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EXPLORING SECTORIAL AND ORGANIZATIONAL CONTINGENCIES ON SERVICE RECOVERY OPERATIONS

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Dipartimento di Tecnica e Gestione dei sistemi industriali

Scuola di Dottorato in Ingegneria Gestionale

Tesi di Dottorato

EXPLORING SECTORIAL AND ORGANIZATIONAL CONTINGENCIES ON SERVICE RECOVERY OPERATIONS

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Summary

This thesis is mainly about operations management. It stems from two big phenomena that are affecting businesses worldwide: the servitization of manufacturing the higher attention paid to service quality. High competitiveness among firms in all sectors, even increased by the globalization of markets, has moved priorities of firms on delivering flawless offerings, in order to match customer expectations and foster their satisfaction and loyalty, protecting this way profitability. Unfortunately, errors and mishaps are always behind the corner, both in pure service contexts and in manufacturing companies, that have largely undertaken the road to servitization, adding services to their physical products. The academic world has extensively treated the importance of recovery practices to turn aggrieved customers into loyal ones, and protecting from negative consequences of failures. Despite that, scarce attention has been paid to how firms should organize resources to deliver recoveries, and no investigations have been run in the manufacturing setting.

This is the reason why this thesis deals with operations management. It aims at providing operational insights into recovery practices, both in manufacturing and service firms. More in depth, this work explores the role of contingency factors, such as the business sector and the organizational configuration of companies, in affecting the implementation of service recovery systems. This study specifically addresses contingencies' influences on seven structural dimensions of recovery systems, already codified in literature and deepened through field investigation in this research. In the end, business sector, organizational configuration and recovery strategy result to be relevant variables that have to be considered in order to deploy coherent operational choices to achieve high results. Findings have been built through within case and cross case analysis in four large organizations from manufacturing and banking industries, with different organizational configurations.

Finally, limitations and future research directions are given, as well as seven research propositions that hopefully will inspire further investigation.

Sommario

Il service recovery è stato il focus della tesi del dottorando e si riferisce alle azioni intraprese per prevenire gli effetti negativi di un disservizio. La letteratura ha ampiamente trattato i desiderata del cliente in termini di process e outcome in imprese di servizio, lasciando inesplorata la prospettiva dell'operations management (domanda di ricerca 1), e solamente accennando ad alcuni fattori rilevanti per l'implementazione delle pratiche di recovery (domanda di ricerca 2). La ricerca si è

quindi concentrata sui sopra citati gap, analizzando quali siano le variabili di contingenza che influenzano la progettazione e l'esecuzione del service recovery. La ricerca, in particolare, ha approfondito il ruolo del settore economico e della struttura organizzativa, studiando come questi comportino diverse implementazioni delle recovery operations. Dato il carattere esplorativo della ricerca è stata selezionata la metodologia del caso studio multiplo, sviluppando un protocollo di indagine e svolgendo within case e cross case analysis. Nella ricerca sono stati studiati due imprese manifatturiere e due gruppi bancari, con diverse strutture organizzative per ogni settore (centralizzato vs. decentralizzato), accertandosi che fossero organizzazioni alto performanti in termini di recovery, così da poter apprezzare le decisioni di best fit rispetto alle variabili di contingenza analizzate. Sulla base delle dimensioni codificate in letteratura per descrivere le operations nei sistemi di recovery (i.e. accessibilità, comprensività, empowerment, formalizzazione, intensità del personale, customizzazione, intensità del sistema), la ricerca ha analizzato come queste fossero implementate nei casi studio, rilevando similitudini e differenze. Il protocollo di ricerca è consistito in analisi di dati e documentazione, esperienza sul campo e interviste semi-strutturate con personale direttivo e operativo a diversi livelli. Un primo risultato intermedio è stato l'identificazione di 19 variabili significative che descrivono le decisioni operative collegate alle 7 dimensioni d'analisi di un sistema di recovery. Tali variabili sono state misurate con una scala ordinale (alto, medio, basso) e valutate al fine di comprendere le ragioni delle scelte operative delle aziende. Successivi confronti tra i casi studio hanno permesso di identificare gli effetti delle variabili di contingenza factors sulle dimensioni d'analisi. Le evidenze emerse sono state comparate con la letteratura riguardante il service operations management e il service recovery, portando alla formulazione delle proposizioni finali di ricerca. In particolare, il settore economico risulta fattore decisivo nell'implementazione delle dimensioni comprensività, formalizzazione e intensità del personale, a causa del ruolo determinante della regolamentazione (o della sua assenza) nel prescrivere particolari procedure, la necessità di formare il personale in dipendenza di specifici task e competenze settoriali, e il ruolo di una stabile piattaforma prodotto-servizio, che consente di elaborare scenari di failure e recovery. Il livello d'empowerment è invece dipendente dalla struttura organizzativa, mentre accessibilità e intensità di sistema appaiono requisiti fondamentali per sistemi di recovery alto performanti, rappresentando l'incipit del processo e la capacità dell'azienda di migliorare i propri sistemi attraverso l'analisi dei precedenti disservizi. Il livello di customizzazione, infine, è connesso con le priorità competitive delle aziende, in aggiunta alle variabili di contingenza analizzate.

I risultati aprono la strada a nuove prospettive di ricerca in termini di theory testing per le 19 variabili operative identificate e per le proposizioni, da estendersi ad altre organizzazioni e settori.

Introduction

During the last twenty years great transformations have been affecting service and manufacturing businesses. Some macro phenomena have deeply changed the way in which value is created and delivered by providers and recognized by customers. Some structural factors of competition, such as the boundaries of geographical markets, the contractual power of providers, the innovation pace, the involvement of customers in value creation, the complexity of their needs to be satisfied have been subjected to large modifications. Indeed, important contemporary markets' features have to be taken into account so as to face global challenges and be profitable in the long term, such as: the globalization of markets, with its relevant effects both on the commercial opportunities and on the competitors side, having a great impact on the efforts that have to be sustained in order to protect the competitive position and the market share from possible attacks coming from everywhere in the world; the higher competition in terms of available alternatives for the same supply that has been nurtured by the fall of economic barriers and by the augment of the number of operators emerged in the growing economies; the increasing expectations of customers, that gain renewed contractual power and take advantage of having multiple possible choices sometimes difficult to discriminate; the great variability and instability of raw materials prices, from petrol to wheat, and sovereign debt ratings, that imply an incredible uncertainty making long-term planning very difficult, causing at the same time a dangerous unpredictability both about material supply and on the financial funding.

All these changes led to a considerable research work so as to give useful indications and interpret actual challenges, resulting in a large agreement about the identification of the most critical aspects of contemporary business, such as the key role of customer retention as a means to protect current customer base and so doing market share and the premises for revenues and profit; the remarkable importance of product-service quality in assuring customer satisfaction with the commercial relationship with the provider, that underpins all future positive behaviours (e.g. word of mouth, patronage intentions and loyalty); the centrality of a correct distinctive positioning that enhances the recognisability and the clear identification of firm offering among the vast number of alternatives; the fundamental relevance of management capabilities in designing and running operations and making strategic decisions, in order to be consistent in product-service delivery and anticipate global trends, resulting in a more secure and stable position for facing uncertainty.

This thesis originates from the authors' will to delve into two of the most discussed management issues that are deeply confirmed by modern markets challenges and emerged in response to the aforementioned needs of customer retention, quality assurance, protection of competitive position

and profitability. They are the servitization of manufacturing, that is a progressive infusion of service elements into manufacturers' practices, and service recovery, the set of actions put in place to prevent negative effects of service failures. The aim of this research work is to deepen actual knowledge of service recovery practices implementation, with particular regard to operational choices and configurations that support daily implementation of strategic goals of firms. In order to carry out a more comprehensive analysis, the study involves both service and manufacturing firms, where the effect of servitization leads to some recovery needs, that deserve to be explored with particular attention to the role of the product.

Actually, service recovery literature has a two-decades history of multifaceted inquiries and applications, but there're still many open issues to deal with, especially referring to operational implementations of marketing principles, whose validity has been largely tested and codified. On the other side, there're scant applications of service recovery in manufacturing firms running servitization, that's the reason why an investigation of service recovery in industrial organizations is proposed, contrasting two banking case studies and two productive realities.

The thesis is organized as follows: Chapter 1 presents the general literature review that originated two research questions RQ1 and RQ2; Chapter 2 describes the research method adopted and the investigation protocol details, Chapter 3 presents banking and manufacturing case studies and can be thought as the main thesis development, illustrating the four within-case analysis in response mainly to research question RQ1. Chapter 4 contains the key elements to answer RQ2, as it develops two within-sector cross case analysis, the cross sector case analysis and the cross organization case analysis (appropriate details are provided in the devoted sections). Finally Chapter 5 discusses findings, draws research conclusions, formulate the answers to the research questions, provides overall interpretations of evidences gathered and analyses research limitations, advancing indications for future research. Insights on each chapter are provided in the following sections that precede the proper thesis development.

