chapter highlights the theoretical reflections that constitute a precious point of departure for the development of the current dissertation.

Indeed, the attention on internal focus springs out from the analysis made in this chapter.

The ***second chapter*** proposes a theoretical analysis on the literature background. This chapter uses a literature review methodology. Thanks to the application of the tools established within this clear methodology, the chapter highlights the main findings on the issues of value creation and capture.

This chapter underlines a wider understanding on the research theme in the light of more empirical studies.

The aim of this chapter is to verify how and whether literature identifies the sources of value creation as well as from whom and how the so created value is then captured (value appropriation). In this sense, the current work is outlined according a clear path that conceives value creation and value capture processes as separated since the source of value creation has to “share this value with other stakeholders” (Lepak et al., 2007).

More precisely, this chapter is developed in the light of two research dilemmas: the first one concerns the clarification of the sources of value creation (Does the distinction among the levels of analysis is clear in literature? Do these levels overlap or are they considered as isolated?); the second is related to value capture and the relative focus on the slippage between the source who creates it and the player who appropriates it.

In this direction, the literature review allows to verify the literature production and the relative distribution of the levels of analysis in order to understand to what extent works on both value creation and value capture issues are concentrate on the single level rather than the multiple levels.

Moreover, in this chapter it is clarified in what terms executives, employees and firm capture this value.

Furthermore, this chapter explores the link between employees’ productivity and both value creation and capture. In particular, since some scholars have bring forward that productivity *per se* does not influence firm’s profitability, the current dissertation verifies the truthfulness of this statement.

With the ***third chapter*** the attention shifts from the theoretical background to the analysis of the referring industry.

This chapter defines the status of the U.S. airline industry and tries to explain the reasons why this industry is characterized by a strong instability (i.e., intense price competition, intense use of Internet Technologies, stiff cost structure, principal-agent problems, etc.).

The chapter proceeds with the focus on the strategic and organizational features of airline companies to after analyze the different sources that create and capture value in this specific kind of industry.

The *fourth chapter* introduces the methodology of the research entering into the empirical discussion. Indeed, the themes of value creation and value capture are, in this chapter, deal with a precise level of analysis and with a clear key that acts as a bridge between the creation and capture of value.

This chapter aims at verifying if employees' productivity influences firm performance and if the value they create if after appropriated.

In particular, this chapter explores whether the productivity (measured here through some indicators such as ASM per employees, employees per aircraft, passengers per employees, passenger revenue per employees) of pilots, co-pilots, flight attendants, maintenance and passenger, cargo and aircraft handling acts upon the creation of value and if the created value is then appropriated by these groups of employees.

The Structural Equation Modelling is used as methodology since it allows measuring latent variables such as value creation and value capture.

Finally, *conclusions* explain the findings and the results of this study as well as highlith the limits and the future research directions.

CHAPTER I

BACKGROUND TO THE STUDY

1. 1 Overview to the study

In the strategic management literature the concept of “value, in its declination of value creation and value capture, nowadays still occupies a central position in the debate among academic scholars.

This debate and the consequent development of these research issues sink the roots on their huge complexity.

Several scholars stress the attention, right from the introduction of their works, on the existence of a general confusion around the topic.

More precisely, these authors translate this confusion in terms of “lack of agreement”, “disagreement”, “confusion”, “not a clear understanding” or “dilemmas” – to cite the most important - as the following sentences show.

Lepak, Smith and Taylor (2007) state that:

“..... we now view this lack of agreement about value creation among organizational scholars as one of the most important conclusions from this Special Topic Forum”
(p.180)

“.....considerable disagreement and confusion remain among scholars on the nature of value creation” (p. 190)

Bowman and Ambrosini (2007) argue that:

While this is well acknowledged by RBV advocates there is however not a clear understanding of what valuable means within the view.

This being said, these definitions, while helping our understanding of what valuable¹ means still leave many questions and dilemmas that have yet to be resolved.

These considerations allow to become aware of the necessity to deeply study these issues, trying to break them into different parts that shape the concepts of “value creation” and “value capture”. Of course these research issues, being complex, require a holistic approach in order to understand their entirety.

That is the reason why the current work attempts to shed light on these interesting topics through a systematization of the existing literature and the development of some empirical foundations.

If the explanation on the choice of these topics could appear expected, the formulation of one specific question is actually what serves as introduction for this dissertation. The basic question is: “Why value creation and value capture represent two key issues within the strategic management literature?”.

The answer to this question inhabits in the same interrogatives that leads strategic scholars to deal with these themes.

Indeed, as Coff (1999, p. 120) underlines, recalling Amit and Schoemaker (1993), there is a core dilemma that highlights both the necessity to create value and the understanding of the elements involved in this process: “What resources and capabilities will generate rent for firm?”

This sentence, more than the others, acts as background to this work since the research of what can be the sources able to generate value constitutes the starting point of the literature review (see chapter two).

Effectively, the study of both value creation and value capture involves the investigation of who and what generates and appropriates such value.

If up to now, this work has introduced the core issues of the current dissertation, the following paragraphs will explore some theoretical points underpinning the problem of the research.

¹ For Bowman and Ambrosini the term “valuable” means that generates value.

1.2 Statement of the problem

There are some studies in strategic management literature, that parallel proceed on the exploration of the same dilemma about the creation and appropriation of value process, even if they are dated in different years.

More precisely, the blatant example is given by two works, that at the beginning of the research they focused the attention on some clear questions. As it is possible to note in table 1.1, the studies of Bowman and Ambrosini (2000) and Lepak *et al* (2007) seem to move towards the same direction since they formulate similar questions in terms of contents.

Table 1.1 – Dilemma on value creation and value capture

Authors	Dilemma 1	Dilemma 2	Dilemma 3
Bowman and Ambrosini, 2000 (p. 1)	what is ‘value’?	how is it created?	and who captures it?
Lepak, Smith and Taylor, 2007 (p. 180)	what value creation is	the process by which value is created	the mechanisms that allow the creator of value to capture the value

Source: Our Elaboration.

The comparison between the constructions helps in understanding and outlying the path of the current research.

Actually, deeply examining these critical points, the analysis of the first sentences shows a substantial difference. Indeed, while Bowman and Ambrosini start with questioning about the meaning of value, on the other side, Lepak *et al* inquire about the sense of value creation.

The interesting and specific question of Bowman and Ambrosini is translated in the need to adopt two acceptations. These are “use value “and “exchange value”. The first refers to the value “perceived by the customer” and is related to the “specific qualities of the product”. The second concerns the price and it is exactly “the monetary amount realized at a single point in the time when the exchange of the good takes place”.

Although Lepak *et al* (2007) refer to value creation rather than value, in the explanation about this concept they start the discussion by introducing the theoretical constructs of use value and exchange value developed by Bowman and Ambrosini.

Recalling their definitions, finally they claim that value creation “depends on the relative amount of value that is subjectively realized by a target user (or buyer) who is the focus of value creation and that this subjective value realization must at least translate into the user’s willingness to exchange a monetary amount for value received”. This phrase highlights the lack of a definition since the scholars affirm on what value creation depends and not what it really is even if in the following paragraphs they claim “having defined value creation” (p.182).

They only add and indicate the existence of two conditions for value creation. The first refers to the necessity that monetary amount have to overtake the costs related to the sphere of the producer. The second is linked to the fact that the monetary amount exchanged by the user depends on “the perceived performance difference between the new value that is created and the target user’s closest alternative” (p. 182).

As viewed from this comparison, clear assumptions do not emerge. This represents the first point on which it is necessary to work and deepen in the second chapter, broadening the analysis with more contributions.

As regards the second dilemma, from the analysis of the two contributions, it seems to emerge a similarity in terms of contents. Indeed, they deal with the theme of the process of value creation (Lepak *et al.*, 2007) that Bowman and Ambrosini emphasize with the proposition “how”.

In order to explain this process, Lepak *et al.* clarify that they adopt a “contingency perspective” rather than a “single universal” one since, in their work, there is a recall to different sources of value creation and, hence, the necessity to establish what is the unit of analysis comes out. They categorize these levels into individual, organizational and societal.

Besides, Bowman and Ambrosini claim that there are not the tangible inputs to create value but “the intervention of people” or, in other words, “ the actions of organizational members” (p.5) can generate use value that then realizes exchange value.

Although the formulated sentences could appear similar, from the answers of the scholars some first considerations come out.

The first concerns the identification of what and who can be the sources of value. As viewed, according to Lepak *et al.* there are three kinds of sources nested in different levels (individual, organizational and societal) while Bowman and Ambrosini conceive in the organizational members (individual level) the real source of value. These studies constitute the starting point for this dissertation, works from which it is necessary to depart in order to find what are the theoretical gaps within this stream of research.

Indeed, the current work tries to find at what level can be located the different sources of value. It is suitable to wonder about what are the sources of value creation and if those listed by Lepak *et al.* can be considered as complete.

Despite this consideration, Bowman and Ambrosini underline that the process of value creation is “inside the firm” (p.5) while Lepak *et al.* add, as external source, the societal level where the society “intentionally or unintentionally” create value. These studies do not include the creation of value at network level while other studies suggest (Gulati, 1999; Lavie, 2006, 2007) that the source of value can be located in the network the company creates.

As regards the identified levels of analysis, this work concentrates its attention on the individual level of analysis and, more precisely, on the operational level of nine airline companies.

There is the third dilemma regarding the capture of value with a difference between the two sentences. Bowman and Ambrosini just inquire who is the captor of value and Lepak *et al.* focus their attention on the mechanisms that help such captor to become an appropriator of that value.

Reading and analyzing the thought of Bowman and Ambrosini, they state that strategic management scholars adopting as theoretical lens the resource-based theory (Barney, 1991; Penrose, 1958) concentrate their attention on the barriers to imitation “rather than on the problems of retain value within the firm”. Thus the issue of value capture has a customer perspective.

The expression “within the firm”, used by the authors, underlines that value can be captured both at individual and organizational level, introducing the distinction made by Lepak *et al.* (2007) between the three levels identified also in the value creation process.

Furthermore, as Coff (1999) and Holcomb *et al* (2009) claim, only few literature contributions have addressed the issues of value creation and value capture with an internal focus.

These reflections constitute a precious point of departure for the development of the current work. Indeed, the attention on internal focus characterizes this dissertation and, particularly, the study will analyze how human resources at operational level of nine airlines companies create and capture value.

1.3 Purpose of the research

The above discussion has introduced the purpose of the present research that consists in discovering how human resources create value, understanding at what level resides the created value, to after analyze if the so created value is appropriated by the source who generates it.

In order to do that, the structure of the current dissertation is conceived according to the development of both theoretical and empirical sections. Within this configuration, the recall to the airline industry acts as binding agent since it offers the possibility to analyze how pilots and co-pilots, flight attendants, maintenance, passenger, cargo and aircraft handling create and appropriate value.

The attention on this kind of employees allows to gain better insights on the issues of value creation and value capture.

As Teece *et al.* (1997) underline, the value of firm's human resources mainly depends upon their employment and their immersion in a particular organizational context. The concept of employment represents the right interpretation that makes able to understand whether, how and to what extent the employment can be translated in terms of productivity.

Here the question is: Can the concept of productivity be used and linked to the study of value creation and value capture? Why? How the employees' productivity can create value? And how the so created value can be captured by the source who generates it?

There are some studies (Hallock *et al*, 2004) underlining that the implementation of employee stock ownership can increase the productivity.

At this point, it is important to inquire about the reason why many scholars (Kauhanen and Roponen, 2010; Chang and Liu, 2008) recall the concept of productivity.

The first order of answers can be tracked down in the positive impact of the productivity on the firm profitability (Hallock *et al*, 2004).

If in these studies the primary focus is on employee stock ownership, the starting point of this research is the study of “productivity” to after understand how this variable can influence firm’s profitability and how such productivity returns, in terms of value captured, to the employees.

Another explanation driving this dissertation to deepen the theme of “employee productivity” is connected with the explosion of several studies to orient their researches (Yukl, 2002) on the top management or leader productivity rather than on the employee productivity.

The direct evidence of the tendency on higher levels of management is demonstrated by the production of literature (Kahuanen and Roponen, 2010) on the drivers of manager’s productivity. According to these studies the antecedents of managerial productivity are managerial talent and practices.

Despite this attention on the productivity, the current work tries to analyze the issue of productivity related to the operational level rather than managerial one. Indeed, in this case the productivity is the concept that ties the issue of value creation to the value capture one, constituting the central idea of this dissertation.

In the light of these remarks, the purpose of the research can be summarized according to the following points:

- a) the research of the meaning of productivity and its correlation with the issue of value creation;
- b) how and to what extent this employee productivity acts upon the employee’s value capture and, hence, the understanding of how productivity can return as captured value;
- c) the declination of the concept of “productivity” in the light of the airline industry. This requires the search for specific indicators for the measure of both employee’s value creation and value capture;
- d) the investigation of what can be the right indicators that express the value appropriation by the firm.

1.4 Structure and research methodology

The objective of this dissertation is to verify how pilots and co-pilots, flight attendants, maintenance, passenger, cargo and aircraft handling create value as well as whether and in what terms the so created value is then captured from the human resources belonging to the operational level of nine American airline companies.

In order to proceed with this analysis, the outlying of the research design process is necessary.

As De Cantis (2013) suggests, the *definition of the problem* is the first step that shapes the basis of the field of the research. Indeed, the definition of the problem helps in understanding what can be the path of the research in terms of theoretical background, empirical setting and methodology.

Once that the problem is defined, this dissertation *determines the objectives* according to previous gaps existing in the current literature on the topics that constitute our research issues.

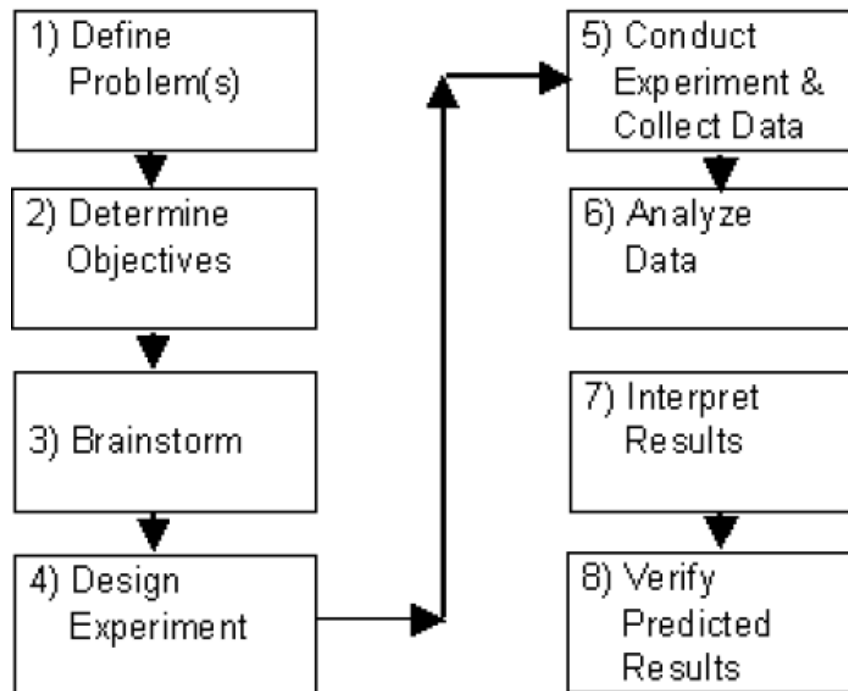
After the definition of the problem and the determination of the objectives, a *brainstorm* allows to understand the state of the art and to determine the transition from the theoretical to the empirical part. Before proceeding with the empirical testing, this dissertation studies what could be the right *design experiment* of this research according to the research objectives.

The design experiment is an antecedent of the conduction experiment itself. In order to direct this experiment and drive the research towards interesting results, *data* are necessary to be *collected, analyzed* to after interpret and *verify* predicted *results*.

There is then another scholar (Creswell, 2009) that claims the necessity of the adaption of a research design requiring the identification of worldviews, strategies of inquiry and the outlying of a research method.

As Creswell (2009) suggests worldview is the synonymous of what Lincoln and Guba (2000) and Mertens (1998) call paradigms while other scholars label as “epistemologies” and “ontologies” (Crotty, 1998).

Figure 1.1 - The research design



Source: De Cantis, 2013.

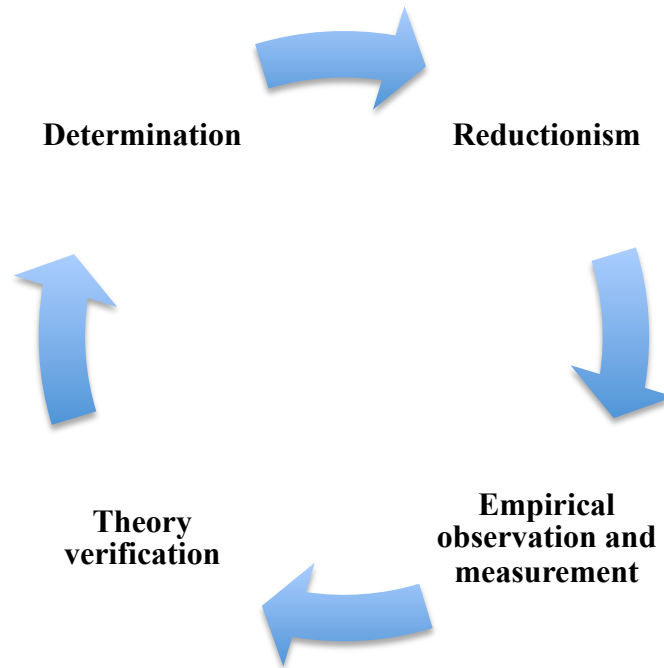
This worldview is summarized as the “basic set of beliefs that guide action” (Guba, 1990 p.17). For the purpose of this research, the positivist approach is adopted. This worldview is based on the deterministic philosophy that shares the idea that causes can determine effects or outcomes. The positivist approach is shaped by some features (see fig. 2.2): determination, reductionism, empirical observation and measurement, theory verification.

According to this view, the studied phenomenon “reflects the need to identify and assesses the causes that influence outcomes, such as found in experiments”.

In the light of these reflections, the current work confirms the accuracy of the positivist approach for the study of the issues of value creation and value capture trying to understand what can be the sources (causes) that influence the creation of value and determine the capture of the value itself.

This understanding is done through “experiments” to which the empirical section is devoted.

Figure 2.2 – The positivist approach



Source: Our Elaboration.

Another feature of the positivist approach is the “reductionism” that is realized through the gradual attenuation of macro ideas “into a small, discrete set of ideas to test, such as the variables that comprises hypotheses and research questions”.

Indeed, value creation and value capture issues are multifaceted since the development of this research stream has involved different aspects as well as different perspectives.

The theoretical section and, in particular, the chapter two helps in this work of reduction. Indeed, the aim of the second chapter is to study the themes of value creation and value capture through a systematic literature review.

This literature review allows to have a holistic vision on these phenomena to after understand what are the existing gaps and, hence, to reach a both small a clear range of ides to test. This chapter is supported by the methodology of literature review (Brady and Allen, 2006; Zain et al., 2001) as it will emerge.

At this point, the positivist approach recalls the necessity of the empirical observation and measures.

Chapters three and four are conceived in order to develop and find the right indicators able to measure value creation and value capture.

The final step is theory verification. The positivist approach considers a precise research path that starts with the study of literature and proceeds with the empirical support through data collection and the measure of the issues of the research. This path drives to confirm or confute the theory of a part of that.

As before underlined, Creswell (2009, p. 11) refers to selected strategies of inquire in the meaning of the “types of qualitative, quantitative, and mixed methods designs or models that provide specific direction for procedures in a research design”.

According to this definition, the current dissertation uses a quantitative methodology adopting a Structural Equation Modelling, as the chapter four will show.

1.5 Contributions of the study within strategic management

Many strategic management scholars (Lepak et al, 2007; Bowman and Ambrosini, 2000; 2009; Coff, 1999) agree around the existence of a general confusion on the issues of value creation and value capture.

Although the second chapter deals with the themes of value creation and value capture according the lens of the strategic management, this paragraph constitutes a pre-introduction to this topic.

While in the second chapter the analyzed literature comes from the study of the sole papers since it is a strict parameter established within the literature methodology, the purpose of this section is to explore the contributions on the topic, done in the last two years at the Strategic Management Society Annual Meetings (Prague, 2012; Atlanta, 2013).

These Annual Meetings constitute a very important occasion of comparison among strategic management scholars that join the Strategic Management Society².

² “The organization is unique in bringing together the worlds of reflective practice and thoughtful scholarship. The Society consists of nearly 3,000 members representing a kaleidoscope of backgrounds and perspectives from more than 80 different countries. Membership, composed of academics, business practitioners, and consultants, focuses on the development and dissemination of insights on the strategic management process, as well as on fostering contacts and interchange around the world.” (<http://strategicmanagement.net>).

Table 2.2 reports the contributions that have focused their attention on the issues of value creation and value capture and identify the level of analysis at which value is created and/or captured³.