Chapter 1

The first aim of this research is to understand how service recovery practices are implemented in daily operations of pure service and manufacturing firms. To answer this exploratory question, a deep literature review is presented in this chapter. It draws a picture of the state of the art of service recovery literature presenting also main evidences from servitization literature, and analyses service recovery contributions about the most relevant issues relating to main concepts of this research. Literature investigates some issues about recovery practices in services, such as what principles and techniques are recommended and how their implementations improve commercial performances.

However, despite many "what" suggestions, some key points about operational insights and organizational configurations remain under-researched, mostly in terms of contingency factors on operational decisions and relevant variables considered by managers. The central work by Smith et al. (2009) is presented, since their "structural dimensions of recovery systems" are cardinal concepts for within and cross case analysis. Thus, the chapter ends with the introduction of the two research questions that are pursued in this thesis:

- RQ1 – coming from the operational gap: "*How are operationally implemented the seven dimensions of service recovery systems? That is: what are the operational constituents of the seven structural dimensions of service recovery systems?"*
- RQ2 – coming from the contingency gap:
  - RQ2-a) "How *does the business sector affect the implementation of the structural dimensions of a service recovery system?*
  - RQ2-b): *"How does the organizational configuration affect the implementation of the structural dimensions of service recovery system?*

Chapter 2

Chapter 2 is entirely devoted to the explanation of the research methodology. It starts with analysing the features of the research objectives and coherently selects appropriate method investigation, which is multiple in-depth case studies for qualitative research. Then the case studies selection criteria are drawn from literature and theoretical profiles are built to allow appropriate investigation of the research questions. The selected case studies come from banking and manufacturing industries and present different organizational configuration, in order to match research questions' categories and allow polar types comparison. They are Intesa Sanpaolo S.p.a., Banca Nazionale del Lavoro S.p.a. (two of the largest banks in Italy), Conergy Italia S.p.a. and Fiamm S.p.a. – Horns Division (manufacturing cases). Then, the research protocol is presented with a structured approach of interviews, focus groups, and data reduction display and validation. Consequently coding procedure is presented in order to operationalize constructs involved by the research questions and the final operational constituents are described, which represent the basic variables to assess structural dimensions' implementation.

Chapters 3

The central part of the thesis concentrates on the case study analysis, starting from manufacturing cases and concluding with the banking ones. The research protocol uses an open coding procedure that starts from high-level well-codified structural dimensions of service recovery systems proposed

by Smith et al. in 2009, and leads to identify from two to three sub-categories that better describe those dimensions, acting as variables used to assess the level of implementation of each dimension. This way, the seven dimensions (accessibility, comprehensiveness, decentralization, formality, human intensity, influence, system intensity,) are split into sub-categories that represent the relevant "objects" managers are used to deal with. Each of them, called operational constituent, is presented and explained, relating its operational feature to the reasons why particular choices have been implemented. The within case analysis largely discusses each dimension deepening the managerial choices and sometimes introducing the contingent factors that affect its specific implementation.

Chapter 4

This chapter focuses on comparisons between cases within the same sector (banking or manufacturing) and between the aggregation of cases of different sectors or with different organizational configurations. Hence four main cross-case analysis are run: Intesa Sanpaolo compared to BNL Italy, Conergy Italia compared to Fiamm – Horns Division, banking compared to manufacturing, centralized firms compared to decentralized. Some comparisons – single cases from different sectors (e.g. Intesa Sanpaolo compared Conergy Italia) – are not specifically presented as they are adsorbed in the cross-sector analysis. Comparisons offer interesting insights into commonalities, which are mostly about tactical decisions to implement processes' efficiency and effectiveness, while there're great differences emerging from context influences (regulation), presence of physical products. Another key point is the role of strategy, which seems to be transversal to sectors and implies punctual distinctions depending on single entity peculiarities. Finally organizational configuration turns out as an important contingency factor that exerts a pivotal role affecting companies' recovery operations.

Chapter 5

The final chapter deeply discusses the within case and cross case analysis and compares the findings with literature evidences, pointing out commonalities and inconsistencies. The final discussion leads also to the formalization of the answers to the research questions and draws coherent conclusions about the evidences gathered. In particular, some distinctions about the role of the structural dimensions are pointed out, actually some of them depend mostly on operational implementation and hence present commonalities across the four cases, some others seem to be mostly affected by the business sector or the organizational configuration, and one seems to be strictly related to single entity strategy. Concluding findings are thus presented as propositions that could be considered for further testing through quantitative explorations. Managerial implications

are also explicated in terms of indications about how to organize resources and processes to deliver service recovery and what the main critical aspects to control are. Limitations are then presented about the few cases analysed and the qualitative methodology adopted, that on the other side has allowed attaining a deep understanding of the research issues and to derive possible future research indications. Indeed the development of a survey about the codified categories, and its submission to a large number of both manufacturers and pure service providers would complete and extend the validity of the present research. In fact it could test the findings attained in this research and investigate some other fundamental points such as cost-benefit analysis of operational decisions, differences between business to business and business to customers models, possible sectorial clusters that require specific indications to run recovery practices.

Next chapters enters the literature review starting from the general concept of service – fundamental to understand what service recovery is – and extending it to the servitization phenomenon before deeply analysis specific literature about service recovery.

Chapter 1 – Literature review and research questions

1.1 – A world of services

Economy says that contemporary world is largely dominated by services (Machuca et al., 2007). This evidence is reflected in really many statistics, that confirm how the value of the third-sector activities have been growing for thirty years leading to a service-based world. The "World Factbook" published by the Central Intelligence Agency of the United States of America reported the 2011 composition of countries all over the world and, as it could be predicted, services are the most important economical sector the in developed countries. They account the 79,6% of USA's economy in terms of GDP, the 71,6% in Japan, the 73,2% in the European Union, demonstrating how the main developed economies are essentially services-based. On the other side also the greatest growing countries so-called BRICS, which are usually thought as manufacturing hubs, are characterized by a remarkable extent of services in their GDP composition, respectively the 67% in Brazil, 58,6% in Russia, 56,4% in India, 43,6% in China, 67% in South Africa. Moreover, a trend analysis of data drawn from the Organization for Economic Cooperation and Development (2012) demonstrates that there has been a continuous growth in real value added by services with an annual growth rate moving from a stable 1% in mature economies to a 3-10% in BRICS. Besides, a graphical elaboration of the World Bank Dataset about the value added by services supports both the global remarkable extent of services' domination over global economy and their continuous growth during recent years.

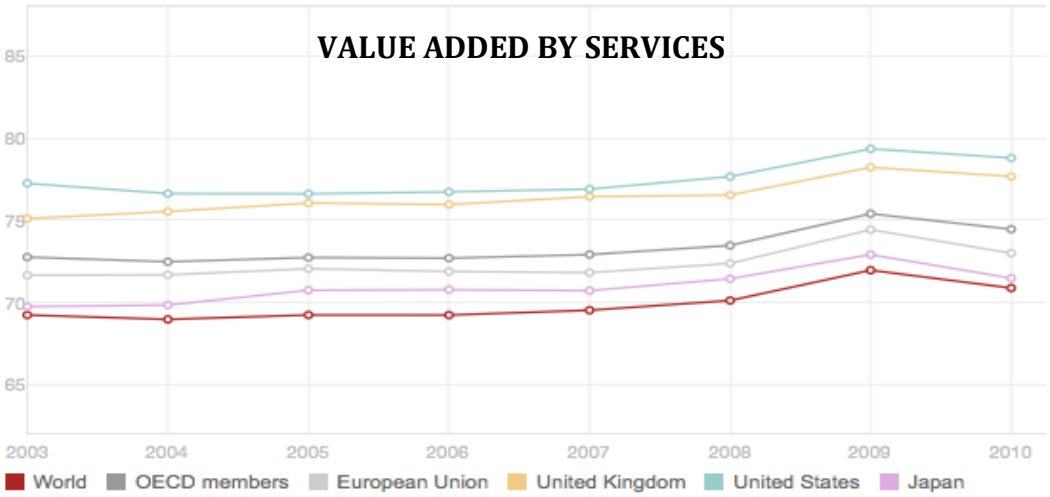

Chart 1 – Value added by services (World Bank, 2012)

In addition and further confirmation of the increasing importance of services' role for the world economy, the OECD Factbook of 2013 shows (table 1) a comparison between 2011 (or latest

available year) data and 2000, about the relative percentage of value added by services, and it underlines how all the largest economies have seen the stability of the weight of trade, transportation, accommodation, restaurant and communication services (except for Russia, with a drastic reduction compensated by a strong growth of financial services), and the augment of financial insurance real-estate and other services, contrasted to the decrease of manufacturing construction and agriculture industries.

	Agriculture, hunting, forestry, fishing		Industry, including energy		Construction		Trade, transport; accommodation, restaurants; communication		Financial and insurance; real estate; business services		Other service activities	
	2000	2011 or latest available year	2000	2011 or latest available year	2000	2011 or latest available year	2000	2011 or latest available year	2000	2011 or latest available year	2000	2011 or latest available year
Australia	3.8	2.8	20.6	20.1	5.6	7.7	22.5	20.2	28.1	30.4	19.4	18.8
Austria	1.9	1.6	23.7	22.5	7.7	6.8	26.2	25.4	20.7	23.5	19.8	20.1
Belgium	1.3	0.6	21.9	17.1	5.2	5.8	23.1	24.4	26.6	27.8	21.8	24.3
Canada	2.3	..	28.2	..	5.0	..	20.3	..	25.0	..	19.2	..
Chile	..	3.4	..	31.0	..	8.1	..	16.9	..	18.8	..	21.8
Czech Republic	3.6	2.1	30.9	31.1	6.6	6.7	27.1	23.8	15.0	18.5	16.8	17.9
Denmark	2.5	1.4	21.1	17.5	5.5	4.8	24.4	23.6	21.1	25.0	25.4	27.8
Estonia	4.8	3.6	21.6	23.9	5.9	6.3	29.4	26.5	21.6	22.1	16.7	17.6
Finland	3.5	2.9	28.0	20.9	6.3	6.8	21.9	22.3	19.6	22.7	20.6	24.4
France	2.5	1.8	17.8	12.6	5.0	6.2	23.1	23.4	27.5	30.1	24.1	26.0
Germany	1.1	1.0	25.2	25.7	5.3	4.4	20.3	19.1	26.2	27.4	21.9	22.5
Greece	..	3.1	..	13.5	..	4.5	..	31.4	..	23.5	..	24.0
Hungary	5.9	5.4	27.1	28.7	5.3	3.8	21.5	22.0	19.2	20.5	21.0	19.5
Iceland	8.5	7.8	17.2	18.8	9.3	4.5	24.8	20.0	18.5	24.5	21.8	24.6
Ireland	3.4	1.7	33.8	28.1	7.0	2.8	19.0	18.6	20.4	26.1	16.4	22.7
Israel	1.7	2.1	19.2	16.5	5.8	4.9	18.2	16.8	30.5	36.5	24.6	23.3
Italy	2.8	2.0	22.6	18.6	5.1	6.0	26.1	25.0	24.4	27.8	18.9	20.6
Japan	1.5	1.2	24.3	21.9	7.0	5.6	20.7	23.9	15.9	16.9	30.7	30.6
Korea	4.6	2.7	31.6	33.8	6.9	5.9	21.6	18.8	19.3	19.3	15.9	19.5
Luxembourg	0.7	0.3	12.6	7.8	5.7	5.6	21.8	19.8	43.8	49.7	15.4	16.9
Mexico	4.2	3.5	29.4	27.7	6.4	6.6	29.8	28.6	19.0	19.7	12.7	13.8
Netherlands	2.5	1.7	19.1	18.7	5.7	5.5	26.1	23.8	25.6	25.7	21.0	24.6
New Zealand	8.5	..	19.9	..	4.4	..	21.8	..	27.8	..	17.6	..
Norway	2.1	1.5	37.7	36.4	4.0	5.9	21.0	16.0	15.3	18.6	20.0	21.6
Poland	4.9	3.6	23.3	25.5	7.8	7.9	29.2	29.8	18.0	16.4	16.8	16.8
Portugal	3.6	2.1	20.3	17.0	8.2	6.3	26.7	28.5	19.2	22.2	22.0	23.8
Slovak Republic	4.5	3.2	28.9	32.5	7.2	9.4	26.3	22.7	16.6	15.4	16.6	16.8
Slovenia	3.4	2.5	28.1	24.5	6.7	5.2	22.6	25.0	19.8	21.9	19.4	20.9
Spain	4.2	2.6	20.8	16.9	10.3	11.5	28.1	28.4	16.9	19.2	19.6	21.4
Sweden	2.0	1.7	24.2	20.5	4.3	5.8	22.2	23.6	22.5	22.2	24.7	26.2
Switzerland	1.3	0.8	21.2	20.7	5.2	5.4	25.7	27.3	21.3	20.1	25.1	25.7
Turkey	10.8	9.2	24.6	22.6	5.4	5.0	29.1	30.9	19.5	20.2	10.6	12.1
United Kingdom	1.0	0.6	20.3	14.9	6.5	6.9	27.0	24.4	24.7	29.8	20.5	23.4
United States	1.2	1.2	18.4	16.2	5.0	3.7	20.0	18.2	31.7	33.5	23.7	27.1
Euro area	2.4	1.7	22.1	19.3	5.9	6.2	23.7	23.4	24.6	26.5	21.3	22.9
EU 27	2.3	1.7	22.0	19.3	6.0	6.3	24.4	23.8	24.2	26.1	21.2	22.8
OECD	..	..	..	..	..	..	..	..	..	..	..	..
Brazil	..	..	..	..	..	..	..	..	..	..	..	..
China	15.1	10.1	40.4	40.0	5.6	6.8	16.6	15.8	8.3	10.7	14.1	16.6
India	..	17.6	..	19.1	..	8.1	..	16.2	..	16.8	..	22.2
Indonesia	15.6	15.3	40.4	36.8	5.5	10.3	20.8	20.2	8.3	7.2	9.3	10.2
Russian Federation	6.4	4.3	31.1	30.5	6.6	6.5	33.1	28.9	4.6	15.9	18.3	14.0
South Africa	3.3	2.4	29.3	26.1	2.5	4.5	24.3	22.7	18.6	21.2	22.0	23.1

Table 1 – Evolution of value added by sector (OECD Factbook, 2013)

Furthermore there is also an historical evidence of the increasing relevance of service sector in terms of employment in developed economies. Table 2 actually highlights this phenomenon presenting the percentage of workers in the service sector, which has been characterized by a continuous increase since the sixties.

Despite the apparent clearness of this data, some inconsistencies about definitions emerge. In particular: what exactly is a service? Even official datasets taken from World Bank, Central Intelligence Agency and Organization for Economic Cooperation and Development use similar but not identical perspectives when presenting analysis. For example OECD distinguishes human activities in six categories named “agriculture, fishing, hunting, forestry”, “industry and energy”,

"construction", "trade, transport, communication, restaurants, accommodation", "financial and insurance, real estate, business services", "other service activities".

Country	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
United States	58.1	59.5	62.3	66.4	67.1	70.0	72.0	74.1	76.2	78.6
United Kingdom	49.2	51.3	53.6	58.3	61.2	64.1	66.7	71.4	73.9	77[a]
The Netherlands	50.7	52.5	56.1	60.9	65.1	68.3	69.5	73.4	75.2	76.5[b]
Canada	54.7	57.8	62.6	65.8	67.9	70.6	72.4	74.8	74.9	76.0
Australia	n/a	54.6	57.3	61.5	64.9	68.4	70.5	73.1	73.9	75.8
Sweden	44.6	46.5	53.9	57.7	62.9	66.1	67.9	71.5	73.4	75.6[a]
France	40.7	43.9	48.0	51.9	56.3	61.4	65.6	70.0	72.9	73.4[a]
Japan	41.9	44.8	47.4	52.0	54.8	57.0	59.2	61.4	64.3	68.6
Germany	40.2	41.8	43.8	n/a	52.8	51.6	45.0	60.8	64.3	67.4[a]
Italy	33.4	36.5	40.1	44.0	47.7	55.3	58.6	62.2	64.9	65.5[a]

Source: U.S. Bureau of Labor Statistics www.bls.gov (02 October 2006), U.S. Department of Labor, Foreign Labor Statistics, Comparative Civilian Labor Force Statistics, Ten Countries, Table 6 in Civilian Employment Approximating U.S. Concepts by Economic Sector.