Table 2.2 – Contribution on value creation and value capture

Author/s	Year	Focus	Contribution	Level of analysis
Phelps	2012	Value creation and value capture	This study explores the implications of Big Data firm value creation and value capture.	Organizational
Petrenko	2012	Value creation and value capture	This work identifies two distinct theoretical dimensions of strategic alliances: collaboration (value creation) and competition (value appropriation).	Network
Seth and Bruyaka	2012	Value creation	This study deals with joint ventures and acquisitions as modes of firm's growth.	Network
Andersen and Rogi	2012	Value creation	This study focuses the attention on the ability to handle dramatic turbulence since authors state that it has become an important source of competitive advantage.	Not explicitly declared
Uzunca, Jarvi, Tscherning	2012	Value creation and value appropriation	Industry platforms are intermediaries between different groups of agents, and are central and appropriation phenomena.	Not explicitly declared
Stahli et al	2012	Value creation	This study analyzes value creation through the corporate strategy function.	Not explicitly declared
Cardenas, Oyon, Davila	2012	Value creation	R&D and CVC are important to firm for growth and value creation.	Organizational
Campagnolo, Gianecchini, Gubitty	2012	Value creation	They apply the construct of business model to understand the sources of value creation.	Organizational
Della Corte and Del Gaudio	2012	Value creation and value appropriation	The purpose of the work is to carry out a literature review of studies on value creation and value capture in order to find possible gaps that represent still unexplored fields in strategic management.	Individual, organizational, network
Bidwell et al	2012	Value capture	They explore whether having high status in the labor market might be a source of competitive advantage for firms. High status employers are able to capture some of those benefits by paying workers less in return	Individual
Panico	2012	Value creation and value	By combining the literature on rent appropriation and on exploitation/exploration with the formal literature on contracting and negotiating, this work sets up a simple model	Individual, organizational

³ As regards the column labelled “focus”, there is not an uniformity in the terminology but it is preferred to use the different expressions used in the abstracts or in the titles in order to after orient the further literature review with the right keywords.

		appropriation	to study the relationship between a firm and a knowledgeable individual.	ional
Moon	2012	Value creation	This article examines how to bundle tasks into jobs within a firm.	Individual, organizational
Lehtimäki and Karintaus	2012	Value creation	The purpose of this study is to gain a better understanding about social embeddedness of strategic management and strategy implementation. The study is built on the widely established argument that social capital is a source of competitive advantage and value creation for organizations.	Network (internal-social capital)
Hellström	2012	Value creation	Business models are typically studied at the level of a single firm or its business unit. Still both innovation and value creation as well as competitive advantage is often derived from the relationships between firms.	Network
Nemeh and Yami	2012	Value creation	Several studies have indicated the importance of coopetition as a strategy for value creation.	Network
Kuusela, Keil and Maula	2012	Value creation	The research contributes to acquisitions research by improving the understanding of under what circumstances do acquisitions lead to value creation.	Individual, organizational and network
Polidoro	2012	Value creation and value capture	Extant literature highlights the positive impact that collaborations between firms and universities have on firms' global knowledge sourcing strategies by facilitating value creation.	Network
Mahoney, McGahan Pitelis	2012	Value creation	In this paper, they submit that public organizations are usefully analyzed as entities that create value in both the private and public sectors, and that a capabilities lens sheds important new insights on the value creation processes.	Organizational
Minà, Dagnino, Dunbar, Cattani	2012	Value creation	The study clarifies how coopetition involves new management practices, processes, and structures to support organizational value creation.	Network
James, Leiblein, Lu	2012	Value creation and value capture	Technology strategy literature has examined how environmental conditions influence firms' choices about the commercialization of innovations and how mechanisms such as patents, lead time, secrecy, and complementary assets influence the extent to which firms capture value from innovation.	Not explicitly declared
Walter et al	2012	Value creation	This study explores how alliance governance (interorganizational contractual safeguards and intraorganizational process safeguards) influences the perceived value of an alliance and how firm heterogeneity, namely the innovative capability of a firm, operates as a boundary condition in this milieu.	Network
Johansson and Zander	2012	Value creation	This article recognizes the importance of Christensen et al (2009) in the field of business model innovation by focusing on value configurations and different types of innovation.	Organizational, network
Rajwani and Paroutis	2012	Value creation	The study how senior management's attention to specific political processes can create valuable political capabilities.	Network and individual
Venturini et al	2012	Value creation and value extraction	They investigate how different appropriation strategies affect the performance of firms in the presence or absence of knowledge management strategies that foster integration of knowledge coming from different parts of firm's organization	Individual, organizational

Schmidt and Priem	2013	Value creation	The facilitation of customers' consumption activities affords a value creation opportunity for firms and can provide an impetus for extending firm-level product market scope	Organizational
Cozzolino and Verona	2013	Value creation	Technological changes often challenge incumbents' sustainability by transforming the competitive landscape of industries.	Organizational
Chaudhuri and Chatterjee	2013	Value creation	Prior client-vendor relationship is associated with greater value creation as tasks grow in scale	Network
Martins et al	2013	Value creation and value capture	This study aims to analyze the effect of trust on both value creation and value capture in the buyer-supplier relationships.	Network
Lundmark	2013	Value creation	This study refines current theories of value creation and provides important insights into the practice of strategic management	Individual
Campbell, Kryscynski, Coff	2013	Value creation and value capture	They combine human capital theory with the demand side perspective in strategy to examine the impact of human assets on the value creation and capture of firm stakeholders	Individual
Bygballe, Sward, Vaagaasar	2013	Value creation	Firms increasingly organize their value creation processes as multi-party collaborations.	Network (internal)
Chatain	2013	Value creation and value capture	Value creation and value capture are fundamental concepts for understanding performance heterogeneity	Network
Nemeh and Yami	2013	Value creation and value appropriation	This paper highlights the moderating role of social capital between value creation/appropriation dynamics.	Network (social capital)
Daxboeck and Laudien	2013	Value creation	The examine how individual organizational learning can initiate the process of joint value creation in service related networks	Individual, network

Source: Our Elaboration.

The analysis of these contributions shows that although there is an attention on the issues of value creation and value capture at individual level, there is none that deals with the operational level.

Indeed, while some scholars underline the importance of human capital (Campbell *et al.*, 2013), others (Bidwell *et al.*, 2013) stress their attention on high status employers for the value capture.

As the table shows, in the last two years, the middle level has not been considered within the contributions of the Strategic Annual Meetings.

This point represents, as starting point of this dissertation, strength rather than a weakness. This is the reason why this dissertation tries to study the issues of value creation and value capture.

CHAPTER 2

REVIEW OF THE LITERATURE

2.1 Theoretical foundation

The starting point of this dissertation is constituted by the will to find the definitions of value creation and value capture within the referring literature in order to understand what they really are and how scholars define them.

A previous work of Cabiddu *et al* (2013- see table 2.1) shows some contributions (Lavie, 2007; Lepak *et al.*, 2007; Priem, 2007; Mizik and Jacobson, 2003; Bowman and Ambrosini, 2000; Brandenburger and Nalebuff, 1996) on value creation and value capture and their related definitions.

As regards “value creation”:

- ❖ Lavie (2007) defines it as a process;
- ❖ Lepak *et al* (2007) highlight on what value creation depends;
- ❖ Priem (2007) underlines what value creation involves;
- ❖ Mizik and Jacobson (2003) and Bowman and Ambrosini (2000) enunciate the antecedents of value creation;
- ❖ Brandenburger and Nalebuff (1996) define the created value as the balance between willingness-to-pay and opportunity cost⁴.

From these definitions, a sequence of reflections springs out.

First, value creation is defined only by Brandenburger and Nalebuff (1996) while others (Lavie, 2007) conceptualize it, explicitly or implicitly, as a process.

On the side of value capture, its definition is given by Priem (2007), who defines it as “appropriation and retention” of the firm.

Although other scholars do not state what value capture is, the attempt of Priem (2007) is realized through a tautological definition that remains fairly generic.

The multiplicity of the involved sources, in the value creation process, is underlined by Lepak *et al* (2007) and by Brandenburger and Nalebuff who respectively use the

⁴ According to Cassar (20006) “opportunity costs are the foregone benefit of the next available alternative as a consequence of making a choice”.

expressions “levels of analysis” and “players”. This chapter is structured in the light of these reflections.

As emerged, these issues require a wider understanding also in the light of practical applications.

First of all, Bowman and Ambrosini (2010) state that “value means different things to different stakeholders” and it can be captured by both internal (Coff, 1999) and external (Lavie, 2006) players.

As regards the capture of value, several scholars (Bowman and Ambrosini, 2010; Mizik and Jacobson, 2003) concentrated their attention on external stakeholders, such as customers, suppliers and investors rather than on internal one.

On the other hand, some scholars (Coff, 1999; Holcomb *et al.*, 2009) claim the necessity to deal with internal players.

Recalling resource-based theory (RBT- Barney, 1991; Barney *et al.*, 2006) principles, it is not necessarily just one isolated resource that creates value but rather the whole bundle of resources between individuals, the organization and all the relationships with external stakeholders.

This is the reason why value creation and value capture issues require an overlapping perspective.

The aim of this chapter is to verify how and whether literature identifies the sources of value creation as well as from whom and how the so created value is then captured (value appropriation)⁵. In this sense, the current work follows the path undertook by Coff (1999) and Makadok and Coff (2002) that conceive value creation and value capture processes as separated since the source of value creation has to “share this value with other stakeholders” (Lepak *et al.*, 2007).

To summarize, this chapter is developed on two research dilemmas (Figure 1): the first one concerns the clarification of the sources of value creation (Does the distinction among the levels of analysis is clear in literature? Do these levels overlap or are they considered as isolated?); the second is related to value capture and the relative focus on the slippage between the source who creates it and the player who appropriates it.

⁵ The terms “value capture” and “value appropriation” are here interchangeably.

Table 2.1- Definitions of value creation and value capture

Authors	Value creation	Value appropriation or value capture
Lavie (2007)	"Value-creation mechanisms are collective processes that generate common benefits that are shared by all partners in an alliance" (p. 1191)	"Value appropriation mechanisms determine the distribution of these common benefits to individual partners as well as the capacity of partners to unilaterally extract private benefits that are unavailable to other partners" (p. 1191)
Lepak, Smith, and Taylor (2007)	"Value creation depends on the relative amount of value that is subjectively realized by a target user (or buyer) who is the focus of value creation—whether individual, organization, or society—and that this subjective value realization must at least translate into the user's willingness to exchange a monetary amount for the value received" (p. 182)	"The process of value capture varies according to the initiating source or level of analysis, yet at each level of analysis, both competition and isolating mechanisms play important roles in shaping value capture, even though the manner in which competition and isolating mechanisms operate plays out differently across these levels of analysis" (p. 190)
Priem (2007)	"Value creation [...] involves innovation that establishes or increases the consumer's valuation of the benefits of consumption (i.e., use value)" (p. 220)	"Value capture" [is] "the appropriation and retention of payments by the firm made by consumers in expectation of future value from consumption". (p. 220)
Mizik and Jacobson (2003)	"Firms engage in innovative activities that lead to creation of societal value, that is, the total social surplus arising from the difference between the utility that consumers derive from the product and the costs of producing it" (pp. 63–64)	"[...] A firm's ability to restrict competitive forces (e.g., erect barriers to imitation) to be able to appropriate some of the value that it has created in the form of profit" (pp. 63–64)
Bowman and Ambrosini (2000)	"New use value is created by the actions of organizational members who combine to transform the use values that the organization has acquired" (p. 5)	"Profit is value captured by the firm. This includes economic profit (supernormal) profit, and interest" (p. 15)
Brandenburger and Nalebuff (1996)	"The definition [of value creation] has two ingredients: the 'willingness-to-pay' of the buyer and the 'opportunity cost' of the supplier. The value created by the chain of players is defined as the first minus the second: Value created = willingness-to-pay – opportunity cost" (pp. 7–8)	"[...] Each player captures the amount of value, which is no greater than that player's 'added value,' defined as added value of a player = value created by all players – value created by all other players (p. 13)

Source: Cabiddu *et al*, 2013

2.2 The literature review methodology

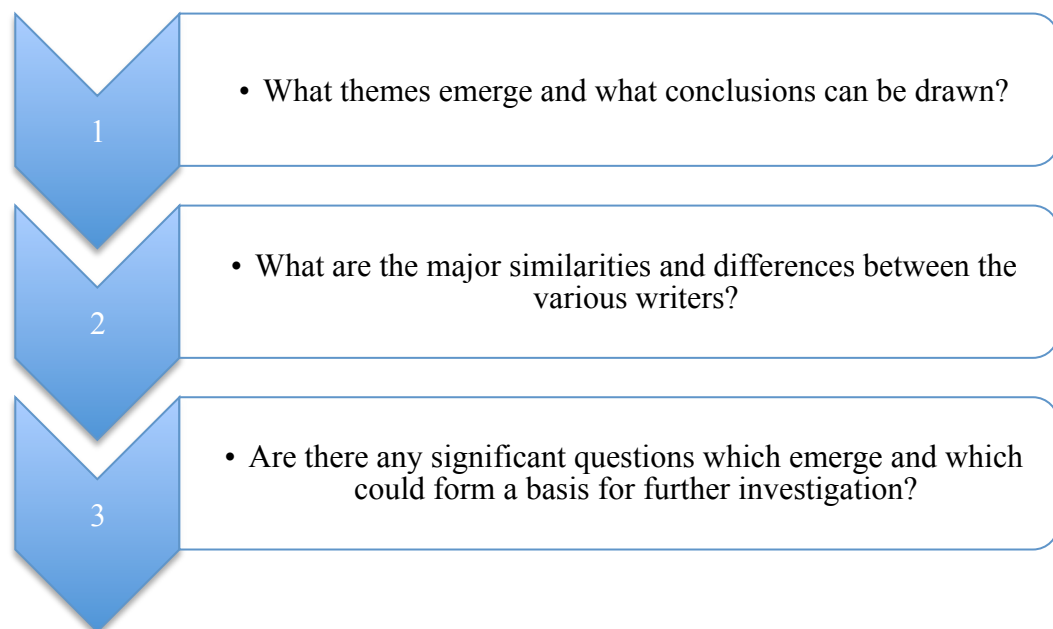
First of all, it is important to define what is a literature review. According to an article (Emerald Group Publishing Limited, 2012) “a literature review is a description of the literature relevant to a particular field or topic” and it “seeks to describe, summarise, evaluate, clarify and/or integrate the content of primary reports”.

The aim of a literature review can be twofold: descriptive or critical (Emerald Group Publishing Limited, 2012). In the latter case, the path of this literature review starts with the identification of gaps as well as the shared theoretical assumptions by the academic community to after criticize some key points or formulate new research questions.

The current literature review is based on what Cooper (1988) suggests in identifying gaps, understanding the trends of literary production and the main topics.

On the other side, some scholars (Emerald Group Publishing Limited, 2012) outline a sequence of questions (see fig. 2.1) that drives the draft of an accurate literature review.

Fig. 2.1 - How to organize a literature review



Source: Emerald Group Publishing Limited, 2012

Furthermore, the literature review can be organized according to different criteria, that may include chronological, thematic and methodological (Emerald Group Publishing Limited, 2012) parameters of selection to after discuss about trends in these areas.

The first step of the current literature review is the search of academic articles through different bibliographic electronic databases including Emerald, Direct (Elsevier), Business Source Premier (EBSCO) and Google Scholar. After a separate research in these databases, the results have been matched.

For the purpose of our study, some different key words are used for the selection of the papers. These are: “value creation”, “rent generation”, value creation + human resources”, “value creation + firm”, “value + network”, “value creation + social capital”, “value capture” and “rent appropriation” and “rent extraction”.

As regards the thematic criterion, papers that focus the attention on value creation and value capture at different levels have been selected.

The chosen journals have the feature to belong to the research streams of strategic management, human resource management and strategic human resource management, organizational behaviour and marketing.

Finally, the selected contributions are both theoretical and empirical. More precisely, these contributions are classified according the used methodology suggested by some scholars (Brady and Allen, 2006; Zain *et al.*, 2001). These are case study, comparative, survey, theoretical with application or conceptual. To these already identified methodologies, the study adds the category “Literature Review” as it is believed that none of the above-mentioned methodologies include this specific one.

A first step leads to the selection of 197 articles. From this database, a further selection has been made and the total number of the papers is finally 143: 97 for value creation and 46 for value capture.

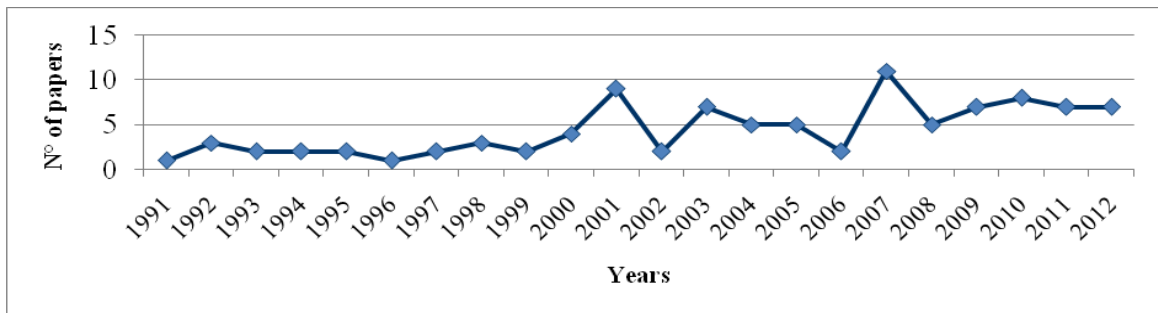
2.3 Literature trends

Before examining the contents of the research issues, this chapter proceeds with a deeply analysis on literature trends.

The first used tool is Pareto diagram that shows on the x-axis the "Year" and on the y-axis the “number of published papers” for the period 1991-2012.

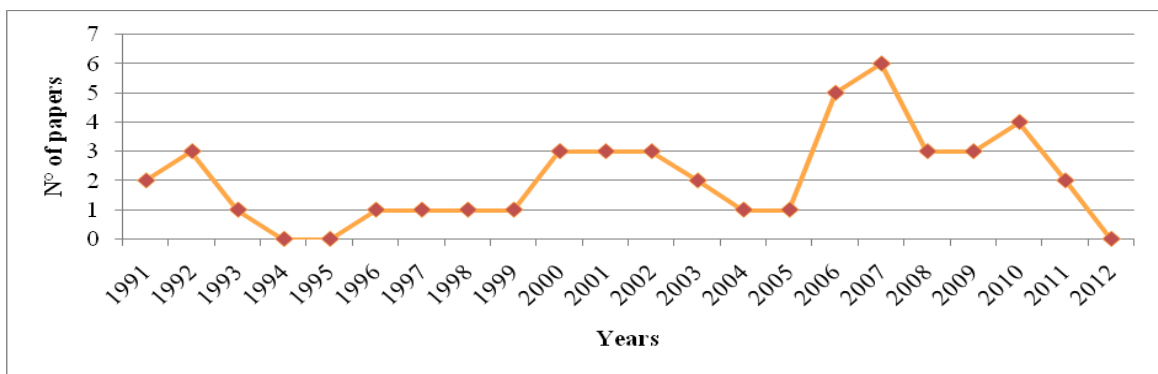
Figures 2.2 and 2.3 highlight the trends of these issues.

Figure 2.2- Value creation and literature trends



Source: Della Corte and Del Gaudio, 2012.

Figure 2.3 - Value capture and literature trends



Source: Source: Della Corte and Del Gaudio, 2012.

Another aim of this work is also to classify articles according to the country of origin where the university of the first author is based.

The map⁶ displays the relative frequency of each country according to the magnitude of their literature production. From this world map some interesting results come out. The top authors for value creation are located in USA (47) followed by UK (10), Sweden (5), China (5), Germany (4), Israel (4), Canada (3), Italy (3), Australia (3), Spain (3), Finland (3).

It is interstating to highlight the presence of Scandinavian countries in this research stream since the linked contributions are related to the process of value co-creation. This constitutes an important research finding. Indeed, in the process of value co-creation two main actors are involved, the firm and the customer, and as Brief and Bazerman (2003) and Priem (2007) underline, strategic management literature has focused less on

⁶ This visualization has been done through the IBM software called “manyeyes”.

the role of consumer for the value creation. This micro level of analysis suggests that future works might explore with a more strategic focus the influence of customer in value creation. In this dissertation, however, the analysis mainly concentrates on internal human resources and on their relationship with the organization in value creation.

As regards value capture, the country that has the highest literature production is USA (30), followed by UK (7), Canada (1), Denmark (1), Germany (1), India (1), Israel (3), Slovenia (1), Sweden (1).

Fig. 2.4 - World map



Source: Della Corte and Del Gaudio, 2012.

This chapter also explores the main journal where the selected papers are published. Table 2.2 and table 2.3 display these journals, representing the 44,76% of the total amount. The main journal both for value creation and value capture are Strategic Management Journal, Academy of Management Review, Management Decision and Journal of Management.

Table 2.2- List of journals on value creation issue

Journal	Papers
Strategic Management Journal	15
Journal of Intellectual Capital	8
Academy of Management Review	8
Journal of Management	5
Management Decision	4
Strategy & Leadership	3
Journal of Business Venturing	2
Journal of the Academic of Marketing Science	2
European Business Review	2
Scandinavian Journal of Management	2
Organization Science	2
Journal of Business Research	2
The Academy of Management Journal	2
Journal of Knowledge Management	2
Academy of Management Review	2
Industrial Marketing Management	2
Journal of Management	2

Source: Della Corte and Del Gaudio, 2012.

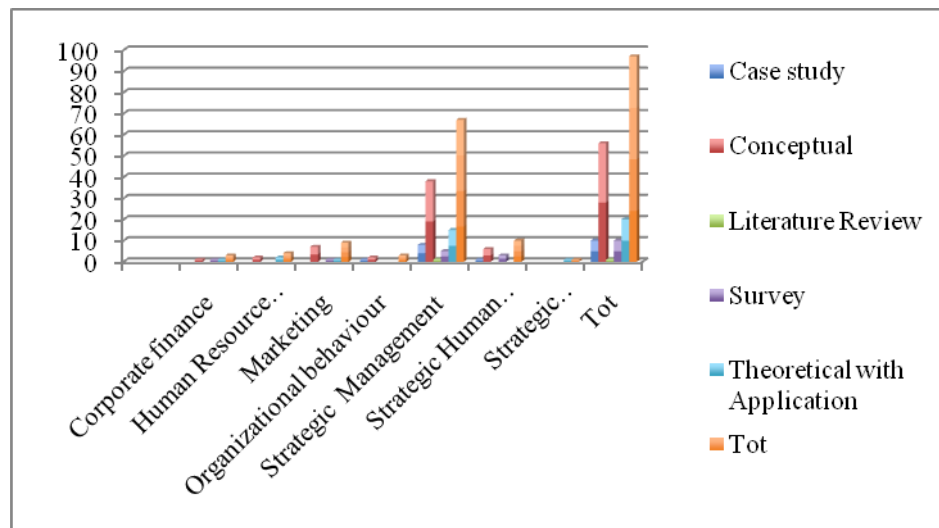
Table 2.3- List of journals on value appropriation issue

Journal	Papers
Strategic Management Journal	9
Journal of Management	6
Academy of Management Review	6
Management Decision	4

Source: Della Corte and Del Gaudio, 2012.

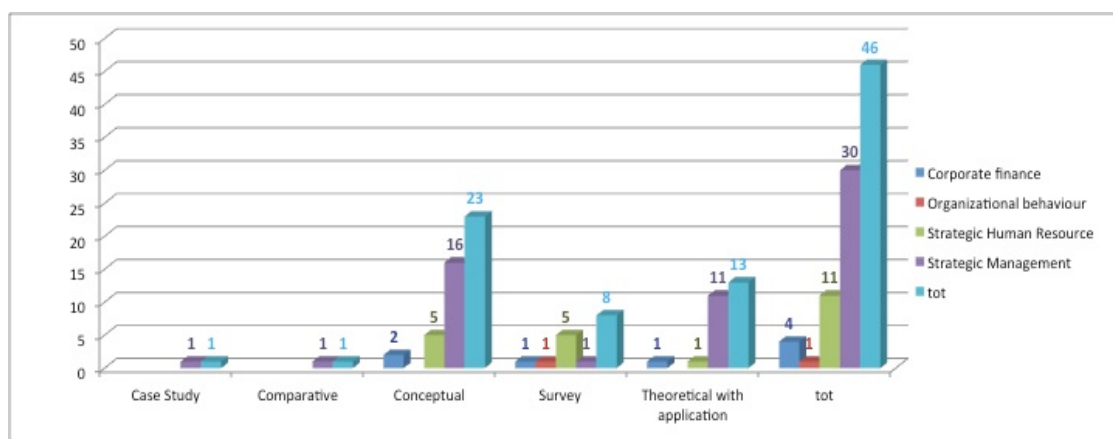
As regards the methodological approaches, Pareto diagram is again used to show the number of papers in accordance with the adopted research methods (Fig. 2.5 and 2.6)

**Figure 2.5- Pareto chart of articles by research approach and stream of research
(value creation)**



Source: Della Corte and Del Gaudio, 2012.