Table 2 – Percentage of employees in the service sector (U.S. Bureau of Labour Statistics, 2006)

But what exactly is a service? Even official datasets taken from World Bank, Central Intelligence Agency and Organization for Economic Cooperation and Development use similar but not identical perspective when presenting analysis. For example OECD distinguishes human activities in six categories named "agriculture, fishing, hunting, forestry", "industry and energy", "construction", "trade, transport, communication, restaurants, accommodation", "financial and insurance, real estate, business services", "other service activities". This classification seems to use a sort of homogeneity in competences to define the activities' category, without formalizing codified criteria in its usage. On the other side CIA declares that under the category labelled "services", contrasted to industry and agriculture, there are government activities, communications, transportation, finance, and all other private economic activities that do not produce material goods, focusing this way on a tangibility criterion that explicitly refers to physical aspects. Finally World Bank dataset is accompanied with a description of the service class corresponding to International Standards Industry Classification (ISIC) divisions from 50 to 99 and they include value added in wholesale and retail trade (including hotels and restaurants), transport, government, financial, professional, and personal services such as education, health care, and real estate services. This classification is quite detailed and it is published by the United Nations Statistics Division, and it is organized several grouping categories with specific associated activities. The main father-categories are: transportation and storage; accommodation and food service activities; information and communication; financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities; public administration and defence and compulsory social security; education; human health and social work activities; arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; activities of

extraterritorial organizations and bodies. In this case the categories are strictly defined and seem to be grouped by similarities of the content-outcome of the underlying activities, with a clear distinction from the categories numbered before 49 that deal with: agriculture, forestry and fishing; mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities; construction; wholesale and retail trade; repair of motor vehicles and motorcycles.

These evidences confirm the absence of a unique definition of what services are, however every classification overlaps with other with a common large majority of activities put under the large "service" label. Along this vein, European Commission Statistical Portal uses a very similar categorization (compare to the ISIC one) to define economic activities.

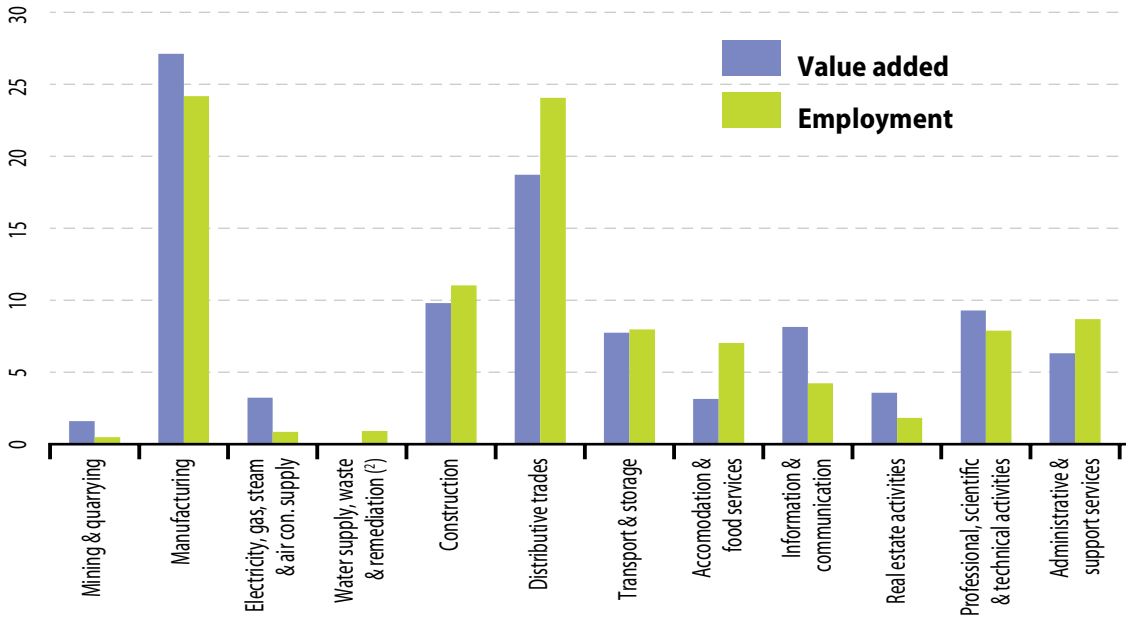

Chart 2 – Value added and employment by sector (Eurostat, 2012)

Chart 2 represents the 2008 percentage of value added and number of employees split by sector of non financial activities, according to the Eurostat 2012 publication of the "Key figures" of European Union. Once again the primary role of services is confirmed, also in terms of employment, with 65% workers employed in the third-sector (excluding agriculture and financial business, this percentage would increase to 75% including those activities). Defining what a service is has challenged lots of researchers, and economists and business researchers have been debating about the "service" notion for more than two centuries (Gadrey, 2000), however there is no consensus about a general categorization or classification of service operations (Metters and Marucheck, 2007). Lusch et al. in 2007 affirmed that a full and adequate understanding of services

and their role in exchange and competition hadn't been reached yet. There's a very huge literature about this theme that tries to investigate any possible definitions or meanings of services, but as it is not the focus of this thesis just few contributions - functional to research development - are analysed in the next paragraph.

1.2 – What is "service"?

Starting from the very intimate meaning of the word "service", it's important to recall its primary root that comes from the Latin "servus" which means slave or servant, indicating this way menial low valuable activities performed by under-compensated low skilled workers (Heineke and Davis, 2007). Despite this, great transformations happened during centuries leading to high competence and well-paid service jobs in all mature economies, with just few exceptions of manufacturing-agriculture based countries striving to carry on the Marxist-Leninist theory, that indicated most of services as non-productive, aligning to Adam Smith categorization of human activities presented in the Wealth of Nations in 1776. Notwithstanding, several authors have suggested that the slowing down of these economies, focused on the materials production and transformation, can be largely connected to their incapacity to increase their service share of business (Maciejewicz and Monkiewicz, 1989). Bailey et al. in 2006 argued that threat of stagnant economy can be avoided through the improvement of local service productivity, as they actually deemed a prime generator of economic growth. Moreover Chesbrough and Spohrer in the same year sustained that the growth of the domestic service sector drives job creation, increasing the standard of living and enhancing the competitiveness of domestic firms in a global economy. About this evolutionary perspective Heineke and Davis proposed in 2007 a natural development from an agricultural to an industrial society, accompanied different kind of services that enhance the change. They identified:

- infrastructure services, basic activities that permit an effective production and exchange of physical goods through transportation and paying attention to people just in terms of education and healthcare;
- support services, to allow the business to grow thanks to banking and insurance activities, retail operations and commerce and trade practices;
- recreational and leisure services, after the increase of salaries and the possibility for people to spend money for personal accomplishments, new services can arise to meet new needs such as restaurants, cinemas, beauty farms, hotels and so on;
- education services, fundamental to support the improvement and progress in all previous businesses, assuring the creation of high skilled resources;

- time-saving services, that let people better manage their time which is reduced by longer working hours, such as home delivery services, childcare, shop-at-home services;
- the service experience, grouping those services that originated from the increasing need of consumers not only to receive the content of the transaction but also to live a memorable experience, with examples from entertainment, retail, beauty care;
- information services, trying to provide customers with useful indications, data and comparisons to make them make the best decision about purchases, voyages, careers and many other topics.

This way they identified a step-by-step path, where human activities evolve in response to emerging needs and coherently with progress consolidation, evidencing the "third" role of service (tertiary) sector as complement to other needs, that arise after the primary tangible ones have been satisfied by the former two sectors (agriculture and manufacturing). This view is quite similar to that used by official statisticians that try to name "service" whatever is not manufacturing or extraction (Sampson and Froehle, 2006), and it's subjected to many bias, for example services delivered by manufacturers are not considered and their income belong to the industry sector.