**Figure 2. 6- Pareto chart of articles by research approach and stream of research
(value capture)**



Source: Della Corte and Del Gaudio, 2012.

These Pareto diagrams show that both value creation (52) and value capture (23) issue have been developed according conceptual papers, followed by “theoretical with application” (21 papers for value creation and 13 value appropriation). Others use the survey method (10 for value creation and 8 for value capture)

Besides, a very few contributions use the case study analysis both for value creation (6) and for value capture (1).

Finally, comparative studies are absent for value capture issues excepted from 1 paper for value capture.

2.4 Value creation and its main sources

Strategic management scholars agree (Lepak et al, 2007; Bowman and Ambrosini, 2000, 2009) on the existence of different sources of value creation.

Lepak *et al* (2007) identify individuals, organizations and society as level of analysis or sources of value creation.

Furthermore, another group of scholars focuses their attention on network resources and, hence, on some structures such as alliance networks (Gulati, 1998; Lavie, 2006; 2007; Gulati *et al.*, 2000) that are able to create value through this external network.

On the other side, some studies on value creation and value capture (Chatain and Zemsky, 2009 p.2), in the definition of levels of analysis, declare the existence “of both industry, firm and resource levels of analysis”.

The contemplation of the industry level is determined by the fact that some studies (Priem and Butler, 2001) underline the gap of resource-based theory since it neglects “product market interactions” (Chatain and Zemsky, 2009).

The recall to the industry level is linked with a traditional organizational literature (Porter, 1985) that emphasizes the industry drivers as determinants of firm’s value creation.

As regards the **individual level**, vast literature on value creation (Lepak et al., 2007; Lepak and Snell, 1999) gives emphasis on the individual level of analysis. According to some researchers (Felin and Hesterly, 2007) the individuals, as source of value creation constitutes the starting point of this process.

Of course, organizations are made up of individuals that shape the so-called firm’s “human resources”. These, in their different levels (core employees, internal partners external alliance partners and contract workers⁷ - Lepak and Snell, 1999) can create value.

⁷ As viewed, the focus on individual level requires the understanding of the subjects that compose human resources architecture. “According to Lepak and Snell (1999), this architecture is shaped by: core

If scholars have declared in general that “value is created by the actions of organizational members” (Bowman and Ambrosini, 2000), it is important to understand who specifically are these members and whether a difference exists among these individuals in creating value.

First of all, the figures of top manager and managers in value creation are extensively recognized as essential in this process. Indeed, right from Edith Penrose (1959) there is a strong acknowledgement in the firm’s “bundle of resources” but, at the same time, “the experience of management will affect the productive services that all its other resources are capable of rendering”.

Kor and Mahoney (2004) underline the influential role of managers, who as “agent of the firm’s owners⁸” (Bowman and Swart, 2007), acts as accelerators in knowledge creation (Grant, 1991) and can own entrepreneurial capabilities, able to catch and discover various opportunities (Alvarez and Barney, 2002).

Literature on this issue is inclined to identify the individual level with “who composes the organization” (Felin and Hesterly, 2007): executives, managers and employees, in many works (Morris and Snell, 2007), are the sources of value creation.

The created value is the result of a process where people’s ability in creating exchange value and managers’ ability in creating value for the firm (Mourtsen, 1998) coexist.

In particular, the union between the individual level and the managerial level is linked to the fact that they are considered sources where the knowledge is nested (Felin and Hesterly, 2007; Starbuck, 1992; McGrath and Argote, 2001).

Felin and Hesterly (2007) highlight that “value-creating knowledge is rooted more in the attributes and abilities of the individuals involved” while other scholars (McGrath and Argote, 2001; Grant, 1996) overlap the individual and the organizational level.

An important point to stress is the consideration about when management value creation occurs. At this point two questions come out: Do executives and managers always create value? Under what conditions do managers create value?

employees (CEO, executives, top managers), internal partners or the so called traditional employees, external alliance partners and contract workers. However, they are not so precise in distinguishing traditional employees from other groups of employees (external alliance partners and contract workers). This latter point is proved by the fact that these contributions often adopt the term “employee” to specify “all the categories” (Della Corte and Del Gaudio, 2012).

These questions lead to the outlining of an important consideration. Managers' ability in creating value depends on their capability of identification of strategic resource and using them in an effective way that is able to generate sustainable competitive advantage (Barney, 2001). Second, the purchase money of these strategic resources must be at a price, which is below their value in use (Ahuja et al., 2005). In other words, the process of value creation is realized when managers deploy "this resource in a particular, more valuable way than it may be deployed in rival firms" (Bowman and Ambrosini, 2000).

Up to now, this literature review shows the leading position of managers (Morris and Snell, 2007) in the process of value creation but there are also interesting contributions that analyse the role of employees (Andersén, 2011; Whright *et al.*, 1994). Furthermore, according the classification made by Lepak and Snell (1999), the role of external alliance partners and contract workers (Flood et al., 2001; Morris and Snell, 2007) is not extensively analysed.

What emerges from this study is an overemphasis on the pool of employees rather than the single employee (Coff, 1999; Whright et al., 1994) in the process of value creation. Moreover, each kind of firm has the peculiarity to own employees with different roles. As regards the issue of value creation and value capture, it would be interesting to understand how each category and each employee create value.

There is then a stream of research (Coff, 1999) that considers not only executives and managers as "locus of knowledge" (Felin and Hesterly, 2007) but, more in general, the individual members of the company.

The sedimented knowledge, owned by firm's human resources, makes necessary the recall of "social complexity" and "casual ambiguity" since they express the concept that human resources are extremely difficult to imitate (Coff, 1997). This is what ever true in the light of resource-based theory, claiming that sustained competitive advantage can be achieved only when competitors are unable to duplicate the strategic resources (Lippman and Rumelt, 1982).

The combinations of human asset specificity shape the concept of the firm-specificity. This latter induce to reflect on a series of observation such as:

- Can firm specificity be spent in the labour market?

- Does firm specificity limit human resources mobility?
- In what terms does this firm specificity is appropriated by human resources?

As regards the mobility, each organizational level owns specific competences that can be more or less spent in the labour market. There could be a difference between the organizational and operational level. While executives, top managers and managers may have firm-specific embedded competences as well as expertise under the strategic profile, employees can acquire knowledge and confidence in their roles.

Executives and top managers deserve a separate discussion since their bundle of competences is shaped by both firm-specificity and personal resource endowment (i.e., external socially complex capabilities and competencies, entrepreneurial ability, personal features etc.). It is precisely this personal endowment that can have a specific value even outside the firm (Della Corte, 2011) and, hence, be spendable elsewhere.

Of course, talented executives and top managers may also benefit from an efficient organization, from the investments made by the company for HR retention, and from knowledge, competences and skills acquired within the firm.

Finally, this firm-specificity can be appropriated by human resources in terms of tangible and intangible benefits (i.e., compensation, wages, training courses, etc.).

As regards the process of value creation and value capture, it is important to remind the classification made by Chen and Lin (2004) who identify four categories: 1) employees of high value and high uniqueness; 2) employees of high value and low uniqueness; 3) employees of low value and high uniqueness; 4) employees of low value and low uniqueness.

This distinction helps in the understanding of who holds a strategic role in the value creation process and on what categories of human resources the company has to invest.

Moving from the individual level, this work wants also to explore the works and the related contents of the organizational level.

As Lepak *et al.* (2007) underline “value is created when firms develop/invent new ways of doing things using new methods, new technologies, and/or new forms of raw material”.

Naturally, the question that spontaneously arises is: Can the organizational elements create value on their own?

At this question Bowman and Ambrosini (2000) tries to answer introducing the concepts of “use value” and “new use value”. Indeed, “use value” is determined by separable inputs (machines, buildings, steel, computers, or flour) while “new use value is created by the actions of organizational members”.

What is important to underline is the unavoidable overlapping perspective between the individual and the organizational level of analysis. Also in the case of the problem-solving perspective, some scholars (Nickerson, Silverman and Zenger, 2007; Nickerson and Zenger, 2004) specify that it is the result of the combination between “the efficacy of various governance mechanisms” (Nickerson, Silverman and Zenger, 2007: 213) and the managerial ability in problem solving.

Other scholars (Tsai and Ghoshal, 1998; Petrash, 1996; Kaplan and Norton, 2004) recognize the importance of organizational knowledge as source of value creation. It is also defined as organizational capital by Petrash (1996) and it is the amalgam of firm’s culture, teamwork, leadership and alignment (Kaplan and Norton, 2004).

Within literature on value creation, there is a stream of research focusing its attention the organizational capabilities (Zander and Kogut, 1995, Cromb, 2006; Ulrich and Smallwood, 2004, Spanos and Prastacos, 2004). These are able “to organize, manage, coordinate, control and govern sets of activities” (Cromb, 2006).

The link between organizational capabilities and value creation is emphasized by some scholars (Smallwood and Panowyk, 2005; Spanos and Prastacos, 2004) since they “drive every aspect of performance, including customer satisfaction, competitive positioning, and bottom-line results” (Smallwood and Panowyk, 2005) and they are able to create use value (Spanos and Prastacos, 2004). Although these scholars declare the supremacy of organizational capabilities, they also note that human resources constitute a fundamental “building blocks” of organizational capabilities.

On the other side, numerous scholars (Arthur, 1994; MacDuffie, 1995; Dyer, 1983; Dyer and Reeves, 1995; Martell and Carroll, 1995; Wright and McMahan, 1992) polarise their attention on strategic human resource management (SHRM) as source of value creation since the ultimate goal of strategic HRM is to contribute to organizational performance” (Rogers and Wright, 1998).

The way through which SHRM creates value is due thanks the aligning of long-run planning of human resources and the strategic choices of the firm (Jain, 2005).

Finally, the theoretical lens of corporate ownership allows to understand the importance of governance mechanisms, board's independence and CEO shared ownership both in the creation and in the process of generation and appropriation of rents (Boubakri *et al.*, 2008).

Both human resources and organizational levels give, in the search of value creation sources, an internal focus. Nowadays, it is quite impossible to think to the lonely internal resources. The rent-seeking drives companies to research outside firm's boundaries external resources able to sustain competitive advantage. This is possible thanks to the creation or the adhesion to a network.

Starting from the definition of network given by Moliterno and Mahony (2011), this can be shaped by individuals, groups or firms.

Strategic management literature has developed works on alliance networks (Gulati, 1998; Lavie, 2006; 2007; Gulati *et al.*, 2000), underlying a link between external network capabilities combined and internal capabilities.

The search in the different databases through the words "value creation + network" has led to the selections of articles that deal with the business-to-business relationships in the cases of outsourcing activities.

The overemphasis on the strategic role of network resources drives to a question about their role in creating value and eventually in the destruction of it.

A part from business-to-business relationships, literature identifies also business-to-customer relationships. This issue has been more developed according to a marketing theoretical lens.

The emerged contributions from this literature review examine the theme of the co-creation of value according to the Service Dominant Logic (Vargo and Lush, 2004, 2008a, 2008b) that conceive the customer an operant resource (Vargo and Lusch, 2004; Nicholls, 2010; 2011), a set of knowledge, experience and skills, involved in the process of value co-creation. The concept of operant resource, translated in the RBT, means that customer can become source of competitive advantage, being itself a strategic resource.

Furthermore, we consider the **social level** as a cross-sectional component for the value creation process since "social capital allows firms to acquire, integrate, recombine and release resources" (Blyler and Coff, 2003). The fact that social capital owns the feature to be cross-sectional means that it can overlap the individual and the organizational

level. In this direction, Gonzalez-Alvarez and Solis-Rodriguez (2011) state that social capital is the display of the activated relationships among individuals, groups and organizations in society.

In support of this thesis, Bowles and Gintis (2002) confirm that social capital is not only created at both levels but also exploited at the same levels.

It is necessary to wonder about if the distinction among the levels of analysis is so clear in the concrete world of the companies as much as in the theoretical studies.

Indeed, what emerges from this literature review is the prevailing attention on one level of analysis rather than an overlapping perspective.

This latter is required since it is relevant to connect the different sources with the value appropriation process.

2.5 Value creation: discussion

The following analysis aims at verifying the literature production and the relative distribution of the levels of analysis in order to understand at what extent works on value creation issue are concentrated on single level rather than a multiple level.

For this purpose, the research uses a bubble chart⁹ that shows how many papers deals with one level or more than one level.

From this tool, the following results come out: 27,96%, of the papers concentrate their attention on the individual level, 16,13%, on the organizational level, 25,81 % on the network level and the 5,38 % deals with the social capital perspective.

The previous percentages express the quantity of works focusing on one level of analysis. What is interesting to understand is how many papers have developed the value creation issue according to an overlapping perspective.

Following the criteria beforehand showed, the results are (Fig. 2.8): individual and organizational (12,90 %); individual and network (1,08%); individual and social capital (2,15%); individual, organizational and network (1,08%); individual, organizational and social capital (3,23%); organizational and network (1,08%); organizational and social capital (1,08%); network and social capital (1,08%).

⁹ It has been done through IBM manyeyes.

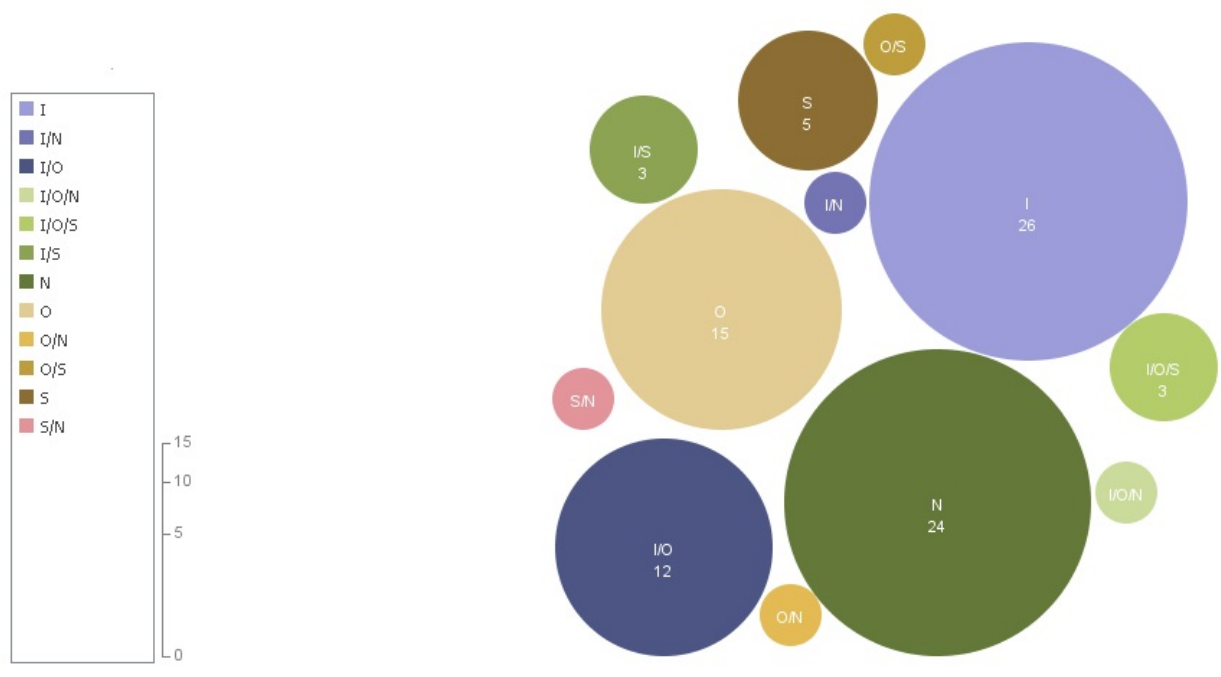
This bubble chart shows a lack of an overlapping perspective among the different levels of analysis.

Even if this is not necessarily problematic, it is also true that these strong theoretical distinctions can be relevant in identifying value appropriation process (Della Corte and Del Gaudio, 2012, 2014).

In this direction another relevant issue is the distinction between the concepts of “*resource endowment*” and “*resource use, bundling and leveraging*”, in order to better understand the overlapping perspective in the study of value creation. These theoretical assumptions will be discussed also later for the value appropriation analysis.

More precisely, we use these concepts linking them to levels of analysis.

Fig. 2.8 –Bubble Chart



Source: Della Corte and Del Gaudio, 2012.

Firm resource endowment can refer to “age, size, organizational form, legitimacy, history” (Santos, 2002, pp. 100-1) as well as sedimented organizational capabilities, learning and its repositories of knowledge (Kogut and Zander, 1992), social relations with customers, suppliers, banks, shareholders and other stakeholders that belong to the

organizational sphere and the sustained relationship with both upstream and downstream firms.

Individual resource endowment are generally connected with higher levels (executives and top management) with the entrepreneurial capability of creating rather than catching opportunities even in dynamic environments (Barney, Alvarez, 2007), generating an acquisition process as real options, or just pointing out strategic resources, either possessed or controlled or anyway available for the firm (Lavie, 2006). Managers' personal resource endowment can be shaped, for example, by their personal set of relations and connections (Della Corte, 2011) or their previous experience (workplaces, role played in those firms, level of notoriousness of the companies they worked for) as well as for their educational background (Della Corte, 2011; Rodenbach and Brettel, 2012).

Network resource endowment represents the reflection of resource endowment of the actors and/or of the firms involved this network, expression of heterogeneous resource endowment of the different network partners.

Personal Resource use and their relative bundling refers to the capability of integrating resources to form new capabilities, while **leveraging** to the use of capabilities for new solutions in the same market or in new markets. These can be defined as managerial process's capabilities that can pertain to a company's executives as well as their staff.

Network resource use and bundling refers to the ability to join, share, or negotiate valuable resources with other stakeholders when these resources cannot be easily built or bought within the firm or through market exchanges (Das and Teng, 2000).

The **leveraging activity** belongs more specifically to the **firm** as its capabilities allow to leverage valuable human resources, firm's strategic assets as well as resources nested in inter-firm network partners (Gulati 1999, Gulati *et al.*, 2000)

With respect to the leverage of network resources, scholars (Lavie, 2006, 2007) state that this firm's ability within an alliance allows to generate value through the leveraging of network resources.

Once these concepts are described, it is important to understand how resource endowment, use, bundling and leveraging that belong to different levels of analysis interact in order to create value.

2.6 Value capture: discussion

A key issue in the value-based analysis is the attention on value capture that consists in explaining how the total amount of value creation is shared among the different players (Chatain and Zemsky, 2009).

The discourse on the sources of value creation helps in the understanding if “the source that creates value may or may not be able to capture or retain the value in the long run” (Lepak *et al.*, 2007).

On the base of this assumption, there is a particular concept that explains the phenomenon of possible slippage between the source that creates value and the player who appropriates that value. This is exactly labelled “value slippage”.

As regards the value capture issue, literature has paid more attention on the external stakeholders rather than on the internal ones (Coff, 1999).

An interesting question in the light of value capture issue is: What are the mechanisms that determine the appropriation of value by each player?

Different schools of thought try to identify them. Coff (1999) explains that bargaining power of each stakeholder and their capabilities allow the relative value capture, Chatain and Zemsky (2009) introduce the concept of “frictions”¹⁰ since the competition among the stakeholders is strong, Cohen *et al.* (2000) talk about the “appropriability mechanisms”.

In literature there is also who uses images to recall the concepts of value creation and capture. This is the case of (Fischer and Henkel, 2010) who exploit the following expression: “the amount of value created (the size of the pie) and its bargaining power (the share of the pie)”.

The debate on the focus on internal and external stakeholders originates from the dominant idea of the past where external actors appropriate part of the created value and the belief that internal value appropriation may reduce short-term results but, at the same time, can help in the retention of talents.

Also for the value appropriation issue, some scholars (Montgomery, 1997; Lee *et al.*, 2007) proceed with a distinction among the levels of analysis. Lee *et al.* (2007) state that value created from talented manager is captured in terms of higher compensation, Collis and Montgomery (1997) affirm that value capture at organizational happens

when valuable resources cannot be replicated by competitors, are demanded by customers and generate superior profits while at a social intangible benefits, more jobs (Lee *et al.*, 2007) or a higher social responsibility can exist.

Bearing in mind the concept of value slippage, the current literature review wants to verify whether if value slippage occurs and who are the players involved in this process. In the light of this aim, the Social Network Analysis (SNA) methodology is useful in order to show the ties that link the source of value creation to the actor who appropriates of this value.

SNA allows to analyze who is the main “creator” of value and who is the main “appropriator” of value.

After examining the selected papers on value, we isolated 24 different “value creator-value appropriator” combinations. Table 2.4 shows these combinations.

Table 2.4 - The 24 different “value creator-value appropriator” combinations.

Created by	Appropriated by
CEO	CEO
Customer	Firm
Employee	Employee
Employee	Firm
Firm	Banks
Firm	Competitor
Firm	Customer
Firm	Employee
Firm	Firm
Firm	Human Resources
Firm	Shareholders
Firm	Society
Firm	Supplier
Human Resources	Firm
Human Resources	Human Resources
Manager	Manager

Manager	Stockholders
Network	Firm
Shareholders	Firm
Supplier	Supplier
Top management	Firm
Top management	Shareholders
Top management	Top management
CEO	Firm

Source: Della Corte and Del Gaudio, 2012.

In order to do that, we use the same terminology adopted in these works without homogenizing the labels (for example, not substituting employees with human resources).

Also indegree and outdegree centrality, two network Analytics, are visualized thanks to NodeXL tool (Smith et al, 2009).

Degree centrality describes how many links incident upon a node (i.e., the number of ties that a node has); *indegree* represents the result of the number of edges directed into a vertex in a directed graph; *outdegree* shows number of edges directed out of a vertex in a directed graph. In a directed graph, we consider the direction of the edge (relationships) between the nodes. Therefore, the links from A to B are distinct from the links from B to A.

This is also advantageous in order to understand who is the hub actor, that is the player with the highest *indegree* value.

Besides, *outdegree* expresses the most active value capturer. Table 2.5 shows indegree and outdegree value of each actor.

Table 2.5- Indegree and outdegree value of each actor

Actors	Indegree	Outdegree
Top management	1	3
Firm	8	9
CEO	1	2
Customer	1	1
Employee	2	2
Banks	1	0
Competitor	1	0
Human Resources	2	2
Manager	1	2
Network	2	1
Shareholders	1	1
Society	1	0
Supplier	2	1
Stockholders	1	0

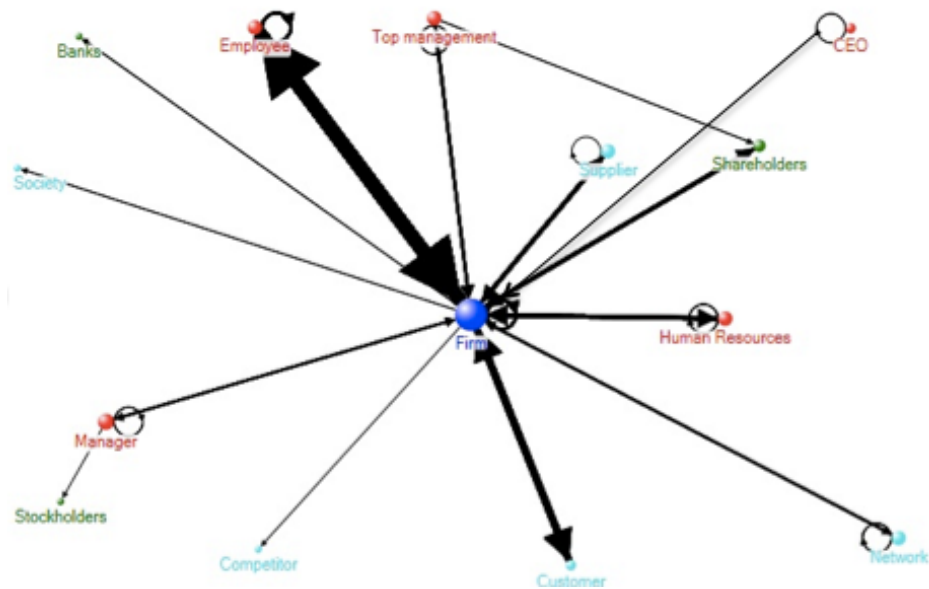
Source: Della Corte and Del Gaudio, 2012.

Finally, degree centrality displays the more central actor. Figure 2.7 makes clear this visualization since the firm appears the “hub actor”.

Pass on examining each player of the figure 2.7 it is possible to outline some summaries. First, **top management** has a key role in the value creation process (Penrose, 1959). The created value is appropriated both by the firm and by its shareholders. Literature demonstrates that top managers do not capture the value generated by others. Indeed, the self-loop shows that they appropriate the lonely value they create.

Another strategic figure is the **CEO**. The selected articles deal with CEOs with long tenure. Again the self-loop shows the duality role of a CEO, that being also chairman of the compensation committee, can capture higher compensation.

Figure 2.7- Value capture and social network analysis



Source: Della Corte and Del Gaudio, 2012.

As regards **managers**, literature underlines their important role. From SNA, two implications spring out: they capture value from value created by the firm and by themselves.

In the second case, the discourse is on the so-called “managerial rent” (Alvarez and Barney, 2001) that focuses the attention the value created and appropriated by managers. These can capture the created value thanks to their “entrepreneurial capabilities” (Alvarez and Barney, 2001; Alvarez and Busenitz, 2001) and “dynamic capabilities” (Eisenhardt and Martin, 2000; Teece et al, 1997). On the other side, Schumpeterian rent is based on managerial ability in creating innovations as well as in creating rather than catching opportunities even in dynamic environments (Alvarez, 2007).

This literature review demonstrates that literary contributions on value capture at individual level do not often consider the organizational dynamics underpinning value capture process.

During that process, it is important to understand how human resources create and capture value. In this sense, the overlapping perspective between the individual and the organizational level is necessary. What constitutes the missing link is the not clear integration with the strategic human resource management (SHRM) stream of research. This requires a deeply understanding of how the firm leverages as well as retains

valuable, rare, inimitable, non-substitutable human resources (Morris *et al.*, 2006; Wright *et al.*, 1994) through the adoption of SHRM practices.

The fact that this literature review confirms the important role of top management, CEO and managers is not a surprising result. What is fairly new is the stress on the discovery of a clear lack of interconnections between internal human resources and network.

On this side, from the selected articles there are none that deals with managers' capture of created value within the network do not emerge.

Following this direction, future researches must concentrate their efforts on what could be top managers' network benefits that can be considered as "marketable" in case of mobility.

As regards the employees, many scholars agree that they are the focal point of value creation process. The firm appropriates the value they created.

This SNA shows the dyadic relationship between firm and employees, it must be underlined that, while literature frequency with reference to the firm value appropriation is definitely higher, as edge width demonstrates, rather than the frequency dealing with the employee value capture whose value is created by the firm. Furthermore, as self-loop demonstrates, it is also possible to notice that there are literary frequency underlining the role of employees in capturing the value they created.

According these results, there is the need to deeply study the dyad firm-employee value creation. For this purpose, it is necessary an overlapping perspective between the organizational and the individual level, especially for the employees.

Customers are considered another important player for the value creation. Bowman and Ambrosini (2010) underline their strategic position since firm captures value from exchange values that represent the "monetary amount exchanged between the firm and its customers or suppliers".

From this analysis it emerges value created by the customer is not only expressed in terms of monetary amounts but also in terms of co-creation of value offers through heterogeneous interactions.

Furthermore, SNA indicates that suppliers capture value from the firm. The question of value appropriation depends on the business where firm operates. Indeed, Amit and Zott (2001) underlines that business models such as e-business with its distinguishing "design of transaction content, structure, and governance" is an important source for

supplier value creation.

With reference to the **network**, SNA indicates that the created value is then captured by the firm as well as embedded within the network.

Literature suggests also the **shareholders** as not big creators of value but as appropriators from the firm and the top management.

Finally, **banks, society, competitors and stockholders find their space in the value capture process and not in the value creation one.**

For value capture issue also a keyword analysis has been done through Wordle (Fig). The more recurrent words are: “Value creation”, “human resources”, “human capital”, “rent appropriation”, “alliances”, “employees”, network”, “rent generation” and “value capture”.

The finding coming out from this literature review is that it is important to analyse how organizational mechanisms and structures support employees’ value creation.

Two gaps come out. The first refers to have a wider attention on the sources of value in order to understand who creates and appropriate it.

The second concerns the lack of links between individual level (internal human resources) and network level. It would be interesting to understand if top-level managers may appropriate rents from network also in the form of intangible benefits, such as strategic relational ties and tacit knowledge.

Finally, the literature review has explored in what terms executives, employees and firm capture this value. Table 2.6 summarizes what are the measures for value capture established by different scholars.

Table 2.6 – Measures of Value creation

PLAYER/S	VALUE CAPTURE IN TERMS OF
Executives	total compensation (Byrne,1991; Chacar and Hesterly, 2008; Iacobucci, 1996; Wang and Chacar, 2012), , restricted stock, and long-term investment plans (Carpenter, Sanders and Gregersen, 2001), both financial rewards and the pleasure, recognition, and resources that come from being the first to make a significant new discovery (Zucker and Darby, 1998), salary and bonuses (Castanias and Helfat, 1991); stock options (Castanias and Helfat, 1991; Carpenter, Sanders and Gregersen, 2001); stock ownership (Castanias and Helfat, 1991), profit sharing (Castanias and Helfat, 1991).
Employees	incentive compensation (Colvin and Boswell, 2007), compensation and benefits systems (Wright and Boswell, 2002, Antoncic and Antoncic, 2011), wages, benefits and greater satisfaction with life (Groth et al., 1996), promotion (Mozina, 2002), benefits and praise (Rosenbloom and Hallman, 1991, Ancic and

	Antoncic, 2011).
Firm	firm performance (Wang and Chacar, 2012; Boubakri et al., 2012; Datt, et al., 2003), return on assets (Carpenter, Sanders and Gregersen, 2001; Nandakuma et al., 2010; Clifford, 2008), attractive cash returns (Groth et al., 1996), Employee loyalty (Meyer and Allen, 1997; Tsui <i>et al.</i> , 1997; Varona, 2002); stock market returns (Carpenter, Sanders and Gregersen, 2001; Gulati, Lavie, Singh, 2009; Clifford, 2008); return on sales (Nandakuma et al., 2010), revenues (Bowman and Ambrosini, 2010); profits (Pfeffer, 1995).

Source: Our Elaboration.

2.7 Labour productivity and the link between value creation and capture

Literature suggests (Coff, 1999) that less attention has been paid on employees as sources of value creation and, as consequence, the issue related to their value capture is not well explored yet.

Researchers have question about what could be a bridge between the human resources and the process of value creation. In this direction, the concept of “productivity” serves as a bidding agent among these.

Starting from Koch and Gunter McGrath (1996, p. 337) “Labour productivity taps the extent to which the human capital is delivering value to the firm”.

According to Guthrie (2001, p.184) productivity “indicates the extent to which a firm’s human capital is efficiently creating output”. Furthermore, he adds another important key assumption that is the following: “Although labour productivity *per se* does not guarantee long-term profitability and success, it is generally considered a necessary condition”.

In the same direction, Holcomb *et al* (2009), dealing with managerial productivity, declare that a superior degree of productivity related to a specific set of resources is not adequate *per se* to create competitive advantage. According to the authors what is important is the “resource synchronization” that consists in create connections between the firm’s resources (Sirmon *et al.*, 2007) in order to adjust the activities where this bundle is located with firm’s strategic and competitive scenario (Siggelkow, 2001). In this light, it is exactly the synchronization that is difficult to imitate (Holcomb *et al*, 2009).

Starting from these definitions, the dissertation wants to verify the truthfulness of the assertion made by Guthrie (2001) and Holcomb et al (2009) and, hence, to understand what is the impact of productivity on firm's performance.

According to Porter (1985, p. 42) "superior employees" can create value in both value chain activities (primary and support activities) while interpreting the thought of Barney (1991) productive human resources are "relatively rare, difficult-to imitate resource".

In order to proceed with an analysis on the employees' productivity, the typology of the companies and the industry specificities are necessary to be studied. This is also important in order to find the specific measures of productivity and go ahead in the empirical analysis.

Furthermore, this dissertation explores the link between employees' productivity and both value creation and capture.

Although some scholars (Holcomb *et al*, 2009; Guthrie, 2001) have bring forward that productivity *per se* does not influence firm's profitability, the current dissertation will verify this statement.

Moreover, it will explore whether and how employees' productivity has an impact on the value appropriated by the same employees.

In order to be more precise, the research questions will be formulated in the chapter three after having identified the specific measures of productivity connected with the airline industry and the operational level of human resources.

CHAPTER 3

THE AIRLINE INDUSTRY

3.1. Status of the U.S. airline industry

Looking at the worldwide airline industry, it is possible to state that airlines offer their services in three region “the Americas, EMEA (Europe, Middle East and Africa) and Asia-Pacific” (Czipura and Jolly, 2007). North America is the continent where most of the traffic is concentrated (Czipura and Jolly, 2007).

External events such as September 11th, SARS, rise in oil prices and financial crisis explain, in part, the reasons why this industry is characterized by instability since the last decade.

The industry’s instability has been intensified not only by these exogenous events (MIT, 2006; Tsoukalas *et al*, 2008), that pervade the U.S. airline industry, but also by other factors, such as:

- ✚ intense price competition (Tsoukalas *et al*, 2008);
- ✚ intense use of Internet Technologies (McIvor *et al*, 2003);
- ✚ stiff cost structure (Seristo and Vepsalainen, 1997; Tsoukalas *et al*, 2008);
- ✚ principal-agent problems (Wojahn, 2012).

In 1978, thanks to the Airline Deregulation Act¹¹, the entry and prices started to be regulated. This was the date of the liberalization of U.S. aviation markets (Pels, 2008). The U.S. airline industry was signed by another agreement in 2008 for the “Open Aviation Area” between Europe and USA. This agreement was important for the pursuing of new markets opportunities that, before 2008, were closed. One of the major effects of deregulation is the economic context where companies operate, that is characterized by working under density economies (Pels, 2008). This means that the

¹¹ According to the Deregulation Act represented Borenstein (1992) “A rejection of the incredibly inefficient regulation of the past 50 years”.

cost per seat decreases when the number of passengers increases (Caves, Christensen and Tretheway, 1984). Another important effect of deregulation refers to the reduction of labor costs. The latter was possible thanks to the introduction of new systems such as two-tier wage¹² systems and Chapter 11 bankruptcy¹³ (Weiss and Wruck, 1998).

On the other side, deregulation led to *intense price competition*, connoting this sector as empty core.

The increased competition has driven to two different implications for the demand side and offer side. Indeed, airline travel is become more affordable and accessible according to customer's perspective while, both liberalization and deregulation, has made higher the price competitions for the single companies.

The price competition is based (Borenstein and Rose, 1995) on the fact that there is a cutthroat competition (Barney, Della Corte and Sciarelli, 2006). The high fixed costs that are "sunk costs" leads to an intense price competition.

The *intense use of Internet technologies* is what characterizes this kind of companies (McIvor et al., 2003) and some factors can strengthen the value creation potential (Amit and Zott, 2003).

These factors are efficiency, complementarities, lock-in and novelty. Table 3.1 summarizes the key drivers of this constructs that refer to the airline industry.

The parameter of efficiency refers to way through which companies reduce their costs. The adoption as well as the exploitation of Internet technologies facilitates the search of information during the decision-making process according to a consumer perspective.

As regards complementarities, they refer to the bundle of services and/or products that can be added in order to create greater value. In this direction, for example the dynamic packaging in its tight meaning, offered by both network and low cost carriers, express the concept of "complementarities". Indeed, these complementarities are shaped thanks to vertical, horizontal and network partnerships.

¹² This system "pays entry-level hires at slightly more than half the rate of veteran workers" (Klayman, 2013). This kind of system characterizes the industries where the presence of labor unions is strong as in the case of airline industry.

¹³ "Chapter 11 is a form of bankruptcy that involves a reorganization of a debtor's business affairs and assets. It is generally filed by corporations which require time to restructure their debts" (Investopedia, 2014).

With reference to lock-in (Amit and Zott, 2003), this regards all the mechanisms that companies can create in order to retain the customers.

Finally, the concept of novelty is connected with the use of Internet technologies for new purposes that can change some companies' politics (i.e, placement politics).

As viewed, in the e-commerce era (Jarach, 2002), Internet technologies play a key role, totally redefining the distribution policies.

Table 3.1 – Impact of Internet technologies on the value

Source of value (Amit and Zott, 2001)	Key findings in aviation context
Efficiency: (e.g. search costs; selection range; symmetric information; simplicity; speed; scale economies)	<ol style="list-style-type: none"> 1. Real-time decision-making mechanisms 2. Up-to-date information for buyers and sellers 3. Reductions in customers' search and transaction costs 4. Reductions in the communication and transaction costs of the seller
Complementarities: (e.g. between products and services for customers; between on- and off-line assets; between technologies; between activities)	<ol style="list-style-type: none"> 1. Bundling products and services through vertical and horizontal collaboration/ /partnerships/alliances to form more valuable holistic travel package 2. Offering additional services not directly related to the core travel offering (e.g. financial services) 3. Reducing communication and promotion costs 4. Taking equity stakes in on-line agencies
Lock-in: (e.g. switching costs—loyalty programmes, dominant design, trust, customization; positive network externalities—direct and indirect)	<ol style="list-style-type: none"> 1. Offering low(er) prices/discounted fares (e.g. for on-line bookings only, or relationship-based pricing) 2. Customizing offerings to suit individual customer needs 3. Amalgamating rewards/bonuses for loyal customers within business networks 4. Building consumer trust
Novelty: (e.g. new transaction structures; new transactional content; new participants)	<ol style="list-style-type: none"> 1. New transaction structures play integral role in lowering transaction costs for airlines and customers 2. Disintermediation and reintermediation of the travel agent 3. Emergence of novel retail partners (e.g. Internet cafés)

Source: McIvor et al., 2003.

Indeed, the fields where the ICT (Information and Communication Technologies) is more used are in the distribution and collaboration with partners (Buhalis, 2004), facilitating relationships with all stakeholders.

If above-described parameters connect the use of Internet technologies with the customer's perspective, the figure 3.1 is useful in order to understand the other stakeholders that can benefit from the exploitation of Internet, extranet and intranet providers.

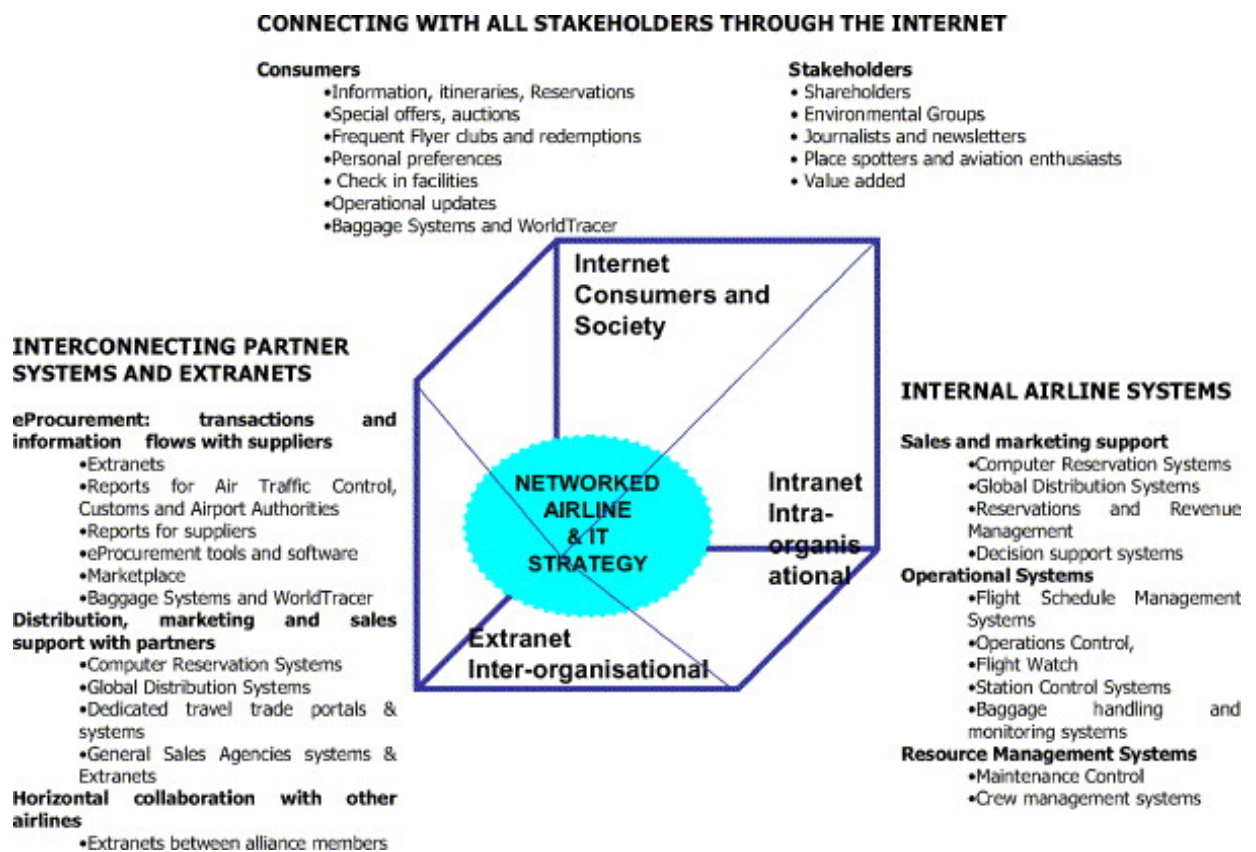
The role of Internet is of key important in the airline industry, if we look at the opportunity of interconnecting partners and the internal airline systems.

As regards the extranet, Internet technologies facilitate the information flows, support the distribution and marketing policies and helps in simplifying horizontal partnerships.

There is then the internal perspective, that cover three macro-areas: sales and marketing, operational systems and the resource management systems.

Furthermore, Internet technologies can be also exploited by the companies in order to debate with other stakeholders such as shareholders, environmental groups, journalists, place spotters, etc.

Figure 3.1- The use of Internet in the airline industry



Source: Buhalis, 2004.

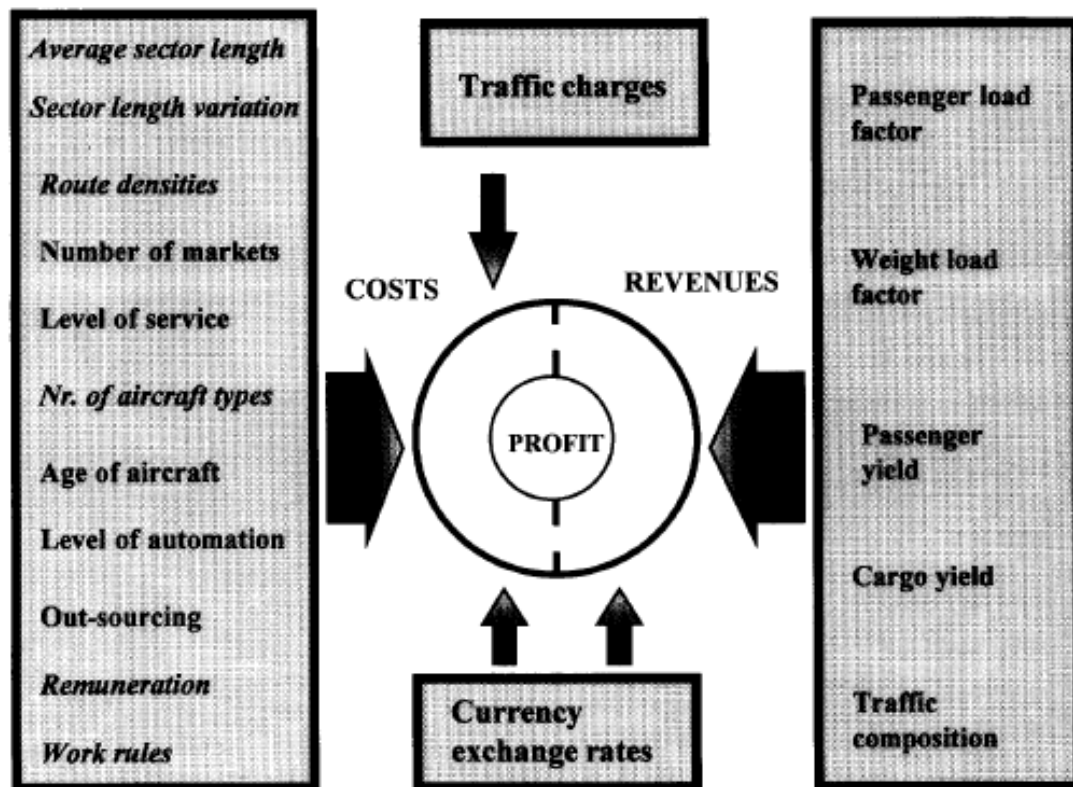
The *stiff cost structure* is one of the main issues in the airline companies. Several studies suggest that dynamic changes in airline cost structures are due to operating and technical characteristics (Caves et al., 1987).

The main costs of an airline company are related to transport and fuel, labor costs and non-labor costs (Tsoukalas et al, 2008).

In particular, fuel and labor costs represent the 50% of the overall costs (Doganis, 2006). Labor costs include economic salaries and social benefits while non-labor costs are related to the all other costs.

Of course, for a right management of the cost structure, the variables that influence costs are of the main importance. Indeed, airline companies must act upon these variable or, at least, try to operate looking at this kind of scheme.

Figure 3.2 – Cost and revenue factor in airline industry



Source: Seristo and Vepsalainen, 1997.

The fact that airlines companies are characterized by a stiff cost structure points out, on the other side, that the airline industry suffers for not achieving adequate levels of profits (Wojahn, 2012). This latter can also originates from the peculiarity that in the majority of airline companies ownership and control are separated, shaping so the *principal-agent problem*.