A common classification of service processes' characteristics, in order to distinguish them from manufacturing processes, in embodied by IHIP paradigm, that originates from the research work of Zeithaml, Parasuraman and Berry (1985). They executed a deep literature review (summary in chart 3) and identified the most frequent characteristics that were referred to services, namely intangibility, heterogeneity, inseparability, perishability. These concepts, detailed in the following, have been the milestone of research about service concept and construct definition for many years, before being object of strong recent criticism. The four pillars are:

- intangibility - services are essentially acts, performances, activities and not objects or materials that can be seen, tasted, touched or perceived as physical products or common goods. Hence services are impossible to perceive using physical senses and really difficult to be imagined in terms of delivery compared to a product present in a catalogue, for instance a photography course, a cosmetic surgery intervention, a stage show don't let the customer precisely figure out the result before the concrete participation (McDougall and Snetsinger 1990);
- heterogeneity - services are really affected by a lot of sources that introduce variability, such as the mood of customers and operators, the peculiarities of customer needs and expectations, technological reliability and availability, the effectiveness of communication, the customer involvement in the delivery process. All these sources make every customer different from the

another and the delivered service as well (Zeithaml and Bitner 2003), augmenting the complexity to design and perform standardized high quality services;

Characteristic Cited	Bateson (1977, 1979)	Bell (1981)	Berry (1975, 1980, 1983)	Bessom and Jackson (1975)	Booms & Bitner (1981, 1982)	Carmen & Langeard (1980)	Davidson (1978)	Davis, Guiltinan, and Jones (1979)	Donnelly (1976, 1980)	Eiglier and Langeard (1975, 1976), Eiglier et al. (1977)	Fisk (1981)	George and Barksdale (1974), George (1977)	Gronroos (1977, 1978, 1979, 1983)	Johnson (1969, 1981)	Judd (1968)	Knisely (1979a, 1979b, 1979c)	Langeard et al. (1981)	Lovelock (1981), Lovelock et al. (1981)	Rathmell (1966, 1974)	Regan (1963)	Sasser (1976), Sasser and Arbeit (1978)	Schlissel (1977)	Shostack (1977a, 1977b)	Thomas (1978)	Uhl & Upah (1980), Upah (1980), Upah and Uhl (1981)	Zeithaml (1981)
Intangibility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heterogeneity (Nonstandardization)		✓	✓	✓		✓	✓			✓				✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Inseparability of Production and Consumption	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Perishability (Cannot be inventoried)	✓	✓	✓						✓							✓			✓	✓	✓			✓	✓	

*Several authors have disputed the need for a separate treatment of services in marketing. These authors include Bonoma and Mills (1979), Enis and Roering (1981), and Wyckham, Fitzroy, and Mandry (1975).

Chart 3 – The distribution of literature over the IHIP constituents (Zeithaml et al., 1985)

- inseparability - unlike physical goods, that are produced sold and used/consumed in different moments, there is a contemporaneous production and consumption for services and the customer must be present during the service creation and delivery, entailing a high direct contact with the delivery process that has this way to deal with visibility criticalities (Regan, 1963);
- perishability - services are characterized by a form of evanescence, the outcomes of a service disappear as it has been delivered, and customers have to buy another performance if the want to re-enter the service (show, restoration, hotels), on the other hand the perishability implies for providers great complexity to manage the operations capacity, because of the impossibility

to stock a service, that creates many difficulties in avoiding both overloads and under-saturation (Edgett and Parkinson, 1993).

This model has received many criticisms since it was developed, as the aforementioned characteristics seem not to be exhaustive or sufficient to univocally describe what a service is. For example many researchers contest that many services present tangible aspects, such as the food in a restaurant, the linens in a hotel, the seats in a train. Consequently it has been argued that services and products are not opposite distinct categories, but rather polar ideas with a continuum between them, where every activity or product can find its specific position with a particular degree of tangibility (Gummesson, 1995). The heterogeneity characteristic is also an interesting point of debate, while some researchers contest that sometimes production operations are subjected to the same degree of variability introduced by the workforce or machine instability causing defects or non compliant pieces (Lovelock and Gummesson, 2004), others point out that there are some services with a relevant degree of standardization, those that are technology-based, where variability directly depends on the reliability of the machines (physical products) they use, such as healthcare diagnostic services, information management services, transportation services (Vargo and Lusch, 2004). In addition there are lots of new internet based services that completely avoid the human contact. Next, neither the inseparability pillar is saved from criticisms, actually the simultaneity of production and consumption is rooted in the assumption that the customer is present during service encounter (Beaven and Scotti, 1990), but there are some intangible activities such as clothes washing or car repairing where the customer doesn't participate in the service and so doing there is no simultaneity, with many advantages in terms of criticality of operations visibility. Finally, even the concept of perishability is attacked by service scholars, sustaining that services can been stocked in buildings materials knowledge and competences, using this perspective an hotel is a room warehouse, university registered lessons is stocked education and so on (Vargo and Lusch, 2004). Other academics found some inconsistencies in the paradigm too, and Metters and Marucheck in 2007 rose the question about how services may be defined, whether they have to be considered just a result of a service industry firm or they should be studied as particular processes with distinct characteristics, or whether the focus should be on the needs and cross-functional interactions within the context of an industry. Chopra et al. in 2004 suggested that there are lots of cases in which the research needs are strictly industry-specific and, lacking a comprehensive general framework running across different services, several subareas are emerging with some degree of independency as their boundaries are quite well defined, such as healthcare, financial services, call centres. Sampson and Froehle proposed a process-based definition of services, that stems from the extent of customer inputs into the production process as the distinctive difference

between manufacturing and services, and focusing on the role of participants in the transaction they built a "unified service theory": "With service processes, the customer provides significant inputs into the production process (2006, p. 331)". However, they specified that the notion of customer may be quite difficult to be universally defined.

What seems clear is the inadequacy of static definitions for "service", because it is a concept that must be strictly connected with a dynamic business world, where economic activities' characteristics may change (and has changed) a lot in a continuous evolution. In addition this change has seen a strong acceleration during the last decades, thanks to the diffusion of Internet, the progressive globalisation and the growth of the tertiary sector. Consequently many definitions emerged with the aim to catch the dynamic multifaceted nature of service. Some refer to the concept as the application of specialized competences (knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself (Lusch and Vargo, 2006). Others describe services as processes consisting of a series of activities where a number of different types of resources are used in direct interaction with a customer, so that a solution is found to a customer's problem (Gronroos, 2000). Lusch and Vargo (2011, p. 1302) specified that "in everyday use, service is usually viewed as assisting or helping or aiding someone and this can be done through activities, tasks, processes and performances", stressing the presence of motion in contrast to the physical ownership of something. These definitions tried to overcome the mere residual attempt to indicate what a service is just by affirming what it is not, like the definition given by Judd (1964, p.59) of "market transaction by an enterprise or entrepreneur where the object of the market transaction is other than the transfer of ownership (and title, if any) of a tangible commodity", or by Lovelock (1991) that addressed services as processes or performances that don't result in objects. The same approach distancing from objects possession was used by the "rental/access paradigm" (Lovelock and Gummesson, 2004) which exploited the same idea of "non ownership" to define service activities as a rental/access to physical goods or competences that are used but not marketable by the customer. Spring and Araujo in 2009 proposed a new framework to define services different from residual approaches, that stemmed from the work of Hill (1977, p. 319), who affirmed that "the production of a service cannot generally be distinguished from that of a good by means of the technology used, but by the fact that the producer unit operates directly on goods which already belong to the consumer of the service", this perspective allows assigning the same activity, for example a tyre installation on a car, to the manufacturing or service field depending on the case the car was in the manufacturing line (provider ownership) or in a repairing centre (customer ownership). This way, the following definition was pointed out: "A service may be defined as a change in the condition of a person, or a good belonging to some economic unit,

which is brought about as a result of the activity of some other economic unit, with the prior agreement of the former person or economic unit (Hill, 1977, p. 318)". They considered also another definition which stated: "a service activity is an operation intended to bring about a change in state in a reality C that is owned or used by consumer B, the change being effected by the service provider A at the request of B, and in many cases in collaboration with him or her, but without leading to the production of a good that can circulate in the economy independently of medium C" (Gadrey ,2000, pp. 375-6). This definition deals with a triangle where customer and provider are connected by the presence of a "reality" which is changed somehow, and specifically covers the case of "request of intervention" without dealing with the category of performance (fundamental for example in entertainment services, medical interventions, hairdressing) or capacity (key for instance in telecommunication networks, hotels) which have been included in a further definition: "any purchase of services by an economic agent B (whether an individual or organization) would, therefore, be the purchase from organization A of the right to use, generally for a specified period, a technical and human capacity owned or controlled by A in order to produce useful effects on agent B or on goods C owned by agent B or for which he or she is responsible" (Gadrey, 2000, pp. 382-3).

Hence as far as the definition of service concept is concerned it is possible to draw the following considerations:

- there is no common agreement among researchers about what the distinctive characteristics of services that clearly point out the differences from manufacturing are;
- many perspectives have been proposed to accomplish this task, each of them focusing on specific elements of distinction;
- the main paradigms supported by scientific community are based on the concepts of ownership, tangibility, performance, customer involvement.

Despite this apparent chaos, some interesting approaches tried to overcome the traditional dichotomy between service and manufacturing, and were taken into account as conceptual foundations of this thesis, presented in the following paragraph.

1.3 – A service definition proposal

A parallel perspective, which is basically the interpretation that best fits the purposes of this thesis, is given by the molecular model, introduced by Shostack, that expressed the need to overcome the contraposition between services and products defining new concepts of marketed entities that are "combinations of discrete elements which are linked together in molecule-like wholes" (1977, p. 74). This way, the author highlights the possibility to mix tangible and intangible aspects, choosing

which one has the priority on the other, in order to attain the market success. The offering doesn't have to be either service or product exclusively, but it can be composed of several molecules that together create the winning commercial package. Along this vein it is argued that transportation by airlines and by automobiles represents a good example of different mix of service and product components, with a prevalence of intangible aspect in the former, such as flight personnel service, luggage arrangements, hot meals on board (but also tangible aspects such as the quality of the plane, the seat, the food), and of tangible aspect in the latter, such as the options, the engine, the trunk capacity (but also intangible aspects such as car repairing, assistance). Besides, not only the static composition of an entity contributes to its prevalent product or service connotation, but also the experience in using it is determinant in defining which are the most important characteristics that are appreciated by the customer: imagine two customers ordering pizzas to the same take away pizzeria, the former orders two hours in advance so as to have the certainty to eat particular qualitative ingredients, the latter orders as he arrives in the shop. The same activity is perceived from two very different points of view, in the first case there is a prevalence of tangible elements that enhance the transition and are crucial for the customer, in the second one quickness readiness and the possibility to order without any advance are service intangible aspects that ensure the customer patronage. This simple example demonstrates what Shostack expressed in his work, that is the possibility for providers to mix different molecules (commercial elements) to offer entities more or less service/product oriented in order to meet customer expectations.

After having presented the main contributions about service definitions, the thesis approach about the service definition is provided. First of all it is important to specify that the adopted perspective must be strictly linked to actual management practices and should stem from both academic knowledge and empirical setting, in order to respond to scientific acceptability and concrete applicability. To provide a comprehensive view of the service perspective adopted in this thesis, some examples are provided to enable quicker and intuitive comprehension. Let's start with polar instances: considering a salt producer, which operates in saline plants along the seaside and extracts salt and puts it in confections. No service elements can be identified in this activity, the result is actually the pure product. On the other side let's consider a hairdresser who perfectly knows his customers and is able to provide them with great hair looks that make them feel nice and satisfied. No product elements are present here, the transaction is realized thanks to the performance of the hairdresser (and actually physical element – hair – is removed from the customer). What clearly distinguishes the first activity from the second one? There is an important distinctive element, which is the need that has to be satisfied. When the need is physical nothing but a product can satisfy the customer. If someone is thirsty, you'll give him water, that can be served fresh or

room-temperature, in a bottle or in a glass, quickly or slowly, standing at counter or sitting comfortably at the table, but the core of the transition, the key element that satisfied the core need, is water, the pure product, nothing else can substitute its role (except for other analogue physical drinks). On the other side, if customer intention is to relax in a comfortable bar, kindness of personnel, calm atmosphere, quality of seats (even a tangible aspect) become primary aspects, more important than the drink, with a more service-oriented transaction. Even if the main characteristics proposed by the IHIP, rental/access, unified theory, triangle view paradigms, are recognized here, and sometimes suffice to distinguish services from products, they can't be considered the key distinctive elements, as literature criticisms have largely proved. Differently, the Shostack view seems to be more comprehensive and mature for present complex economy with large miscellaneous of product and service elements, and indeed it is the base of the perspective adopted in this thesis. Changing the focus from tangibility, simultaneity, ownership lets us be more consistent in applying the service definition, without been in contrast with any of previous conceptualizations but accepting them in a broader transversal view. The molecular model is still valid, as there is an increasing number of offerings composed of product and service elements working together in creating value for the customer. Harking on this thesis' approach towards services, it is argued that under this category all human activities that create marketable value responding to particular customer's needs should be classified. This group of needs is really large and it comprises transportation, social distinction, beauty, self-accomplishment, entertainment, health care and many others. Thus, it is possible to refer to services as activities and performances that let customers satisfy needs that are not physical and that can't be satisfied by the mere possession of a tangible product. On the other side, the presence of products can be necessary to perform services, but it is not sufficient to meet customer expectations. Product and services become this way complementary elements which are useful to answer markets' demands, which are multifaceted and present different needs to face. A practical example could be explanatory: let's consider a beautiful competition car which is bought by a collector, the sole possession of the car is sufficient to meet his expectations, as he is satisfied for having augmented his collection value. If the same car is bought by a competition team that has to participate in a race, the possession of the product is not sufficient to satisfy customer needs, as it has to be delivered in time and the car has to perform according to the team manager expectations, in other words it is a means through which the team wants to win the competition award. In the second case there is a very different need from the collector example, indeed it is not required just a product, but the performance of the product. Actually, the team manager doesn't mind about the car model, he could have chosen a different one in order to win the race. Similarly, if someone wants to listen to music while walking, he can decide

to buy different devices, a walk-man, an I-pod, a mp3-reader, and even if there're no doubts about the product nature of the device, the customer needs a service, that is the possibility to listen to music while doing something else. Also in this case the performance is the real need, not the product. Contrarily, if a constructor wants aluminium bars for particular application, the real need coincides with the product. So, there are some needs that are strictly and intimately connected just to product static characteristics (the taste, the aspect, the smell, mechanical properties, etc.) and other that depend on performances, run by physical products or humans.

Finally, in this thesis, using elements from literature consolidated definitions, services are intended as performances played by humans, machines or systems that meet customer needs which can't be satisfied by the sole physical design characteristics of products. This way, all other paradigms' suggestions are included as possible features of some services, without considering them exhaustive for their definition. The following paragraph deals with one of the most important themes of this research work, the servitization of manufacturing, fully exploiting observations and definitions of what a service is and introducing the service issue in the secondary sector.

1.4 – The servitization of manufacturing

Shostack contribution in defining a molecular model to describe the strict interaction between tangible and intangible aspects, with variable mix of prevalent product or service elements depending on the specific offering and customer expectations, is a kind of anticipation of the formalization of servitization phenomenon. Vandermerwe and Rada were the inventors of the term "servitization" (1988, p. 315) indicating a movement of managers' perspective from "the old and outdate focus on goods or services to integrated bundles or systems, as they are sometimes referred to, with services in the lead role". In this first stage they defined servitization like a movement, to indicate a sort of transition in progress that starts from a separated view of product and services to a more integrated concept of those elements into a more complete offering, providing some justifying reasons in terms of locking out competitors, locking in customers and increasing the level of differentiation. They observed how services were breaking out not only in the manufacturing business but also in service organizations as well, leading to an extension of their activities. Cleaning companies, for instance, began to offer security, energy saving, building repairs and alterations, plumbing, carpet replacement, refurbishing. Similarly American Express began to use direct mail to cardholders, selling $500 million a year in electronic gear, furniture, jewellery, suitcases, and fur coats. In the same well-known article a transformation process from antique polar view to modern mixed one is proposed with three different phases:

- goods *aut* services: in the past companies clearly declared their business field exclusively in goods or services, fundamentally companies fitted into one or other camp and managers were comfortable affirming to belong to a particular well-defined cluster;
- goods *plus* services: advances in technology and converging trends made traditional definitions inadequate, and it became obvious that most companies needed both goods and services. Many manufacturers, in particular the computer companies, demonstrated the inseparability of goods and services. Meanwhile, the classic service companies, like banks o telephone companies, began to use more products to facilitate their service delivery (cards, electronic encrypted keys, tablets, phones, etc.);
- goods, services, knowledge, support, self-service: the mature stage is characterized by a multi-layer composition where goods represent the hardware, physical parts and equipment, services are mostly created around the product such as financing or forecasting services. Self-service is an advanced stage of delivery where customers using technology may save time and money since the process costs are lower. Support services are key drivers to make customer better use and fully exploit product features, such as assistance or remote maintenance, and involve sometimes co-production and co-delivery which let clients operate more effectively. Finally knowledge services convey know-how to the customer, which is useful for problem solving and better performing the product-service bundle.

This process is described as an evolution of the behaviour of providers and the expectations of the customers as well, with associated opportunities risks and challenges to face. Indeed, the authors in 1988 tried to point out some key points of the servitization that would be largely discussed in the following years, and are presently still at the centre of the debate. In particular, these points were:

- the customer-driven nature of servitization, with many relevant trends such as the increasing of decision power detained by users (rather than buyers), the consequent higher attention to the end user, the great amount of information available to customers that make them more critical and difficult to please, the widespread use of technology that allows forms of co-creation and more direct contact;
- the different forms that can be used to run servitization, in terms of strategic choices, implementation alternatives from product-service systems to stand-alone services, intensity of commitment and effort devoted to the transition;
- the competitive advantages connected to servitization, largely considered a good means to build up barriers against competitors, third parties and customers in order to protect the actual position and minimize stakeholders threats. It is also credited with being a driver to create a customer dependency on firm supply, as well as creating longer and more stable profitable

relationships, besides other benefits in terms of differentiating commercial offering and diffusing new innovations are advanced;

- the risks and challenges to face, actually the competitive scenario has become global and companies have to compete with new and unusual rivals, sometimes with themselves (having to cope with a deep transformation that can undermine the traditional organization and core competences assets), on the other hand many strategic decisions have to be made about where to invest, how to facilitate the change, which service operators address as competitors.