Wojahn (2012) defines it as “the agency problem of the empire building” since managers look after shareholders interests, their own compensation, new positions for the middle management, etc.

Another issue, referring to the principal-agent problem, is the managerial *myopia* (Stein, 1988) that occurs when managers are not able to balance long-term investments with short-term investments. This myopia can provoke under-investments or over-investments.

The over-investments in this kind of industry represent a problem due to asymmetric information between managers and shareholders, as these latters know about the project and the relative level of investment but not on the returns.

Furthermore, data on airline activity within the U.S market and the related market share, coming from Research and Innovative Technology Administration Bureau of Transportation Statistics (RITA, 2014) are summarized in tables 3.2 and table 3.3.

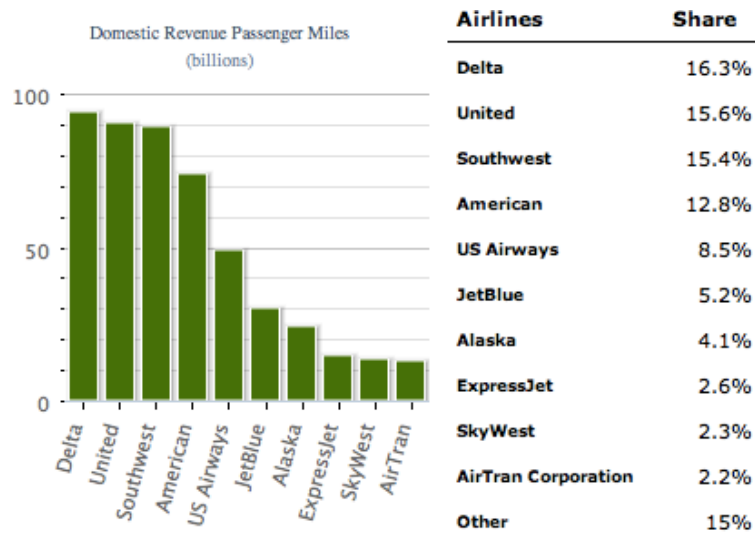
In particular, table 3.3 highlights the main U.S. companies that hold the higher market share.

Table 3.2 - Airline Activity: National Summary (U.S. Flights)

	2012 *	2013 *	Change
Enplaned Passengers (million)	642	644	0.3%
Departures (000)	8,923	8,764	-1.8%
Freight/Mail (million lbs)	19,764	19,841	0.4%
Load Factor (%)	83.4	83.4	0.0 points
Airlines with scheduled service	102	94	-7.8%

Source: Research and Innovative Technology Administration Bureau of Transportation Statistics, 2014

Table 3.3 - Airline domestic market share November 2012 –October 2013



Source: Research and Innovative Technology Administration Bureau of Transportation Statistics, 2014

3. 2 Strategic and organizational features of airline companies

Airline companies operate in a “volatile industry” (Russel, 2014). According to the CEO of Delta Air Lines “The question is what you do about your business model to buffer and make the enterprise successful regardless of the volatility of the marketplace” (Russel, 2014).

The sentence of Delta’s CEO underpins the necessity to create the right mix between strategic and organizational features (Russel, 2014).

The strategic activities are enclosed in the value chain of the airline companies (Fig.3.3). Thanks to the analysis of the value chain, it is possible to understand the strategic activities that generate value (Porter, 1985).

The value chain of an airline companies is shaped by primary activities and support activities.

Inbound logistics, operations, outbound logistic, marketing and sales and service constitute the primary activities.

Inbound logistics include market assessment, yield management and pricing, routes

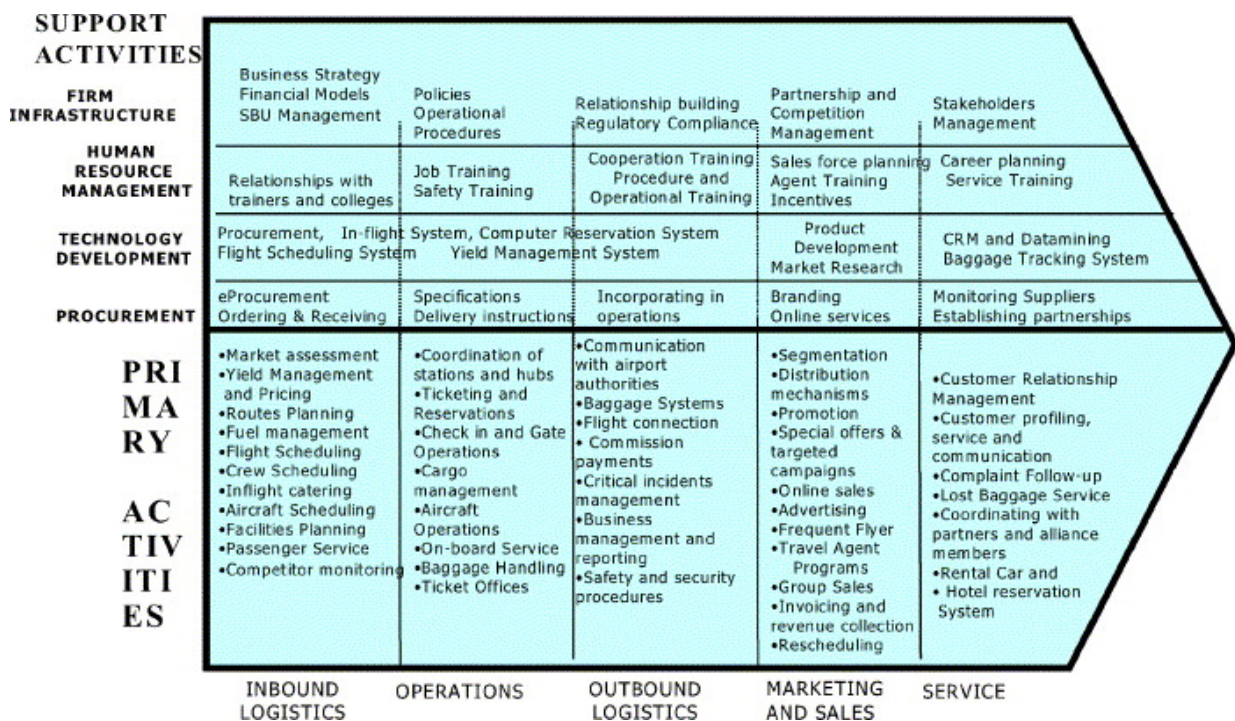
planning, fuel management, flight scheduling, crew scheduling, inflight catering, aircraft scheduling, facilities planning, passenger service and competitor monitoring.

This industry is characterized by dynamic and competitive market conditions (Faged et al., 2011) that dictate the rules of the game for the other inbound activities.

Operations refer to a series of activities that consider both external and internal operations. These require a high level of technical capabilities.

Outbound logistics are shaped by critical activities for an airline company. These deal with safety and security and other kind of tasks that have a wide range from external duties (i.e., communication with airport authorities) to internal operations (i.e., baggage systems, critical incidents management).

Fig. 3.3 – The value chain of an airline company



Source: Buhalis, 2004.

With reference to **marketing and sales**, this activity is considered one of the most strategic for the profitability of airline companies (Buhalis, 2004). First of all, companies concentrate their attention on the building of a corporate images on which they set down marketing policies. One of the main critical points within this context is the pricing strategy as the high competition drives companies to compete on prices and,

consequently, they have to design less costly routes.

As regard distribution, in the last years it is possible to prove a kind of change in this direction. Apart from traditional and e-distribution, agreements seem to be a new vehicle for the implementation of new distribution policies. The example of Alaska, American and Delta represents a case where the agreements between these companies allow them to sell, respectively, their tickets. In particular, Alaska takes advantages from “their international networks, reservations systems, and connecting with their frequent flyer programs” (Business Insider, 2013). In particular for business travelers these frequent flyer programs and loyalty programs are able to generate switching costs. At the base of the right implementation of marketing strategies there is the activity called “**service**”, that with its series of strategic assets, such as Customer Relationship Management and Customer Profiling Service and communication, supporting and the orienting the marketing mix strategies.

Furthermore, a well-finished customer service and a higher degree of efficiency in some services (i.e., lost baggage service, rental car, etc.) can help in enhancing the quality of the overall airline service.

On the other side, the value chain is constituted by support activities such as firm infrastructure, human resource management (HRM), technology development and procurement.

The activity “**firm infrastructure**” includes some of management practices that constitute the key drivers for the companies’ success. The deployment of relational capabilities (Nahapiet and Ghoshal, 1998) are here of the main importance as stakeholders management, partnership and competition management, relationship building require this the amalgam between technical and relational capabilities. These latters are based on the relational assets (Dyer and Singh, 1998; Chow and Chan, 2008) that an airline company owns. In particular, the relational dimension of the social capital (Nahapiet and Ghoshal, 1998) explains how interpersonal relationships can lead to the creation of social capital through determination of common expectations by the different stakeholders. On the other side, relational capabilities exploit the network perspective, fundamental for the strategic partnerships.

Second, the **human resource management** needs to be read in the light of the constant attention on overall elements shaping the customer satisfaction.

A winning human resource management practice is based on the implementation of a process, that starts from the selection and goes on with the planning of human resources 'career.

In this field, Southwest Airlines is one the biggest example of good human resource management practices. It is also awarded by "Employees Choice Awards Best Place to Work" and by "Best Companies for Leaders based on outstanding Company culture and internal professional development".

As regards the technology development, as before underlined, it represents a fundamental stone for the daily work. In this direction, it is possible to cite a variety of systems that support the primary activity. Indeed, flight scheduling systems, computer reservation systems, CRM, etc.

Finally, **procurement** refers to the management of supplier of goods or services and supposes a process that starts with the order and receiving and is completed by the monitoring activities.

3.3 Creating value in the airline company

The second chapter, as viewed, has described the different sources of value and their relative levels of analysis.

For the study and the understanding about the sources of value in the airline companies, we recall the scheme and the levels identified in the previous chapter.

Therefore, the individual, organizational and network levels are here dealt with this specific kind of companies.

Before entering into the discussion, it is important to state that "The airline industry creates significant economic and social value, both directly through its own activities and indirectly through the net positive impacts it has in generating economic activity elsewhere" (IATA, 2011)

With reference to the *individual level* of analysis, executives play a strategic role in managing the main costs for an airline company. These are fuel and labor costs.

The challenges that top managers and executives face in this kind industry are to balance the necessity to create low fares with the capability to offer an adequate customer service. Furthermore, executives and top managers have to look after the

internal human resources' alignment with the principal economic, social and environmental goals of the companies.

Airline executives are responsible for some critical activities, such as flight operations, system operations control, maintenance and engineering, customer service, relationships with airports, etc. The management of these operations can create as well as destroy value.

As airline companies operate in hypercompetitive and volatile context (D'Aveni, 1994), where changes in technology and demand are fast, executives must own transformational capabilities able to supervise over transformation of industry (Cho and Hambrick, 2006).

This industry is, indeed, characterized by the permanent necessity to revitalize the industry, exploring what is the most suitable business model for the achievement of sustainable competitive advantage (Mayo, Nohria and Rennella, 2009).

Several authors (Hosseini et al, 2011) stress the attention on the role of executives in coordinating human resources with corporate strategy. A CEO of an airline company, C. Mand of SkyEurope Airlines, states "in order for an airline to maintain the highest standards of operational safety and quality of service, and ultimately be successful in their strategy, is to invest heavily in the people who will carry out this strategy".

Moreover, executives have the duty to look after labor cost related to employees' productivity (Civil Aviation Authority, 2006).

This latter sentence links the employee's productivity to value creation. In particular this dissertation point the attention on some groups of employees, working at the operational level of airline companies.

According to some authors (Bowman and Ambrosini, 2000; O' Cass and Sok, 2012; Baumann and Stieglitz, 2013) employees are potential sources of the multi-stage process of value creation. In the light of this reflection, this dissertation aims at verifying if employees' productivity influences firm performance, considering them as groups (Coff, 2010) and not as individuals.

In general, the issue of productivity has been studied in relationship between HRM practices, human resources productivity and firm's performance (Jiang et al, 2012), or linked with employee stock-ownership and the participation to the decision-making

process (Pendleton and Robinson, 2011; Mygind, 2009; Poulain-Rehm and Lepers, 2013).

Furthermore, the focus on productivity has been analyzed through a correlation of the above underlined aspects with an efficiency-driven approach (Wright and McMahan, 1992) and, finally, with the antecedents of employees' productivity (Schulz et al, 2013). In particular, the focus of the current dissertation is on the operative level of airline companies. The figures that this work aims at analyzing are pilots, co-pilots, flight attendants, and the group of maintenance.

First of all, as the IATA (2011, p. 40) report underlines “airlines are dependent on their skilled employees, especially **pilots** and technical personnel”. Pilots are considered a strategic resource for airline companies as they have high-specialized skills. They are key subjects in the creation of value since studies (IATA, 2011) confirm that aircraft operating capability increases if pilots are able to share information through different systems (i.e. ground-based systems and satellite-based).

Pilots must to work in coordination with the co-pilot and across the aviation group. **Co-pilots** are technically the second pilots.

Flight attendants display a key role during the service encounter. According to Boudreau and Jesuthasan (2011), flight attendants cover three roles:

- are responsible for services regularly required by regulators;
- provide some services on-board;
- are able to deploy problem solving capabilities

A particular observation is useful to be made for HR investments by the companies. Table 3.4 shows how flight attendants and pilots are recruited and how companies perform some HR practices such as compensation one.

Table 3.4 – Flight attendant and Pilot: implications for HR investments

Flight attendant	Pilot
<i>Sourcing and development:</i> Significant premium placed on talent with critical competences in customer service, including talent from other industries, such as retail.	<i>Sourcing and development:</i> Emphasis on recruiting talent early in career, with an emphasis on apprenticeship and a long development cycle to encourage the acquisition of experience and skills (as often happens in military service before talent joins a commercial airline).
<i>Performance management and rewards:</i> Aggressive differentiation of individual performance on the basis of service provided (performance-based incentives would encourage individuals to move farther along the performance curve).	<i>Performance management and rewards:</i> Minimal differentiation of individual performance (which might encourage risk taking) or use performance-based incentives; emphasis on steadily increasing rewards as skills are acquired and as talent progresses through the organization.

Source: Boudreau and Jesuthasan, 2011.

Maintenance as well as **Passenger, Cargo and Aircraft handling** represent two voices of the major operational costs that need to be streamlined. Airline companies sometimes outsource part of this activities in order to optimize the relative costs.

As regards the **organizational level**, airline companies outline the organograms useful in order to achieve certain goals. The critical point of airline companies is the variety and the high number of functions that shape the management systems. This is the reason why airline companies must be supported by organizational structures able to create value. In the light of these observations, it is possible to state that value creation may depend on the adopted business model.

This is the case of Southwest that at the beginning of its history adopted an hub-and-spoke model, also anticipating the requests of customers such as low-cost service, no-frills and reliability (Teece, 2007). This company reduces its costs using the same aircraft model (Boeing 737s), exploiting so the economies of scale.

Furthermore, not only economies of scale but also economies of scope and density may influence the creation of value (Wojahn, 2012).

Of course, the capability to create and/or replace business models underpins dynamic capabilities of the entrepreneur and executives to anticipate or provoke changes. This is

the reason why, sometimes value is created through the overlapping between individual and organizational level.

In order to face the major challenges of this industry, airline companies are pushed to readjust their business models as the presence of low cost carriers are growing up. What is observing is the build and/or the adjustment of a business based on cost reduction through the deployment of some consequences, such as “lower commissions for travel agents or the impact of buy-on-board food for caterers” (Wojahn, 2012).

There are then systems that enable the creation of value through the link between organizational systems and individual capabilities. As IATA (2011) report underlines flight deck automation and self-optimizing “smart systems” allows to create value thanks the work of pilot. This is another example of overlapping perspective between individual and organizational levels.

An efficient organization, for example, can also benefit from different technologies (i.e., Unmanned Aerial Vehicle).

In this direction, the right exploitation of the Computer reservation systems (CRS) allow to create value in terms of financial returns (IATA, 2011).

It is also important to get a glimpse on some organizational models that are able to create value. These are based on values that afford a sense of employees’ engagement and are called “spiritual values-based management model” (Fig. 3.4).

In particular, the organizational model of Southwest Airline (SWA) follows the organizational spiritual values, the business employee plans and goals, the HRM practice and the outcomes in terms of organizational performance and employees attitudes, etc. These variables are analyzed within the case of Southwest Airline.

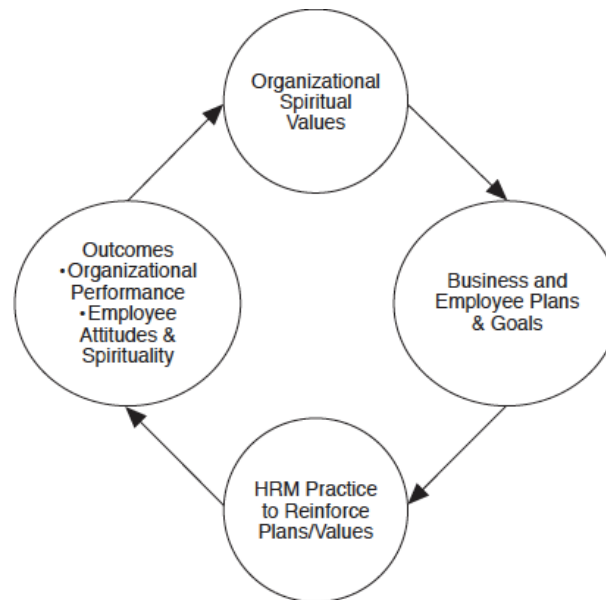
First these values concern the sense of community, the role of employees as “part of a cause”, the empowerment of all employees (Ferguson et al., 1999).

Second, the business plan, as before underlined, underpins a clear business model where the three main keywords are “cheap, fast and fun” (Stewart, 1998).

Third, the main source of success of the Southwest Airline is the HRM practice that constitutes a source of sustainable competitive advantage. While many companies try to imitate SWA’s human resource practices with any success, SWA takes still advantage from inspiring practices.

Fourth, this model allows to translate the adopted practices into concrete results for employees, customers and the company itself.

Fig. 3.4 - Spiritual values-based management model



Source: Ferguson et al., 1999.

This kind of companies must own Safety Management Systems in different activities and areas such as organizational structures, accountabilities, policies, and procedures.

The advent of Information Technologies has led, in terms of organizational procedures, to a dynamicity and cost reduction since “e-ticketing, common-use self-service kiosks, bar-coded boarding passes, and automated baggage rules” (IATA, 2011) has allowed to cut on labor cost.

As regards value creation at the **network level**, airline companies tend to search for strategic alliances, whose partners are strategic since they own resources and capabilities able to gain competitive advantage.

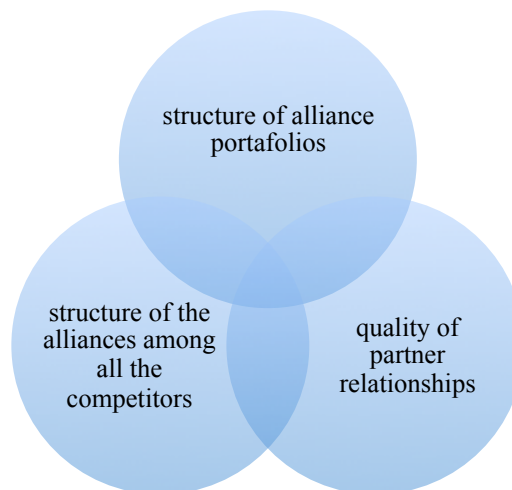
Indeed, the strategic resources can reside in the heart of the organization or/and in the executive figures as well as be nested within or outside the firm (network – Lavie, 2006). This network perspective leads to the recall of relational capabilities (Nahapiet and Ghoshal, 1998), fundamental for the access in information about foreign markets.

The airline industry emphasizes the importance of the network with a clear link to relational managerial capabilities that helps in addressing challenges and opportunities concerning the alliances. This is the reason why value creation at network level underpins the creation of value as the result between the amalgam of network and individual level of analysis.

In this direction, alliance portfolios support the access to network resources, the acquisition of technological capacity, the achievement of brand reputation in new markets. According to some authors (Andrevski et al., 2013) it is important to take into account “the structure of the alliance portfolios, the quality of partner relationships or the structure of the alliances among all the competitors affect access to network resources and whether this access affects the individual performance of each airline” (Fig. 3.5).

According to Gulati *et al* (2000) strategic networks “encompass a firm’s set of relationships, both horizontal and vertical, with other organizations” and “are composed of inter-organizational ties that are enduring, are of strategic significance for the firms entering them”.

Figure 3.5 - Factors affecting alliance portfolios



Source: Our Elaboration from Andrevski et al., 2013.

The distinguishing element in the field of airlines’ alliances is the shift from bilateral alliances to multilateral ones (Lazzarini, 2007).

They are grouped into three principal networks: Star Alliance, Oneworld, Skyteam.

Star Alliance is the world's biggest airlines network and it was founded in 1997 by United Air Lines, Lufthansa, Air Canada, SAS and Thai Airways. Oneworld was established in 1998 by founding alliance members American Airlines, British Airways, Cathay Pacific and Qantas. Finally, Skyteam is born in 2000 thanks to the alliance between Aeromexico, Air France, Delta Air Lines and Korean Air.

In these multilateral alliances, members decide the “rules of the game” in terms of destination served, referring markets, etc. This, on one side, leads companies to cooperate while on the other they remain competitors.

Such alliances seem to drive to a coopetition context (Nalebuff and Bradenburger, 1996; Dagnino and Padula, 2002) that can reveal itself to be very profitable since competition favours innovation and through collaboration it is possible to start strategic or tactical initiatives.

The alliances in airline industry can be tactical or strategic (Tugores-García, 2012). The first ones are based on marketing and commercial objectives.

Interline agreement, code sharing and coordinated joint ventures shape the framework of tactical alliances.

On the other side, strategic alliances (Doganis, 2006) can regard brand strategies, the homogeneity of service standards, the resource sharing (i.e., human resources, financial resources, etc.). Furthermore, this kind of alliance allows co-marketing activities through the creation of dedicated entity (Fan et al., 2001).

Table 3.5 – Composition of the groups Star Alliance, Oneworld and Skyteam.

	Star Alliance	Oneworld	Skyteam
Member Airlines	28	30	20
Passengers per year	727.42 million	480 million	588 million
Countries served	195	150	178

Source: Star Alliance, Oneworld and Skyteam, 2014.

These three groups represent a mega classification of the main alliances called “Global airline alliances”. Of course, the nature and of alliances may differ from the strategic purpose.

Indeed, important agreements between airline companies exist also for commercial purposes. This can be the example between American Airlines (*full cost*) and JetBlue Airways (*low cost*) signed in 2010. This commercial agreement has two implications. The first one refers to an expansion of the markets for both companies with a share of the routes: 15 are the destinations served by American Airlines and 26 those of JetBlue Airways.

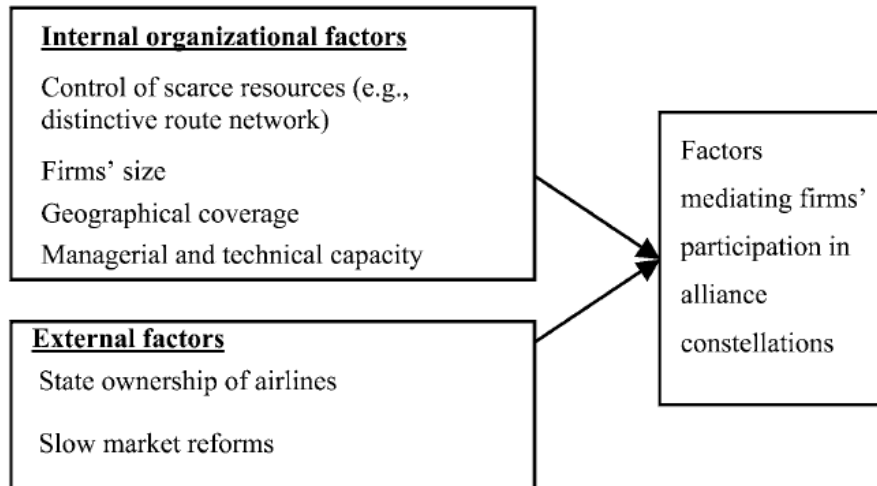
Second, this agreement is twofold influential according to a marketing perspective. The two companies, therefore, have created a shared “*frequent flyer agreement*” that allows members, who adhere to Airlines AAdvantage or JetBlue’s TrueBlue, to gain points even if they belong only to one frequent flyer program.

This example represents an overturn of the classical perspectives for both low cost and full cost companies.

In this direction, some studies (Amankwa-Amoah and Debrah, 2011) doubt about what are the factors pushing companies to join forces. These are divided into internal organizational factors and external factors (Fig. 3.6). If companies own scarce resources and the destinations served in terms of geographical area could be greater they tend to ally as the firm’s size and the internal managerial capabilities do not permit to exploit/explore opportunities.

On the other side, the state ownership of airlines and the slow market reforms are the two main external factors that drive to find some kind of agreement between companies.

Fig. 3.6 – A proposed integrative framework of factors mediating firm’s participation in alliance constellations



Source: Amankwa-Amoah and Debrah, 2011.

3.4 Capturing value in the airline company

For the analysis of this paragraph, we adopt the distinction made for the value creation process that proceeds with the levels of analysis according to the different sources.

As before underlined, at an individual level we find executives, employees and customers. With reference to the CEOs and executives, the compensation plans include a total compensation shaped by a package where salary, bonus, stock gains, benefits (both tangibles and intangibles) and other compensations¹⁴ form the total compensation. Furthermore, their stock ownership is what characterizes their value capture.

With reference to employees, this research aims at verifying if those involved in the process of value creation can also capture it.

Although some scholars (Bowman and Ambrosini, 2000) agree that employees can be the source of value, they also state that these appropriate only a portion.

¹⁴ Other compensations may refer to “vested restricted stock grants, LTIP payouts and perks; and stock gains, the value realized by exercising stock options” (Forbes, 2014).

Literature on productivity has deeply studied the linkage between productivity and firm's performance as well as whether and to what extent the human resource practices may have a positive influence on as efficiency-based approach that drives to the increase of productivity (Schulz et al., 2013).

Previous researches explored the role of "employee-owner", deeply analyzing the effect of stock ownership on both employee and firm productivity (Pendleton and Robinson, 2011; Mygind, 2009) and the relative compensation systems.

On the other side, studies have underemphasized the role and the contribution of employees with an analysis focused at different organizational levels (i.e., operational and technical level).

Value capture literature has afforded the theme analyzing the mechanisms that determine employees' value capture (Coff, 1999; Coff, 2010- i.e., bargaining power and capabilities).

This dissertation wants to verify if productive employees appropriated of the so created value.

We therefore measure differences in productivity across different categories of employees at the operational level. Indeed, different groups of employees may show different levels of productivity.

In order to proceed with an answer, we have also to introduce some insights on the groups of employees we analyze in this work.

As regards the value captured by employees, airline companies compensation plans as well as operating procedures and social norms (Kole and Lehn, 1999) constitute the corporate culture. According to Kole and Lehn (1999), the set of compensation and incentives can influence and shape employees' behaviour.

In general, high level of productivity (Klein, 2012) contributes to the company's success in the case of airline companies. The high level of productivity can be translated into higher compensation and benefits (Klein, 2012).

Looking at some figures that this dissertation deeply analyze in the empirical part, we focus the attention on particular operational groups of employees, such as pilots and co-pilots, flight attendants, maintenance, etc.

Pilots and *co-pilots* are defined as "atypical employees" (Harvey and Turnbull, 2006 p.332) owning "strategic skills", both generic and specific (Johnson 2002, p.22). Their

significant bargaining power and their possible mobility (Johnson 2002) insert them in a privileged position for the capture of the created value. According to Hunter (2006) there is a difference in compensation policies between low cost and full cost airlines. Indeed, they are inferior in the case of low cost as the average of days per annum is lower than for the full cost.

*Flight Attendants and Maintenance*¹⁵ must own the right attitudes as “the lack of an attitude of superiority” (Klein, 2012 p. 38) and they have to possess relational competences.

According to the IATA report (2011), employees are considered one of the first groups for the appropriation of the created value. This is also due to their belong to union of workers that guarantee them satisfying labor regulations. Furthermore, these unions represent specific groups of employees (i.e., pilots, ground staff, cabin crew, etc.) and look after the negotiation of wages separately for each category.

According to Carter et al (2006), airline industry is quite interesting as it has high-risk exposures. Indeed, this scenario pushes to doubt about if there is a possibility to capture value. In this sense, the performances of many airline companies show not satisfactory results.

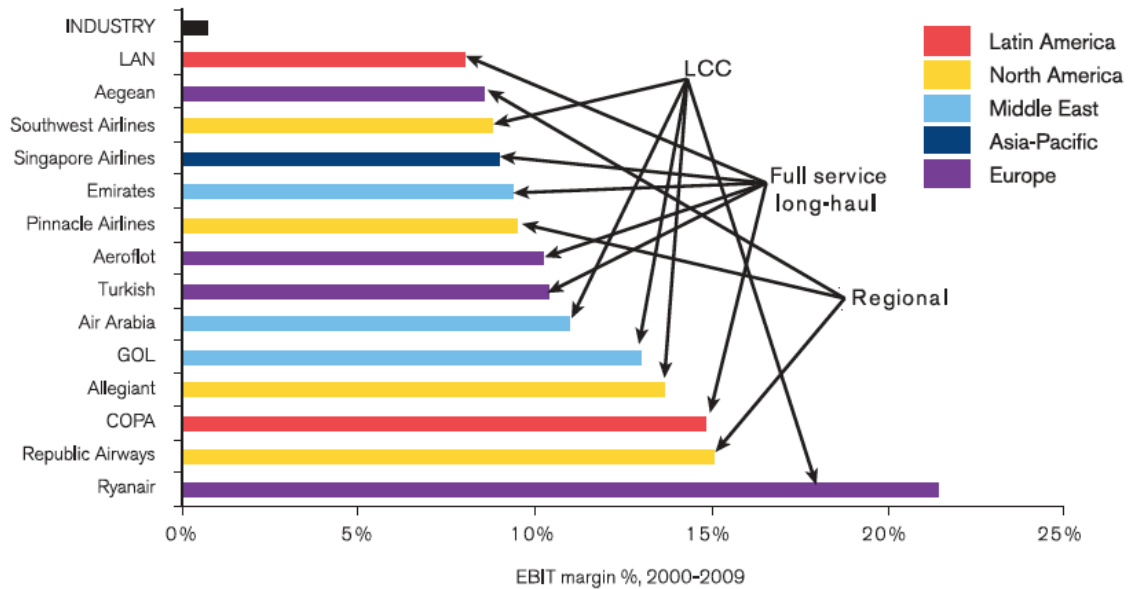
On the other side, there are companies that perform better than others in a context where the financial risk erodes the economic results. Figure 3.7 shows how different airline companies have a stable and valuable situation even if they differ in business models, scale, geographical context, etc.

It is important to underline that airline companies in order to generate a return of capital equal to its cost have to generate an EBIT¹⁶ equal to 8% or more (IATA, 2011).

¹⁵ The discourse on maintenance needs to be examined in depth as “many airlines perform line maintenance in-house, 60% of carriers outsource at least part of their maintenance activities. About 30%-50% of maintenance work is estimated to be provided by external suppliers” (IATA, 2006)

¹⁶ EBIT “is an indicator of a company's profitability, calculated as revenue minus expenses, excluding tax and interest” (Investopedia, 2014).

Figure 3.7 – Airline companies and their EBIT



Source: Bloomberg

As regards the level of profitability, revenues are a suitable indicator that expresses whether these companies are able to cover bills, renewing their fleets and acquire other services (IATA, 2011).

Even if this industry is framed as having low level of profitability, the search of the reasons allows us to understand what are the main critical points.

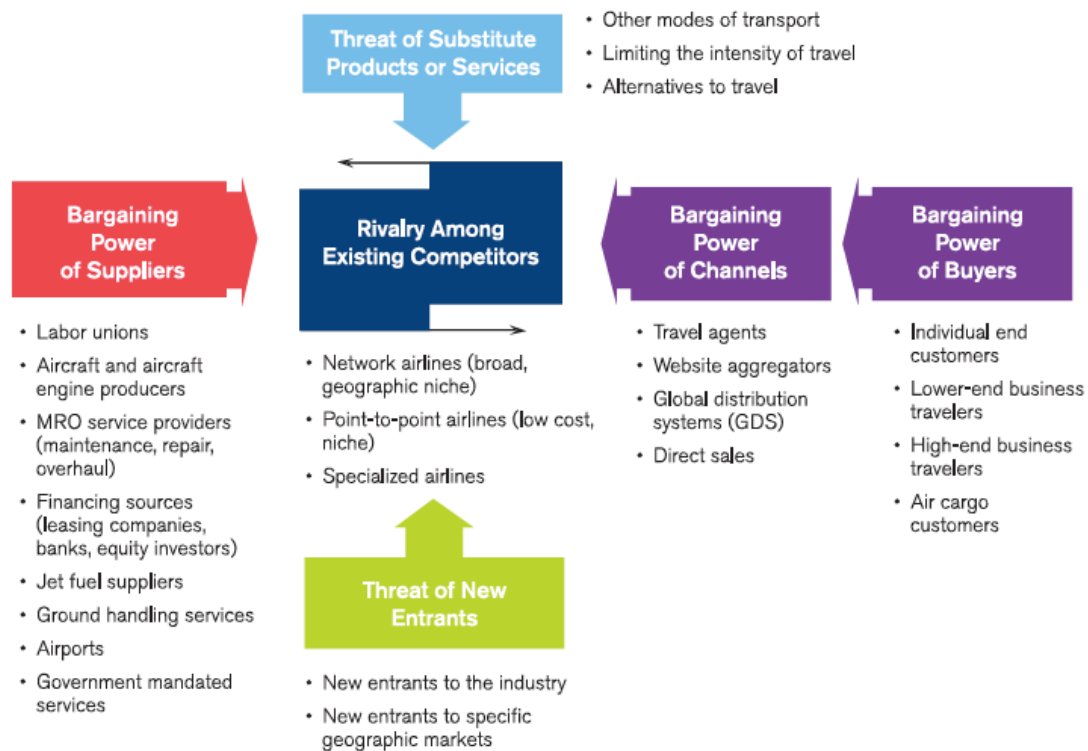
In particular, two traits distinguish this industry: the high level of fragmentation and the competition that is almost based only on the price.

Moreover, there are suppliers that leverage on price competition and act with destructive behaviors, making more difficult the regular management of the activities and the gain of a sustainable competitive advantage.

Other determinants of airline profitability must to be researched in the bargaining power of suppliers, in the threat of new entrants, in the direct competitors¹⁷, of the threat substitute products, the bargaining power of channels and buyers (IATA, 2011 – see figure 3.8)

¹⁷ According to the chairman of American Airlines Tom Horton the airline industry “is now defined by the changes our competitors made in restructuring to secure their futures, and the landscape is littered with those airlines that failed to change.” (Mouawad, 2012b).

Figure 3.8 – Determinants of airline profitability



Source: IATA, 2011.

Hence, within the actual context airline companies are enhancing their profitability with the key of innovation in products and services.

There are many indicators used in order to measure value capture. Some scholars (Wojanh, 2012), analyzing this industry, suggest that the return on capital employed (ROCE) and WACC are two important indicators of the captured value.

As airline industry is defined as “cyclical¹⁸” (Wojanh, 2012; MIT, 2006), the companies have to cover the cost of capital in a cycle but it is quite impossible. The is the reason why, they try to earn more economic profits in stable times in order to cover the amount of total costs during the periods of crisis (Wojanh, 2012).

¹⁸ A cyclical industry is an industry whose performance (revenues, profits, etc.) is tied to the business cycle. Thus, when the economy is grows quickly, the industry does well and vice versa.

Finally, the value created by the network may have two implications for the capture of value: the first one belongs to the offer side and the other to the demand side.

This double perspective recalls the concept of “value slippage”. Indeed, the created value at network level can be appropriated at firm’s level, customer’s level as well as network’s level.

Of course, the benefits of the value captured at network level depend on the nature of activated network.

From the customer perspective, Goh and Uncles (2002) suggest that greater network access, seamless travel, transferable priority status, extended lounge access, enhanced frequent-flier programs benefits represent the value appropriated by the customers. These customers can travel for both leisure and business.

In particular, these benefits consist of:

- *greater network access*: this allows a wider choice among routes and destinations, greater schedule, etc.;
- *seamless travel*: global alliances lead to a speedier management of processes of which customers may benefit in terms of quick procedures (i.e., transfers, check-in, etc.);
- *transferable priority status*: this can refer to the transferability of benefits if customers adhere to loyalty programs of one company rather than another;
- *extended lounge access*: customers that have priority status of one company can enjoy reciprocal access to all the benefits of other companies belonging to network;
- *enhanced frequent-flier programs benefits*: it is the initiative made by airline companies adhering to a network that involves the joining of frequent traveler programs.

These benefits contribute to form as well as to elevate the overall travel experience (American Airline, 2014).

Furthermore, if airline companies have also business-to-business clients, these networks give them corporate solutions (Skyteam, 2014) such as corporate contracts in the light of cost saving.

These networks, exploiting the fact that they offer a global coverage, give the possibility to take advantages in terms of more flexibility.

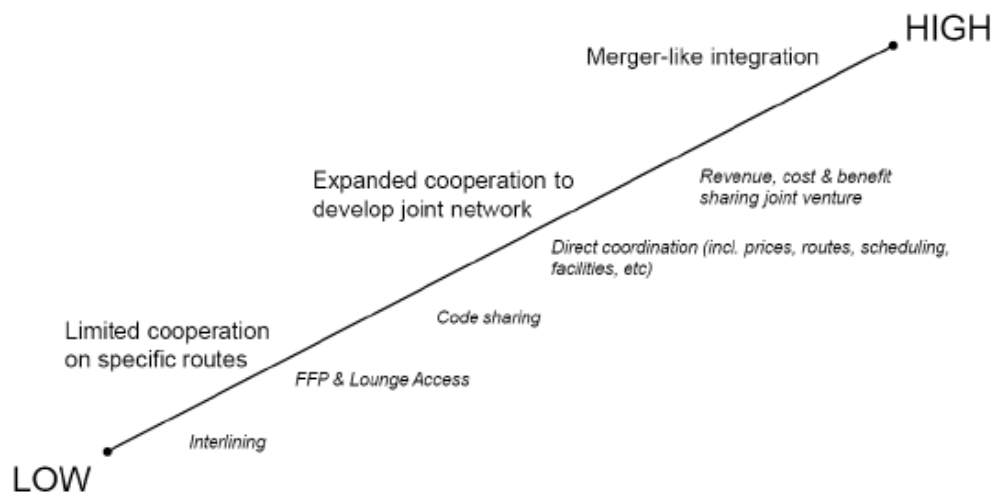
The greater number of options that are offered to both leisure and business travelers are the tangible symbol of what the network can create in terms of value and what customers may appropriated of the so created value.

To summarize, customers effectively benefits from the value created at network level.

Figure 3.9 suggests that the “spectrum of airline co-operation” (IATA, 2011) can vary from low to high.

If this spectrum is quite high, the value appropriated by the single companies can be translated in revenues, lower costs in some fields due to the higher bargaining power regarding suppliers or channels, and sharing joint- venture.

Figure 3.9- The spectrum of airline co-operation



Source: IATA, 2011.

3.5 Research questions

The previous chapters and the description of the features of the airline industry of this chapter drive to the summary of research issues and the consequent formulation of research questions.

The themes of value creation and value capture are here deal with a precise level of analysis and with a clear key that acts as a bridge between the creation and capture of value.

This bidding agent is the productivity of the employees, working at the operational level of the airline company.

The productivity, indeed, conceived as “the extent to which a firm’s human capital is efficiently creating output” (Guthrie, 2001, p.184) can according to some scholars (Koch and Gunter McGrath, 1996) influence the creation of value while according to others it is only a necessary condition (Holcomb *et al*, 2009; Guthrie, 2001).

Starting from this academic debate, the aim of this dissertation is to verify whether or not productivity influence value creation.

The necessity to deeply analyze this issue, leads to the formulation of the first research question.

RQ1: Does employees’ productivity impact on the creation of value?

The axis of the analysis shifts then from the creation to the capture of the so created value.

If capture of value according to employees perspectives can be translated in terms of compensation, payroll taxes, and other tangible and intangible benefits, it is important to verify if employees with higher level of productivity receive higher rewards than those with lower level of productivity.

Value creation by human resources can be linked with employees’ productivity or with the human resource practices that companies realize.

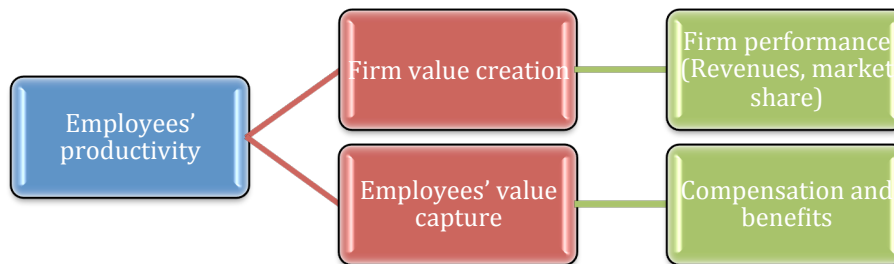
This perspective leads to a new interpretation that consists in taking into account the value capture as a starting point for the analysis of both employees’ productivity and value creation.

In this direction, the second research question comes out:

RQ 2: *Do employees capture the created value?*

Figure 3.10 summarizes the research issues and shows how productivity is the starting point of this research.

Fig. 3. 10 - Research issues



Source: Our Elaboration.

CHAPTER 4

RESULTS

4.1 Research Methodology

In this chapter we present the research methodology and the analyzed companies, showing our theoretical model.

This research uses the Structural Equation Modelling (SEM). This is a “multivariate technique combining aspects of multiple regression (examining dependence relationships) and factor analysis (representing unmeasured concepts with multiple variables) to estimate a series of interrelated dependence relationships simultaneously” (Gefen et al., 2000, p. 72).

SEM can be used when the relationship between two types of variables needs to be investigated: observed and latent (Table 4.1).

The observed variables can be directly observed by the researcher through some tools such as a questionnaire or data coming from specific databases. Latent variables, on the other side, cannot be directly observed.

In this direction, SEM can both measure endogenous (also known as latent) and exogenous variables (also known as dependent).

Table 4.1 – Traditional latent variable models

Observed variable(s)	Latent variable(s)	
	Continuous	Categorical
Continuous	Common factor model Structural equation model Linear mixed model Covariate measurement error model	Latent profile model
Categorical	Latent trait model/IRT	Latent class model

Source: Skrondal and Rabe-Heskett, 2007.

In particular, “latent variables are random variables whose realized values are hidden” (Rabe-Heskett and Skrondal, 2007).

To be studied, they need models that are able to statistically connect latent variables with observable ones.

Hence, SEM is a particular technique that can analyze casual links among endogenous variables and between exogenous and endogenous variables.

In particular, SEM is able to study bi-directional relationships. The model is shaped by two parts:

1. the measurement model that identifies the relationship between latent variables and their connected indicators;
2. the structural component studies the relationships among latent variables.

This dissertation uses Partial Least Square Path Modeling (PLS-PM) or Partial Least Square approach to SEM (SEM PLS). The reason why we chose this technique is because its flexibility allows the analysis of a large number of missing values, of variables with high correlation for a sample, in this case, with small number of airline companies we can consider the high number of variables.

SEM techniques are the results of two perspectives: the econometric and psychometric. The econometric perspective focuses its attention on prediction while the psychometric one is based on latent variables that can be measured through the observed variables.

What defines the SEM are a series of factors:

- the coefficients;
- variances and co-variances of exogenous variables;
- the error variance and covariance.

These structural parameters, that help in the understanding of casual relationships between variables, can be classified according to coefficients γ and coefficients β . The fact that these coefficients are two is linked to the possible existence of exogenous variables (recognized thanks to the symbol X) or endogenous (recognized thanks to the symbol Y). The coefficients β and γ shape the relationships between the different endogenous variables (Y) and between X and Y.

We chose this specific methodology since it allows to model relationships among multiple predictor and criterion variables (Chin, 1998) and to examine a series of dependence relationships simultaneously. Furthermore, as underlined from the first chapter, value is a latent variable, and the use of SEM allows to give an answer to a set of interrelated research questions in a single, systematic and comprehensive analysis (Gefen et al., 2000). SEM has two different methods of analysis: covariance-based SEM or they can use partial least squares-based SEM. In this study, we chose PLS.

The application of SEM is characterized by model formulation, model identification, model estimation, model evaluation and model modification (Wang and Wang, 2012).

In the phase of *model formulation* phase the researcher explains the model and the origin of the same. Indeed, it springs out from theoretical background or previous empirical findings. It is shaped by two parts: the measurement model and the structural model.

Model identification is useful since for the free parameters of the model and their relative identification.

Model estimation allows to estimate the model and proceed with the model fitting.

In the *model evaluation* phase the researcher has to verify if model fits data.

Model modification refers to the case in which model does not fit data and the researcher has to re-modify the model.

4.1.1 Validation of measurement model: reliability and validity

As viewed in the last paragraph, there are different phase in the SEM. In particular, Model estimation, evaluation and modification underpin the validation of the outlined model.

For the use of SEM, reliability and validity should be assessed. The first step consists in performing validity. This latter is the ability to rely the measures of the model.

This means to verify if the *ex-ante* supposition about measure have effectively a validation.

If this does not happen, the researcher should eliminate the indicators that are not statistically significant (Anderson and Gerbing, 1988).