These issues have been largely developed by scholars, and many papers deal with different aspects of servitization that can be referred to the aforementioned key points. The work by Oliva and Kallemberg (2003) sustains the evolutionary and molecular model through the product-service continuum diagram (figure 1), which explains that the servitization process may be represented as a movement from a starting position on the left side to an ending position on the right. So doing the firm has to face many challenges, from the definition of the current position and the analysis of competitors' practices to the exploration of possible strategic alternatives, in order to identify a targeted product-service mix that is coherent with the market and compatible with company's resources and contingent situation.

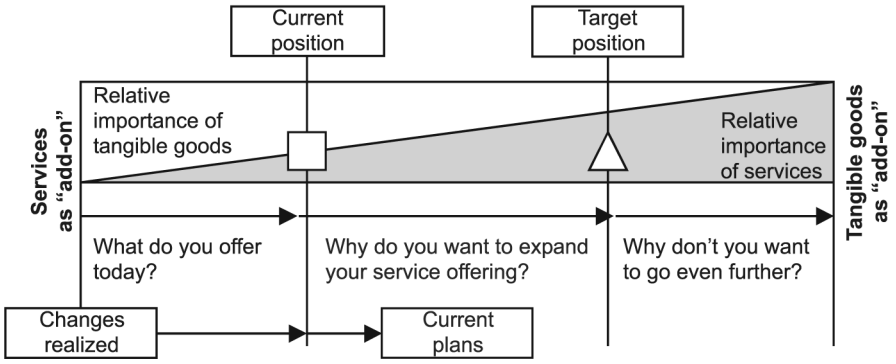

Figure 1 – The product-service continuum (Oliva and Kallemberg, 2003)

This model basically suggests that servitization concerns change, and catches very well the concept of "movement" expressed by Vandermerwe and Rada, and it is enriched with some key issues that sum up the uncertainties of such a transformation: what is the most suitable and profitable position to occupy? How should the change happen? What are the most critical challenges to face? This way, while addressing the conceptual issue of what the servitization is, the authors also posed some interesting questions about what and how has to be done to assure the success of the initiative.

A conceptual milestone that consolidated servitization codification and characterization in terms of theoretical background is the work by Vargo and Lusch in 2004. They recognized the importance

of services marketing as a new discipline, sharing the scholars' challenges to "break free" (Shostack 1977) from product marketing and recognizing its inadequacies for dealing with services marketing's subject (Dixon 1990), and proposed a new modern vision, alternative to the classic market view of exchange. Indeed it is argued that marketing is shifting from traditional dominant logic of goods exchange to the exchange of intangible specialized skills and processes, moving to a more comprehensive view and paradigm that include both products and services. As a break with precedent approaches, it is suggested that a new form of treating services is necessary, since the time of articles explaining differences between services and products has gone. A notable, even if emphasised, quotation by Gummesson (1995, pp. 250-251) sums up this need: "they (customers) buy offerings which render services which create value. The traditional division between goods and services is long out-dated. It is not a matter of redefining services and seeing them from a customer perspective, activities render services, things render services. The shift in focus to services is a shift from the means and the producer perspective to the utilization and the customer perspective". This way, according to the interpretation given in the previous paragraph, services are not defined as residuals from other "hard" activities classification, but are considered as the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself. Put differently it is proposed a new service-centred dominant logic, applicable to all marketing offerings, included those with tangible elements. Many authors supported this new view more or less explicitly, for example Penrose (1959) suggested that physical resources themselves are never sufficient as input in production processes, because the real important aspect is the service that these resources can render. Service dominant logic is thus the formalisation and the synthesis of many strands of new interpretation of marketing and offering that go beyond the mere description of the object of the transactions and mostly focus on the value in use. Hence the new service-centred view is based on four pillars:

- core competences identification and development, as a process that recognises and exploit internal skills and knowledge usable in an economic activity and representing a competitive advantage;
- identification of market entities, namely the potential customers, that may benefit from the use of these competences;
- relationships building and nurturing, trying to involve customers and creating value proposition that can meet their specific needs;
- measure market feedback in terms of financial performance and draw useful indications about how to adapt the offering to better fit business requirements and get higher returns.

This logic is not dependent on the classical definition of products or services as contrasting units that define incompatible business areas, as it combines those elements as marketable entities coherent to core competences application. The service dominant logic implies that the value is defined by the customer and co-created with him, it not just embodied in a sheer physical output, and firms' objectives are pursued by a strategy of sensing and responding instead of the old-fashioned producing and selling (Haeckel, 1999). The authors provided also an interesting comparison between the goods logic and the service logic (table 3) using the concepts of operant and operand resources introduced by Constantin and Lusch in 1994. Operand resources are subjected or modified by operations or acts played by operant resources.

	Traditional Goods-Centered Dominant Logic	**Emerging Service-Centered Dominant Logic**
Primary unit of exchange	People exchange for goods. These goods serve primarily as *operand resources*.	People exchange to acquire the benefits of specialized competences (knowledge and skills), or services. Knowledge and skills are *operant resources*.
Role of goods	Goods are *operand resources* and end products. Marketers take matter and change its form, place, time, and possession.	Goods are transmitters of *operant resources* (embedded knowledge); they are intermediate "products" that are used by other operant resources (customers) as appliances in value-creation processes.
Role of customer	The customer is the recipient of goods. Marketers do things to customers; they segment them, penetrate them, distribute to them, and promote to them. The customer is an *operand resource*.	The customer is a coproducer of service. Marketing is a process of doing things in interaction with the customer. The customer is primarily an *operant resource*, only functioning occasionally as an operand resource.
Determination and meaning of value	Value is determined by the producer. It is embedded in the *operand resource (goods) and is defined in terms of* "exchange-value."	Value is perceived and determined by the consumer on the basis of "value in use." Value results from the beneficial application of *operant resources sometimes* transmitted through *operand resources*. Firms can only make value propositions.
Firm–customer interaction	The customer is an *operand resource*. Customers are acted on to create transactions with resources.	The customer is primarily an *operant resource*. Customers are active participants in relational exchanges and coproduction.
Source of economic growth	Wealth is obtained from surplus tangible resources and goods. Wealth consists of owning, controlling, and producing *operand resources.*	Wealth is obtained through the application and exchange of specialized knowledge and skills. It represents the right to the future use of *operant resources*.

Table 3 – Goods-centred vs. Service-centred dominant logic (Vargo and Lusch, 2004)

In the first stage of the economy land and natural resources (operand) were used and cultivated by human work (operant) in order to obtain food and primary elements to live, while during industrialisation other operand resources such as carbon, metals, petrol were combined by operant resources such as machines and technology to create products. The comparison highlights how the role played by operand and operant resources and their nature itself have deeply changed moving to

the new service-dominat logic, where customer-centric perspective emphasize value in use, with physical and intangible resources mixed together to create value proposition that can meet customer expectations. Finally, one of the foundational premises of the logic says that "goods are distribution mechanisms for service provision" (Vargo and Lusch, 2004, p. 8), and continues asserting that goods are not the common denominator of the exchange, it is rather a matter of application of specialized knowledge, mental skills, physical labour. Furthermore some authors have proposed a very innovative view of products as embodied knowledge, becoming this way means that are used to transport and deliver specialized skills (Norman and Ramirez, 1993). This ultimate vision seems to be the perfect summary of the new paradigm, where objects are nothing more than a possible alternative to deliver performances and respond to some needs, with the value in use (and not pure materials) being the real exchange core. Products become an appliance for the performance of services and every kind of distinction is no more relevant: cars let people move easily, computers help scholars in organizing data and execute calculations, televisions allow watching shows, pharmaceutical provides medical service… clothes protect from cold or make people feel cooler, every product can be linked to a service, that is the reason why people buy them, as it has been suggested in the first paragraph.

The service dominant logic helps to deeply understand the rationales behind servitization diffusion, linking it to the previous debate about marketing vision of products and services, prospecting at the same time interesting developments and practical application of conceptual theory.

The following brief literature review about this theme is executed, coherently with the role that servitization has within this research work, in order to focus on the main evidences about how transformation may be implemented, with a prevalent insight into applicative (strategic or operational) suggestions instead of theoretical investigation.