Hence, while validity means that SEM can then measure what it is intended to measure, reliability means that the model can consistently measure something.

More precisely, Measurement reliability concerns the real score of the latent variables (DeVellis, 1991). This measurement of reliabilities can be expressed through Cronbach's α or the composite reliability and Average Variance Extracted (AVE).

Coefficient α is the most common measure of reliability. Its measure can vary from 0 to 1. If α is greater than 0.7 the scale is good. Some scholars agree that it has several limitations (Shook et al, 2004).

Average Variance Extracted indicates how much variance is captured by the latent variable in SEM and shared among other variables.

Once that reliability is measured, the researcher proceeds with the test of discriminant validity. This latter is done through the AVE analysis by observing the comparison between the AVE and the correlation among the constructs.

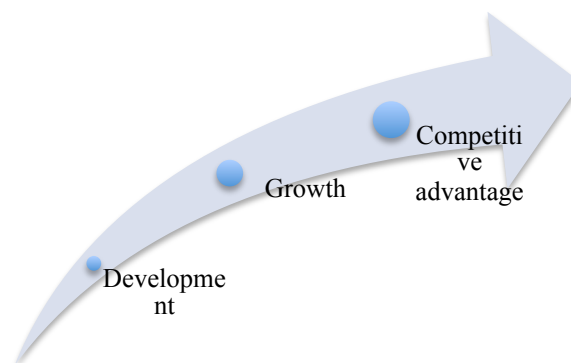
Data go beyond the test of discriminant validity if the square root of AVE exceeds the correlations of the construct with all of the other constructs (Fornell and Larcker, 1981).

4.2 Data analysis

Data were collected from the Global Airline Industry Program, that is the result of the Massachusetts Institute of Technologies (MIT). This institute aims at building "a multidisciplinary team of faculty" (MIT, 2014) to deeply analyze the airline industry.

In particular, MIT wants to study the development, growth and competitive advantage of the airline industry since it is one of the most dynamic in the world.

Figure 4.1 – The purpose of the study of Massachusetts Institute of Technologies



Source: Our Elaboration.

Moreover, MIT established the Airline Data Project (ADP) that collects data from fifteen airline companies (Table 4.2).

The necessity to study this particular industry is imposed by the fact that it is “fast-evolving, labor intensive, capital intensive, hyper-competitive and highly susceptible to the ebb and flow of business cycles as well as being among the most regulated of deregulated businesses.” (MIT, 2014¹⁹)

Table 4.2 – Companies of the Airline Data Project

Company	Other important information	
AirTran	Subsidiary of Southwest Airlines by May 2011	
Alaska Airlines	Alaska Air Group, Inc., is the holding company for Alaska Airlines	
Allegiant Air	Subsidiary of Allegiant Travel Company	
America West Airlines	Subsidiary of US Airways	
American Airlines	-	
Continental Airlines	-	
Frontier Airlines	Subsidiary of Indianapolis-based Republic Airways Holdings Inc	

¹⁹ <http://web.mit.edu/airlinedata/www/default.html>

Hawaiian Airlines	Subsidiary of Hawaiian Holdings, Inc.	
jetBlue Airways	-	
Midwest Airlines	Operating brand of Republic Airways Holdings	
Northwest Airlines	Merged with Delta in 2008	
Southwest Airlines	-	
United Airlines	subsidiary of United Continental Holdings	
US Airways	-	
Delta Airlines	-	

Source: Our Elaboration.

We excluded from this database companies that do not have updated information and data. This operation leads to the analysis of nine companies that are: American, Delta, United, US Airways, Southwest, jetBlue, Alaska, Hawaiian, Allegiant.

We analyzed data of the fiscal year 2011 since the database of Airline Data Project is updated until 2012 but for a few companies some data of the year 2012 were not displayed.

The intent of the current dissertation was also to analyze qualitative information of the companies in the field of human resource practices in order to explore whether they apply and focus their attention on this aspect. Furthermore, we try to understand if they create relationships between human resource practices and value creation.

In order to explore these research questions, this dissertation uses also an in-depth multiple case studies analysis (Eisenhardt, 1989; Yin, 2003)

According to Aarikka-Stenroos and Sandberg (2012, p. 201) multiple case studies “allow rich description and comparison” as well as to proceed with a cross-case comparisons (Eisenhardt, 1989). A multiple case study allows an in-depth and a richer analysis of a certain phenomenon.

The research methodology, adopting a multiple case study analysis, points the attention on the relative qualitative results.

Furthermore, the case study methodology is able to capture contextual richness and complexity of research issues (Yin, 2003). Each case has to be studied as a single case (replication).

According to Aaboen et al (2012, p. 236) multiple case studies “facilitate identifying and analyzing particular patterns in certain processes and explaining differences across cases by contrasting them to each other”.

Furthermore, Eisenhardt and Graebner (2007) underline that multiple cases study approach is an effective vehicle for obtain new knowledge about a specific phenomenon since it allows to understand the research issue from different standpoints.

Data were collected from different sources such as annual report, feasibility studies and other secondary sources.

American Airlines obtained in 2004 an important improvement in relationships with labour unions that allows the company to do not go into bankruptcy (von Nordenflycht, 2006).

The company has the highest labor costs compared to the other companies in the industry (Mouawad, 2012). In times when fuel price goes up, the company tried to reduce job costs, proceeding with job cuts (Maynard, 2008). In this direction, American

Airlines has to deploy relational and negotiation capabilities with labour unions for contract negotiations of the specific categories.

One of the most expensive labor cost of employee groups is that related to the pilots. Indeed, in 2012 the pilot union asked to the company “more flexible work rules and the ability to use regional partners to fly larger jets” (Mouawad, 2012)

In terms of compensation and benefits, American Airlines offers to its employees a satisfying total rewards package with a vast range of benefits from different categories: health and life benefits, savings and retirement, work/life balance, career development and travel²⁰. Moreover, the company provides for profit-sharing and performance incentives.

American Airlines, indeed, offers to their employees medical plans, financial benefits for the retirement, a series of advantages for their private life and guarantees the professional growth of every single employee.

American Airlines major efforts are addressed to the training of human resources. The methods of the trainings differ according to the employee group but also according individual needs following also a psychological perspective (Schmitt, 1987).

The keystones of American Airlines about human resource management are “Developing People”, “Approach To Training And Talent Management”, “Approach To Training And Talent Management”, “Excellence From Within”²¹.

These kinds of approaches underline the range of opportunities that American Airlines gives to its employees. At the basis there is a sharing of strategic objectives of the company and the possibility to enhance and develop personal and professional skills, aligning them to the objectives that need to be achieved.

Alaska Airlines “had the industry’s best on-time performance for the third consecutive year in 2012, with 87 percent of flights landing on time” (Mouawad, 2013). This important result can be linked to a good level of productivity of its employees as well as to the right implementation and use of modern technologies.

As regards Alaska Airlines’ human resource management, it is characterized by the presence of employee unions (about 80%)²². The aim of the company is to provide the so-called “market-based wages²³” to its employees.

²⁰ <http://careers.aa.com/en/ac/employee-benefits>.

²¹ <http://www.aa.com/i18n/aboutUs/corporateResponsibility/employees/strengthening-our-workforce.jsp>.

The total rewards of Alaska Airlines are shaped by: medical benefits, flexible spending accounts, retirement plan, additional cash compensation, operational performance rewards program, work/life balance opportunities, travel privileges and events.

They offer also tailor-made opportunities for their employees such as career development programs, training opportunities, as well as mentoring and coaching programs.

Alaska Airlines has, moreover, a special plan called “Taking Care of Each Other” that is composed by employee injury, illness and medical leaves, vacation donation program, employee assistance fund. These programs have the meaning that the company wants to support its employees in every field and situation of the everyday life.

The success of Alaska airlines is based on the expansion of its services (Mouawad, 2013). This expansion also refers to a geographic enlargement of the base on the West Coast. In particular Hawaii, is one of its main hub since company’s flights have a weight of about 20% of its available seat miles compering the other companies operating in this state (Mouawad, 2013).

Talented and skilled individuals are one the critical success factors of the company with others important pillars such as safety, reliability, quality service, profitability and continuous improvement²⁴.

On the other side, “Professionalism” is contemplated in the shared values. The peculiarity of Alaska airlines human resource is the union between high professionalism and the share of Alaska Spirit.

Allegiant Air provides to its employees, a part form the classical compensation, retirement plan, competitive stock-ownership plan, healthcare insurance, wellness program and incentives, travel benefits, etc.

The company invests in innovative people that are able to pervade with this innovativeness the job, the team where they work or the department to which they belong.

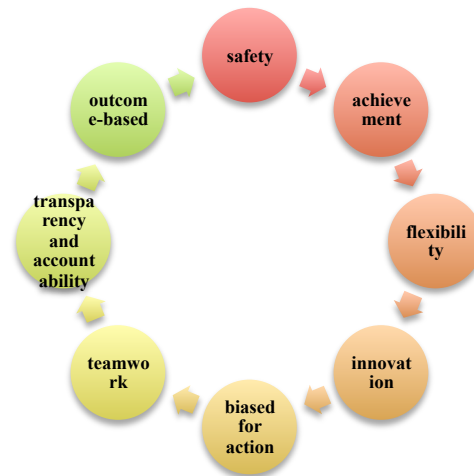
²² <http://www.alaskaair.com/content/about-us/newsroom/qx-employees.aspx>

²³ Market-based wages “combine the more well-defined parameters of a traditional structure with the range spread flexibility of broad bands” (Society for human resource management, 2012).

²⁴ <https://careers.alaskaair.com/Alaska-OurCulture.asp>.

The mission statement of Allegiant Air is based on specific values: safety, achievement, flexibility, innovation, biased for action, teamwork, transparency and accountability, outcome-based.

Figure 4.3 –Allegiant Air’ values



Source: Our Elaboration.

The success of Allegiant Air is due to “efficient operations, lower costs and an attention to customer service” (Mouawad, 2010). Also other companies, such as JetBlue Airways, have adopted the same system based on efficiency. This kind of organization constitutes a threat for Southwest, that can loose its leadership in the market of low-fare trade (Mouawad, 2010).

Delta Air Lines went into bankruptcy in 2007. The rules of compensation have changed after this date.

In 2008, Delta merged with Northwest Airlines to form the world's largest commercial carrier, with about 80,000 employees²⁵.

The company classifies employees according to different categories: noncontract employees, pilots and flight dispatchers, management.

The rewards of noncontract employees are designed in order to improve their productivity and performance. Indeed, it is possible to find (Delta, 2007):

- ❖ Stock Ownership;
- ❖ Cash Lump Sum Payment;

²⁵ <http://news.delta.com/index.php?s=18&cat=47>.

- ❖ Shared Rewards Program;
- ❖ Base pay increases;
- ❖ Retirement.

While for the category pilots and flight dispatchers, there are the labor unions that have high bargaining power.

Their compensation package is shaped by profit sharing and the shared rewards compensation programs. As regards contribution, they have defined contribution retirement benefit. Moreover, they capture value “from the proceeds of the general” (Delta, 2007).

With reference to management, it receives “restricted stock, stock options and performance shares, which will require performance over time in order to vest” (Delta, 2007). Executives are included in the retirement benefit plan and in the annual incentive plan.

Although the package of compensation is designed in a better way, there always are labor unions that contract for better wages (Fitzsimmons, 2014).

United Airlines together with American, Delta and Southwest Airlines are the leaders of domestic market with about 70% of share (Mouawad, 2013). But Delta and United went into bankruptcies and mergers in the last decade. Thanks to these mergers United Airlines and Delta Air Lines have become the biggest domestic airlines, obtaining more than 100 million frequent fliers (Mouawad, 2013).

Before 2002 employees of United were organized according a system called "best of business" that implied the involvement of teams to find solution about, for example, free pass policies for travel or to improve operations for cost cutting (Rosen, 2002).

United's total rewards is composed by a wide portfolio of privileges, such as²⁶:

- ❖ Travel privileges
- ❖ Profit sharing plan
- ❖ Performance bonus
- ❖ Perfect attendance program
- ❖ Retirement benefits

²⁶ <https://www.united.com/web/en-US/content/company/career/benefits.aspx>

- ❖ Vacation and sick pay
- ❖ Business travel accident insurance
- ❖ Wellness program
- ❖ Medical and dental insurance
- ❖ Vision insurance
- ❖ Long-term disability plan
- ❖ Life insurance
- ❖ Long-term care
- ❖ Flexible spending account
- ❖ Personal accident insurance
- ❖ Employee assistance program
- ❖ Commuter benefits program
- ❖ Employee discounts

US Airways gives back an image of a company who takes care about its employees. This is showed through the package of benefits that US Airways makes available for its human resources. The company offers an employees' total rewards program based on a "college tuition reimbursement program". Table 4.3 summarizes it.

Table 4.3 – US Airways' Benefits and Privileges

	<i>Type of benefits and privileges</i>
Benefits and privileges	<ul style="list-style-type: none"> • Medical insurance • Dental insurance • Life Insurance • Short and long term disability insurance • Employee assistance program • Auto and home insurance • Critical illness insurance • Pet insurance • Identity theft protection plan • Travel privileges Domestic partner program • Prescription drug insurance • Vision insurance • Accidental death and dismemberment insurance • Flexible spending accounts • 401(k) plan • Long-term care insurance

	<ul style="list-style-type: none"> • Accident insurance • Legal-aid plan • Paid vacation and days off • Business resource groups
--	--

Source: Our Elaboration.

As regards the employees culture, this company has what it defines a “welcoming culture for all employees” that means an open work environment where the diversity, in all its meanings, is accepted and valorized.

Indeed, in the field of diversity, a series of awards²⁷ testify the commitment and the work on employees’ diversity.

The careful culture of **Southwest Airlines** about employees is testified by the fact that company calls them “our Family of Employees”. Apart form the classical economic compensation, table 4.4 synthesizes the employees’ benefits program.

Table 4.4 - Southwest Airlines’ benefits and privileges

	<i>Type of benefits and privileges</i>
Benefits and privileges	<ul style="list-style-type: none"> * 401(k) retirement savings plan * Profit Sharing Plan * Medical * Prescription * Vision * Dental * Pre-tax commuter benefit * Mental health Employee assistance program * Life insurance * Accidental death and dismemberment * Long-term disability * Dependent life insurance * Dependent care spending account * Health care spending account

Source: Our Elaboration.

²⁷ US Airways received in 2012 some awards on excellent job on diversity from the following institutions: Best for Vets, Black EOE Journal, Professional Women's Magazine, Hispanic Magazine, Latina Style Top 50 Companies, Diversity Journal 2013 Diversity Leader Award, Human Rights Campaign Corporate Equality Index, CEO in Action Award.

Southwest Airlines pays high attention on the all components that shape customer satisfaction and it is given by a winning human resource management. One of the major strengthen is that company has established that a share of capital (about the 20%) is owned by its employees (Jones, 2007).

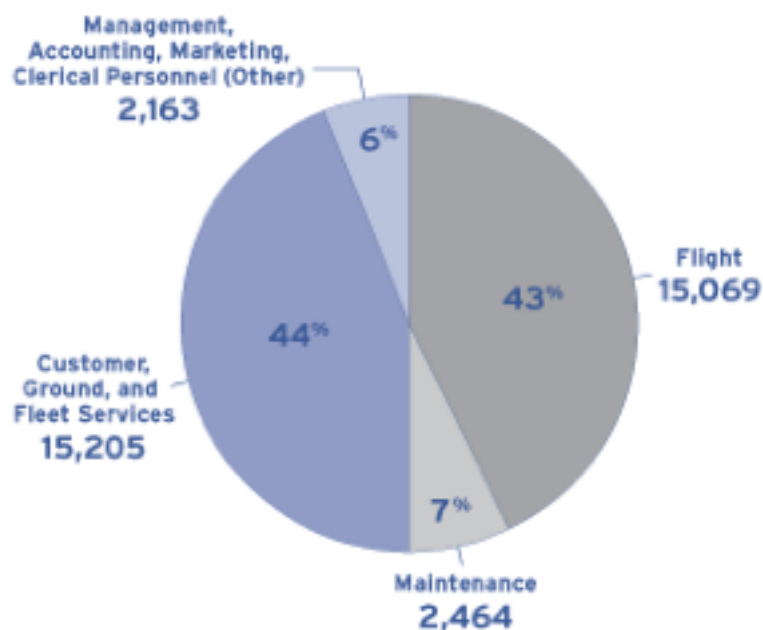
The low turnover and high productivity testify the commitment of the company in this direction. Furthermore, it received a series of awards since it creates a friendly working environment (i.e., “Employees Choice Awards Best Place to Work” by Glassdoor.com and “Best Companies for Leaders based on outstanding Company culture and internal professional development” by Chief Executive Magazine).

Southwest Airlines takes care about its employees from the selection to the special training in the Southwest University.

Moreover, Southwest Airlines aims at spreading out a collaborative spirit among its members that support the creation of a better service for the customer and the listening of his needs.

Moreover, figure 4.4 shows the breakdown of Southwest employees by dvisionion.

Figure 4.4 - Breakdown of Southwest employees by dvisionion



Source: Southwest Airlines, 2014.

JetBlue was founded in 2000 by David Neeleman, who had a clear vision right from the beginning of its history: “Bring humanity back to *air* travel”. This humanity is expressed by the airline’s human resources and by an efficient low-cost service.

The centrality of human resources, is demonstrated by the same CEO of the company, who defines the "Work really hard to hire the right people, train them really, really well, pay them really, really well, give them the best tools to work with. And then if it's not working out, make sure that you get rid of them, because the foundation of JetBlue is our people." (Wynbrandt, 2004).

JetBlue offers a series of benefits for its employees, classified into two categories. Maximize your health and Maximize your wealth.

Table 4.5 – JetBlue’ Benefits and Privileges

Category	Type of benefits
Maximize your health	<ul style="list-style-type: none"> • Medical insurance • Full-time prescription coverage • Dental insurance • Vision insurance • Group legal • Flexible spending • Life insurance • Short-term disability insurance • Long-term disability insurance • Pilot loss of license • Health risk assessment • Disease management programs
Maximize your wealth	<ul style="list-style-type: none"> • 401(k) plan • Roth 401(k) • Self-directed accounts • Guaranteed profit Sharing • Stock purchase plan • Airline credit union • Voluntary discount programs • Free and reduced rate standby travel on JetBlue flights • Discounted standby travel on other airlines

Hawaiian Airlines has more than 5,000 employees and offers them different kind of benefits: 401(k) savings plan, medical plan benefits, dental plan, domestic partner, employee assistance program, employee flexible spending program, floating holidays, vacation, sick leave, immediate day one - travel benefits.

4.3 Discussion

This dissertation empirically verifies whether the productivity of pilots, co-pilots, flight attendants, maintenance and passenger, cargo and aircraft handling acts upon the creation of value and if the created value is then appropriated by these groups of employees.


The SEM that we propose in this dissertation is composed by latent variables, manifest variables (or indicators) and the related relationships.

We use this precise model as it allows to measure latent variables such as, in our case, value creation and value capture.

In order to be measured, latent variables need of observable variables. In this sense, productivity is an observable variable. Productivity is the “total output divided by labor inputs. It indicates the extent to which a firm’s human capital is efficiently creating output” (Guthrie, 2001 p. 184).

In this work, the variable “productivity” is shaped by different indicators that symbolizes the measurable aspects of the phenomenon. Direct relationships exist between independent variable (cause) and dependent variable (effect).

The identified indicators of productivity are recognized by both analysts (i.e. Airline Data Project) and scholars (Zhu, 2011). These are:

 **Available seats per miles (ASM) per employees**²⁸: according to Tsoukalas et al. (2008, p. 178) ASM are “equal the number of available seats flown by the

²⁸ Global Airline Industry program states (2014): “To align with unit costs, we assess ASMs (output) per employee (input) for all employees and flight employees. We then take that analysis a step further and assess the number of ASMs produced per dollar of labor compensation. Calculating the output per employee is only one part of the equation. It is equally important to understand the cost of that output. Often the two produce very different results.”

airline, multiplied by the distance flown by its aircraft. They concern how many seat per miles are available for airline per employees.

- ✚ **Employees per aircraft:** this expresses a measure of efficiency as it defines the number of employees used per each aircraft.
- ✚ **Passengers per employees:** it indicates the number of passengers carried on the aircraft compared to the effective number of employees.
- ✚ **Passenger revenue per employees:** this measure indicates the passenger revenue that a firm generates divided by the number of employees.

As regards the indicators expressing the created value, revenues and market share are those that have been chosen for this analysis:

- ✚ **Revenues:** are a suitable indicator that expresses whether these companies are able to cover bills, renewing their fleets and acquire other services (IATA, 2011). Furthermore, Bowman and Ambrosini (2010) indicate them as measure of firm's profitability.
- ✚ **Market share:** is the market's total sales that is earned by airline companies over a specified time period (Investopedia, 2014).

As regards the capture of value, the used indicators are average salary, benefits and payroll taxes.

Two steps characterize our analysis. The first one refers to the assessment of the measurement model through construct validity and reliability. The second one concerns the assessment of the SEM.

The measurement model identifies what are the indicators for each construct. This means that the measurement model allows to see how constructs are operationalized by set of measured variables.

For the purpose of this dissertation and the nature of the main variables (i.e., value is a latent variable), this model is useful since it can create relationships between the latent variables and their observed indicators, also known as corresponding manifest variables. SEM is built upon a range of relationships, that are path-dependent and create a link with the research questions.

The software application that allows us to perform the analysis is SmartPLS. This latter is able to represent pathmodelling with latent variables using the partial least squares (PLS) method.

Using PLS approach underpins the modulation of data through a series of multiple regressions.

Hence, the research questions were testified using SmartPLS, a PLS structural equation-modeling tool. This kind of application permits two processes: the first one refers to the assessment of the model while the second concerns the estimation of the parameters of the structural model.

The first step, consisting of the assessment of the model aims at performing reliability and validity analysis.

The measures of validity and reliability must be assessed when SEM is chosen. This is useful in order to evaluate the statistic significance of the loadings.

Reliability indicates that a tool measure, in consistent terms, something while validity expresses degree to which a measure matches its construct (Spector, 1992).

In practical terms, the measurement of reliability allows to understand how many variance can be attributes to the score of the latent variable (DeVellis, 1991).

Moreover, Composite Reliability and Average Variance Extracted (AVE) evaluate the reliabilities of the constructs.

Before proceeding with the test of SEM, reliability and validity are here tested. Reliability is assessed through composite reliability (Hair *et al.*, 1998). “Composite reliability is the extent to which a variable or a set of variables is consistent in what it is intended to measure” (Rouibah, 2008). On the other site, convergent validity is assessed through AVE (Fornell and Larcker, 1981). Table 4.6 and table 4.7 show these values.

For both value creation and value capture, AVE is greater than 0.50 and this means that adequate convergent validity (Fornell and Larcker, 1981; Hair *et al.*, 1998).

Values composite reliabilities are greater or close to 0.80. This means that there is a significant convergent validity (Gefen *et al.*, 2000), a part for the performance in value creation that is 0,623899 as we have few indicators.

Finally, the values of R Square are closed to 1. This means that these values well predict the sample.

Furthermore, tables 4.8 and 4.9 show the discriminant validity calculated through the Square-Root of AVE.

In the case of data of value creation and value capture, data passed the test of discriminant validity. In each case, the square root of the average variance extracted exceeds the correlations of the construct with the all of the other constructs.

Table 4.6 - The assessment of the model for value creation

	AVE	Composite Reliability	R Square
Performance	0,563817	0,623899	0,894021
V.Creation_FlightAttendants	0,91848	0,928398	
V.Creation_Handling	0,918277	0,928516	
V.Creation_Maintainance	0,88646	0,893752	
V.Creation_Pilots	0,624194	0,754535	

Source: Our Elaboration.

Table 4.7 - The assessment of the model for value capture

	AVE	Composite Reliability	R Square
Performance	0,93	1	0,852092
VCap_FlighAttendants	0,996963	0,998479	
VCap_Handling	0,652169	0,785597	
VCap_Maintenance	0,574779	0,729976	
VCap_Pilots	0,665998	0,794251	

Source: Our Elaboration.

Table 4.8 - Discriminant validity for value creation

Performance	Performance	VC_FlightAttendants	VC_Handling	VC_Main tainance	VC_Pilots
Performance	0,75				
VC_FlightAttendants	0,700151	0,95			
VC_Handling	0,406174	0,271406	0,95		
VC_Maintainance	-0,653785	-0,198165	-0,159545	0,94	

VC_Pilots	0,566835	0,946309	0,422109	-0,100244	0,79
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Source: Our Elaboration.

Table 4.9- Discriminant validity for value capture

	Performanc e	VCap_FlighAttendant s	VCap_Handlin g	VCap_Maintenanc e	VCap_Pilot s
Performance	1				
VCap_FlighAttendant s	-0,347106	0,99			
VCap_Handling	0,557563	0,27168	0,81		
VCap_Maintenance	-0,383497	0,748041	0,351282	0,75	
VCap_Pilots	0,449585	-0,610157	0,429641	-0,377535	0,81

Source: Our Elaboration.

Once the step of assessment of the model is made, the second step concerns the estimation of the parameters of the structural model.

The model is designed to explore the following research question:

RQ1: Does employees' productivity impact on the creation of value?

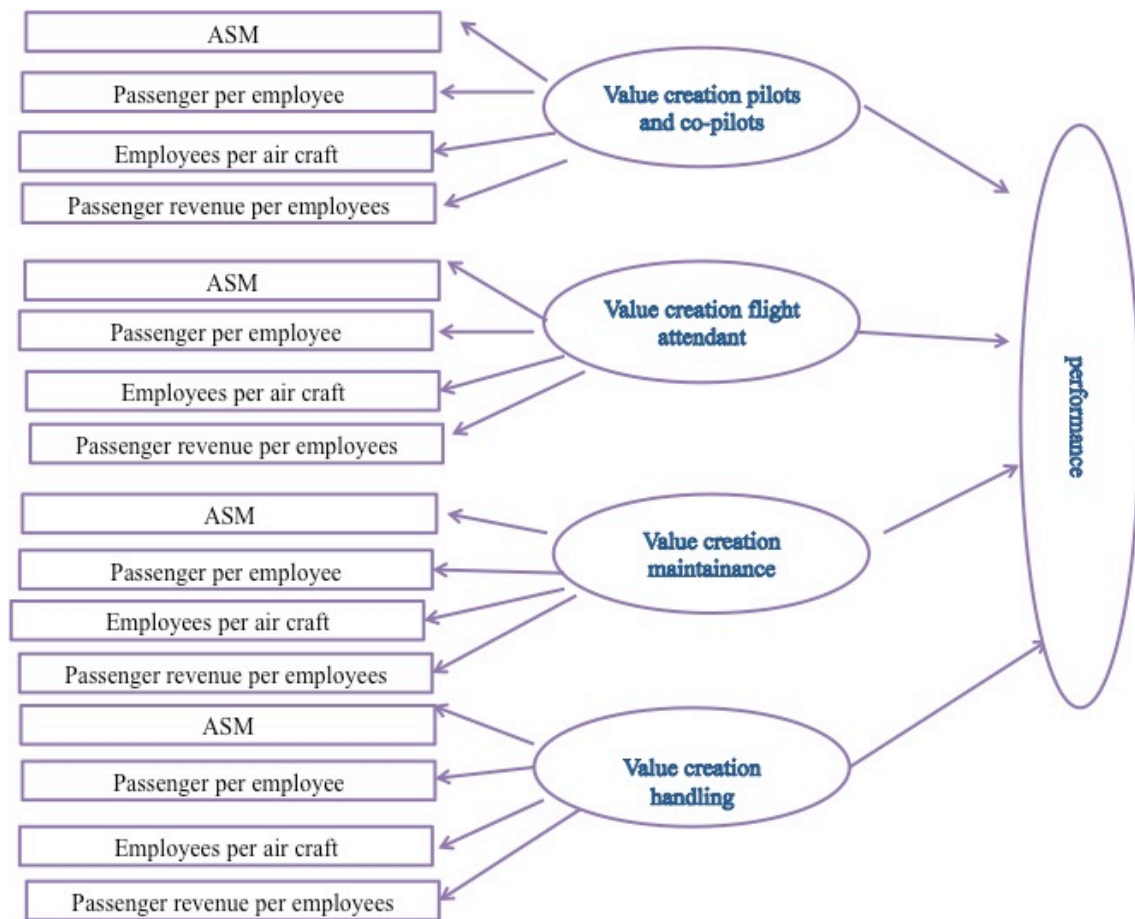
The peculiarity of this model consists in being articulated according to the different employees' groups working at operational level.

Indeed, the question that drives us to hypothesize this model is: "Could we focus on the role of different kind of employees on Value creation?". The aim is, indeed, to verify the hypothetical contribution of each group to the value creation coming from the operational level.

The latent variable of this SEM is the value creation of pilots and co-pilots, flight attendants, maintenance and handling while the manifested variables are the indicators of productivity.

Indeed, we test whether the productivity of each group influences the firm performance. The measures of productivities are indicated by the Airline Data Project and are ASM per employees, employees per aircraft, passengers per employees and passenger revenue per employees. These constitute the manifested variables for the evaluation of the latent variable (value creation)

Figure 4.5 – SEM for value creation



Source: Della Corte and Del Gaudio, 2014b.

These variables are used to predict the value of the latent variable. The focus on productivity finds its routes in the importance that US airlines give to its relative indicators²⁹.

Airline companies have effectively an attention not only in improving productivity but also in cutting operating, of which the labor cost belongs to.

In this direction, in last years U.S. airline companies have made significant efforts and changes in what regards labor costs and productivity (Global airline Industry, 2014). The major challenges in the last two decades come from the areas of cost management and productivity.

²⁹ http://web.mit.edu/airlines/analysis/analysis_airline_industry.html

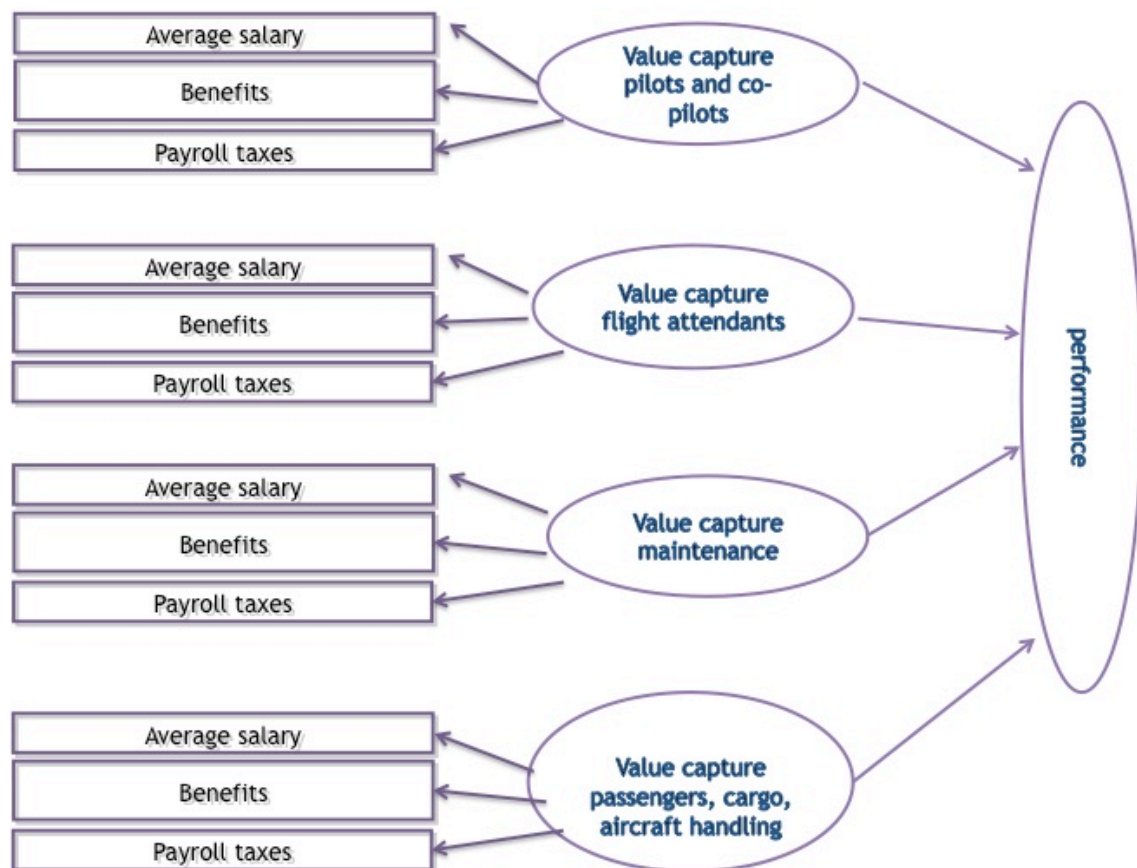
Indeed, in discussing for both value creation and value capture, we explain them according to the double perspective of productivity and cost management.

Finally, the measures of the created value are here calculated in terms of revenues and market share.

The second model is built in order to answer to the second research question:

RQ 2: *Do employees capture the created value?*

Figure 4.6 - SEM for value capture



Source: Source: Della Corte and Del Gaudio, 2014b.

In this SEM the latent variable is the capture of value of each single category of employees.

Average salary, benefits and payroll taxes are the manifested variables.

As shown in the model, value capture (latent variable) is function of dependent variables represented in the rectangle.

In order to analyze the relationship between the value created and the value appropriated by the employees working at operational level of nine airlines companies, SEM is the useful methodology to explore this link.

A fundamental element that drives us to the choice of SEM as methodology is the fact that value capture is not a direct observable variable but it can be measured through the use of manifested items.

4.4 Results

Before showing the results, it important to state that we assessed the structural model and test the research questions.

As viewed in the previous paragraph, we assessed the model estimating composite reliability, AVE and the roote square of Ave.

The structural equations are calculated through Smart Least Square.

Coefficients beta and their relative paths are in table 4.10. The bootstrapping technique is used to validate the significance of the path coefficients.

It is a computer-based method that allows to assess the accuracy of statistical estimates (Efron and Tribshirani, 1998) and to generate a distribution of a statistic (Mooney and Duval, 1993)

Thanks to bootstrapping, PLS creates a distribution for each path coefficient. From this distribution, the mean and a standard error can be calculated.

From this step, it comes out the *t*-value (Henseler *et al.*, 2009) that studies the significance of the path coefficients.

As regards value creation and the different categories, whose productivity is hypothesized to create value, the *t*-statistics and *beta* coefficients indicate whether and to what extent these groups of employees crate value for the airline companies. One of the most important ratio for testing research questions is the *t*-statistic as it is a good starting point.

The *t*-statistics and *beta* coefficients are presented in Table 4.10. From the analysis of the results, it comes out that:

- ❖ The productivity of flight attendants influences firm's value creation (t-statistics 5,646006);
- ❖ The productivity of pilots and co-pilots does not influence firm's value creation (t-statistics 1,192791);
- ❖ The productivity of maintenance does not influence firm's value creation (t-statistics 0,895657);
- ❖ The productivity of handling does not influence firm's value creation (t-statistics 0,982582).

Furthermore, looking at beta coefficient it is possible to state that there is not specific and statistically significant link between employees' productivity and value creation for the groups of maintenance (beta = -0,376141) and pilots (beta = -1,257958). As regards the category of handling the link is not significant (beta = 0,414832). Finally, the group of flight attendants is the only one to have a specific and statistically significant link between productivity and value creation (beta= 1,703443).

The nature of this research question is explorative as literature debate is about whether productivity influences or not the creation of value. The added value of this dissertation is to test this research issue within a specific industry context.

Although these results can appear contradictory, actually it is important to understand the reasons underpinning the arising of these values. Before proceeding in the discussion, we highlight that, here, the value created is measured in terms of revenues and market share. Other studies (Wojahn, 2012) use different measures for the evaluation of the value created at firm level, as we underline in the conclusions.

The most significant thing to consider, exploring the relationship between employees' productivity and value creation is that we need to evaluate both process level performance and firm level performance. The particular and overloaded attention on value creation at firm's level has led to underestimate the importance of the results at process level performance.

Indeed, according to Bowman and Ambrosini (2010, p. 480) human resources are able to create use value “in the form of performed services or activities”. Furthermore, they add the feature of human inputs is to create new use value.

In the light of this observation, the productivity measured here in terms of ASM per employees, employees per aircraft, passengers per employees, passenger revenue per employees is the new use value created by the human resources.

These measures can be checked at a process level rather than a firm’s level performance as the result of the created value, that in Bowman and Ambrosini terminology is called “Use Value”.

Furthermore, firm profitability is given by the difference “between the flow of revenues and the flow of costs” (Bowman and Ambrosini, 2010).

If we consider labor cost, as underlined in chapter three, this represents one of the highest with the fuel one. This explains why through the application of SEM, a positive relationship between employees’ productivity and firm performance (revenues and market share) has not been observed.

In addition, literature (Bowman and Ambrosini, 2000, 2010) identifies activities as source of values.

Looking at the value chain activity of airline companies (see chapter three), the main sources of value creation seem to belong to marketing activities.

The range of marketing activities is often contemplated value-creating activities by both scholars (Driver, 1999, Aksoy *et al*, 2003) and managers.

The best companies, indeed, exploit marketing activities to have better and increasing profits. In this direction, Southwest Airlines is a glowing example as marketing managers state “Every marketing dollar funds a direct connection to an in market consumer” (Southwest, 2014).

With reference to value capture, Table 4.10 shows the *t*-statistics and *beta* coefficients. From the analysis of these results, it springs out that:

- ❖ Flight attendants do not capture value (t-statistics 0,086424);
- ❖ pilots and co-pilots do not capture value (t-statistics 0,683537);

- ❖ Maintenance group does not capture value (t-statistics 0,810924);
- ❖ Handling group does not capture value (t-statistics 0,496169).

On the other side, the beta coefficient reveals not significant link between the categories of flight attendants (beta = 0,071975), handling (beta = 0,45508), maintenance (beta = 0,778627) and value capture. Moreover, the group of pilots and co-pilots does not show a specific and statistically significant relationship between their value creation and value capture (beta = -0,333401).

Looking at these results, employees at operational level seem to not capture the value. Our manifested variables in the applied SEM are compensation, pension, payrolls and benefits, while thanks to the case study analysis of the observed companies it has sprang out that the total rewards of these airlines companies are shaped, a part from compensation, by a series of benefits and privileges that are excluded from the actual analysis.

Second, the value captured originates from the relative bargaining power of the subjects involved in this process. According to Coff (1999), the capture of value also depends on the employees' ability to create unified actions.

The employees of airline industry, working at operational levels, are organized in professional unions and/or associations according their specific categories. As viewed in the case study analysis, there are unions that periodically ask for better compensation in economic terms (Fitzsimmons, 2014).

Table 4.10 - Bootstrapping results

Research question	Path	Beta	t-statistic	Validation
RQ1	V.Creation_FlightAttendants -> Performance	1,703443	5,646006	Supported
RQ1	V.Creation_Handling -> Performance	0,414832	0,982582	Not supported

RQ1	V.Creation_Maintainance -> Performance	-0,376141	0,895657	Not supported
RQ1	V.Creation_Pilots & Co-pilots -> Performance	- 1,257958	1,192791	Not supported
RQ2	V.Capture_FlightAttendants -> Performance	0,071975	0,086424	Not supported
RQ2	V.Capture_Handling -> Performance	0, 45508	0,496169	Not supported
RQ2	V.Capture_Maintainance -> Performance	0,778627	0,810924	Not supported
RQ2	V.Capture_Pilots & Co-pilots -> Performance	- 0,333401	0,683537	Not supported

Conclusions

The central idea of this dissertation was to study the issues of value creation and value capture. These themes have acted as binding agent between the theoretical and empirical section.

Indeed, from the theoretical analysis we have observed a series of findings in literature, on which the empirical part is based.

During the last decades, value creation and value capture have received an over emphasis in academic debate but revealing, at the same time, a “little consensus” (Lepak et al., 2007) about the real meaning and the process that drives to value creation and appropriation.

Literary contributions on value creation have focused more on the external stakeholders of the firm rather than on the internal ones.

Although value creation is often described as a process enacted by individuals (Della Corte and Del Gaudio, 2014), a limited number of contributions has addressed the issue of value creation with an internal focus on the operational level.

More precisely, referring to the source of value creation at individual level, literature shows an explosion of contributions on the role of executives, top manager and manager in the process of value creation and capture.

Hence, researchers have underemphasized the focus of employees in this process. From this theoretical field, the idea of this dissertation sprung out. However, the question remains of whether and how employees create and appropriate value.

Indeed, the choice to examine and focus the attention on the role of employees, working at the operational level of airlines, comes out from the lack of an in depth-analysis in strategic management stream of research.

To shed light on this issue, we find as antecedent of value creation the employees' productivity.

By exploring literature on productivity, we found a contradictory vision on the dyad “productivity” and “value creation”. Indeed, while some scholars (Holcomb *et al*, 2009; Guthrie, 2001) argue that productivity *per se* does not influence firm’s profitability, others (Koch and Gunter McGrath, 1996) strongly believe in the duo “value creation and productivity”.

Starting from the contrast of previous works on the question about the contribution of employees’ productivity on value creation, we examine the possible existence of this relationship and the relative meaning.

In this dissertation, we try to go beyond this ajar perspective by studying the truthfulness of the previous assumptions.

The goal was to develop a deeply understanding of the existence on this link between productivity and value creation.

We advanced the idea that employees’ productivity may affect the creation of firm value.

In addition, we examine the issue of value capture according the theoretical lens of the individual level of analysis. In this dissertation, we have also investigated the role of employees in value capture. Hence, our unit of analysis has always been the employees at the operational level of airline companies.

Through this analysis we contribute to extant literature on value capture by analyzing whether employees appropriate the stream of revenues that the company generates.

To further explore this issue, the field of application was the airline industry as “company performance is driven by a multitude of factors whose interrelationship is not well understood” (Low, 2000). Furthermore, other scholars (Wojhan, 2012) claim that this industry has been destroying value in the last two decades for not achieving adequate level of profits.

In this direction, this dissertation opens up a new field of inquiry by asking whether pilots, co-pilots, flight attendants, maintenance, passenger, cargo and aircraft handling create and capture value. Likewise, employees’ productivity can have effect on both firm’s value creation as well as on value capture if companies establish dedicated human resource practices in terms of compensation and benefits.

Certainly, the peculiarities of this industry that is cyclical, “highly competitive, regulated, unionized and energy-dependent” (Low, 2000) reflect on the mechanisms interplaying in the employees’ value creation and capture.

Consequently, results have been red in the light of these characteristics.

Taking a double perspective (this study is not only focused on value creation but also on value capture), that explicitly considers the role of employees in the process of value creation and appropriation, it is possible to better capture the complexity of this research issues.

Regarding the creation of value, we consider some indicators of productivity as drivers of value. Despite some initial evidence of the importance of productivity on value creation, our dissertation demonstrates that a complete understanding of the function of productivity can only be gained through an accurate consideration of the process level performance and not only of firm level performance.

Specifically, the beta coefficient and t-statistics demonstrate that there is not a specific and statistically significant link between employees’ productivity and value creation for the categories of pilots, co-pilots, maintenance, passenger, cargo and aircraft handling.

On the other side, the productivity of flight attendants shows a specific and statistically significant link with firm’s value creation.

There are, however, several reasons why productivity does not have a significant relationship on firm performance.

Specifically, since productivity finds its results at a process level performance, this requires an extensive human resource management. Also the associated labor costs may not have a contribution on firm performance.

The logic behind these results is that value is created at process-level. The direct effects of productivity are stronger at process level, whereas other strategic activities of airline companies (i.e., marketing) are able to create value.

Indeed, while the productivity is an output referring to the process level, the profitability shows the firm level performance.

This kind of result can be linked to what Bowman and Ambrosini (2010) call “use value” Hence, while at a first glance this is somewhat surprising that productivity *per se* does not influence firm value creation in terms of economic results, this has led to reflect on its correlation with process level performance.

Indeed, considering the indicators of productivity (i.e. ASM, employees per aircraft, passenger per employee, passenger revenue per employee) they reflect the efforts that companies made to improve and enhance the efficiency.

The capital that airline companies employ towards employees productivity does not show correlation in the streams of revenues and market share.

The current study has also verified the issue of value capture. In the airline industry, from a case study analysis it sprang out that the total rewards are shaped by not only economic compensation (wages and benefits) by also by other tangible and intangible benefits and privileges. In our model we concentrate the attention only on the economic aspects of the compensation (wage, pension, payrolls and benefits).

This wage-system has interesting implication on the study of value capture as multifaceted aspects compose it. In practice, it is not surprising that employees, working at operational level, do not appropriate the portion of the create value.

This is demonstrated by the fact that not only the particular design of the compensation system but also the fact that the employees of this industry are strongly unionized.

Indeed, although there is a difference in the wage system between small and big carriers, the associations of the referring groups testify that sometimes these categories obtain wages that are near to the minimum (Nicas and Carey, 2014).

This is due to the fact that this industry is characterized by the two-tier wage system. First this approach has, sometimes, created friction between lower and higher-paid employees.

Second, in an industry where labor unions are very strong this kind of system has generated major defensive behaviors in contrast to airline companies (Salpukas, 1987).

These current findings are relevant to the strategic management literature on value creation and value capture.

This study has a number of limitations. First, the created value is measured only in terms of revenues and market share. Other scholars (Wojahn, 2012), studying the airline industry, state that returns on capital employed (ROCE) and the weighted average cost of capital (WACC) are the two best measure to establish if airline companies earned economic profits.

Second, because this study focuses on a sample of nine companies, these findings may not be generalizable to the all industry.

Third, for the value capture issues this work does not consider the intangible benefits and privileges of which the package of total compensation is shaped.

Given these limitations, the current study can be the starting point for further researches. Future studies might examine the issue according to these research limitations.

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