Author	Definition of servitization
Vandermerwe and Rada (1988)	"Market packages or 'bundles' of customer-focussed combinations of goods, services, support, self-service and knowledge"
Desmet *et al.* (2003)	"A trend in which manufacturing firms adopt more and more service components in their offerings"
Tellus Institute (1999)	"The emergence of product-based services which blur the distinction between manufacturing and traditional service sector activities"
Verstrepen and van Den Berg (1999)	"Adding extra service components to core products"
Robinson *et al.* (2002)	"An integrated bundle of both goods and services"
Lewis *et al.* (2004)	"Any strategy that seeks to change the way in which a product functionality is delivered to its markets"
Ward and Graves (2005)	"Increasing the range of services offered by a manufacturer"
Ren and Gregory (2007)	"A change process wherein manufacturing companies embrace service orientation and/or develop more and better services, with the aim to satisfy customer's needs, achieve competitive advantages and enhance firm performance"

Table 4 – Main servitization definitions (Baines et al., 2009)

Despite this, it is important to notice that a variety of definitions of the phenomenon have been provided, with different accents put on particular aspects, depending on the perception of the dominant distinguishing element. Some definitions by world-class researchers are provided in table 4 taken, from the review of literature by Baines et al. in 2009. The authors themselves gave their own definition after having analysed the presented ones, affirming that "servitization is the innovation of an organizations capabilities and processes to better create mutual value through a shift from selling product to selling product service systems".

In this case, contrarily to the definition of service, there seems to be general agreement about what the main servitization defining elements are:

- service, each author mentions the presence of something different from the sheer tangible product, seen in the traditional view of physical object;
- offering, servitization deals also with customers relationship and the transition must be visible by customers and hopefully lead to some commercial advantages;
- process, it is not a breakthrough innovation or an instant shift of business but a progressive transformation to pursue gradually in a continuous improvement perspective;
- integration, the result is not an elimination of precedent skills and assets and their substitution with pure service ones, but a bundle of product/service elements that can be better marketed and should better fit customer multifaceted expectations, keeping the strengths of product firm's expertise.

This agreement, at least on the very important basis of the servitization, lets the debate move from a theoretical field of constructs definition and operationalization to a more operational one, posing research questions that mostly deal with implementation challenges, classification of alternatives and peculiar business sector characteristics that affect the phenomenon. This conclusion is also supported by the findings of the aforementioned literature review, which ascertains that "since servitization was first coined in 1988, there has been a growing output of papers from the USA and Western Europe that appear mainly in managerial and business practitioner literature, with authors tending to be from operations, services and business fields".

The great diffusion of this phenomenon and its relevance in contemporary economy is well documented by many scholars. Indeed, Gebauer et al. in 2005 found that a consistent number of companies (a third of those surveyed) earned more than 20% of their revenue from service sales, while Fang et al. (2008) reported that service sales accounted for about 42% of revenue for US manufacturers in 2005; Neely (2009) found that with a sample of more than ten thousands firms in the world over the 30% was servitized, with many different kinds of services in their offering, whereas Lay et al. in 2010 pointed out that the 85% of their two thousands European companies

sample had at least one service in their offering. Such a phenomenon has caught the attention of many researchers as it involves different issues in terms of business strategy, operations management, risk minimization and marketing, posing several challenges.

In the next paragraphs the most relevant theories and findings about servitization, useful for the thesis development, are presented and organized in: servitization practices, servitization benefits, servitization challenges.

1.4.1 – Servitization practices

Servitization may take different forms, depending on many variables such as firm dimension, business context, company capabilities, and specific critical aspects have been studied to give practical advice to managers. An exhaustive review of servitization alternatives and contextualization is beyond the scope of this research, so most of the attention is paid to general elements of the phenomenon about which there is common agreement. One of these is for sure the key position assumed by the customer in servitization strategies. Customers are key inputs of the process as the focus of the provider moves from selling products to delivering solutions that can be customized and tailored on specific needs, sometimes even leading to the incorporation of products form other vendors (Miller et al., 2002; Davies, 2004). Customer's role is basically two-fold: the focus of firms changes from a product-based perspective to a more customer-centred one, where the target is not just transferring products to the downstream of the supply chain but pursuing efficiency and effectiveness of the end-users usage of products, and on the other side the exchange has new forms that abandon the pure transaction model and become more relationship-oriented, when the key objective is to maintain the contact with the customer in the long term (Oliva and Kallemberg, 2003).

Another important issue is the variety of servitization strategies that are pursuable by firms, depending on their particular intentions and conditions. Mathieu (2001) proposed a 3x3 matrix to describe servitization maneuvers along two dimensions, service specificity and organization intensity. The former dimension refers to the extent and relevance of service components in the initiative, expressing what kind of service infusion the firm is running. To describe service specificity three categories were used: customer services, that address general relationship between customer and provider, and are created to maintain contact and make clients perceive firm's activity and attention to their needs (e.g. toll-free numbers, on line information websites, periodical newsletters, home delivered catalogues); product services, that support the supplier's products and are created to enhance a better usage of the goods, focusing not only on the mere selling but mostly on users' needs, still being strictly dependent on product characteristics (they can't in fact been sold

separately, e.g. physical distribution, maintenance, installation); and services as products, which is the ultimate evolution of servitization, when firm tries to sell stand-alone services, this way the customer can experience real service capability of the company even being allowed possessing competitors products (e.g. repairing, consultancy, ad hoc design, training). The latter dimension focuses on the way the organization lives the change towards services, and in particular depending on the extent (strength and scope) of the impacts generated by the transition. Three levels are introduced to define the organizational intensity: tactical intensity, when actions are taken for short-terms results, there is no great discontinuity and risks associated with transformation are minimum, being a sort of correction of marketing mix with modest additions that don't revolutionize the actual organization (e.g. starting a customer service division, providing a extension of guarantee); strategic intensity, with a significant insertion of new competences in the firm portfolio without exiting the core business but investing to build alternative capabilities and profit channels with their own budget and responsibility, aiming at results also in the medium-long run (e.g. a new training division, a specialized team of customized designers); cultural intensity, when the firm's mission itself changes and there is a substantial modification of business as if a new firm arises, with a profound shift of competences, responsibilities, selling channels and so on, crossing a sort of non-return point (e.g. from car manufacturer to specialized consultant, from hardware producer to software designer). This work is really important to map several degrees of servitization at a high level of analysis, and through examples it depicts an overview on the most suitable typologies of strategies that have to be connected to firm's resources and intentions. On the other side some researchers work on a more applicative level in order to give indications about how to servitize.

Oliva and Kallemberg in 2003 studied 11 large capital equipment manufacturers in order to discover the process they adopted to run servitization, leading to a four steps process framework presented in the following. First of all, manufacturers consolidate product-related services and try to draw a big picture about the current situation. Indeed in the first step it is necessary to reinforce quality efficiency and delivery time performances in order to respond to customer complaints and reach a milestone, in terms of control of those activities that sometimes are executed without any kind of monitoring. This phase lead to a clear situation in which all services are put under one roof, numbers are transparent and stable and customers rely on the company. The second step starts from the analysis of the first stage and has to deploy a service strategy entering the installed base service market, trying to catching opportunities for profitable actions. The attention is paid to competitors' practices and customer needs, to design useful services that can meet customer expectations and face implementation difficulties to move from manufacturing skilled resources to service-oriented culture, building a consistent service network with the same service level. On the other side

profitability is monitored trying to control at least revenues of new initiatives. The third stage is characterized by companies' effort in extending their depth and profitability of services along two possible non-exclusive paths of relationship-based services or process-centred services. In the first case provider objective is to fully exploit available service infrastructure trying to maximize saturation and take advantages of learning curve effects, scale economies, network interactions. However, it is exposed to operating risks, as it has to assure service availability. In the second case supplier's goal is to elevate product-development skills, in order to provide integrated solutions coping with insertion of consultancy activities, training of professionals and monitoring of possible acquisitions or mergers to enhance technology improvement. Table 5 presents a list of delivered services grouped by orientation and typology of relationship: the natural path of servitization moves towards the right column and the lower row. This is actually the fourth stage of the process, the most complicated to reach and perform, where the manufacturer takes the full responsibility of customer operations and coherently organizes to guarantee a high level of capacity availability. This means mastering and having full command of clients' processes, and total quality management of internal service operations, which is a quite uncharted territory for manufacturers.

	Product-oriented services	End-user's process-oriented services
Transaction-based services	*Basic installed base services*	*Professional services*
	Documentation	Process-oriented engineering
	Transport to client	(tests, optimization, simulation)
	Installation/commissioning	Process-oriented R&D
	Product-oriented training	Spare parts management
	Hot line/help desk	Process-oriented training
	Inspection/diagnosis	Business-oriented training
	Repairs/spare parts	Process-oriented consulting
	Product updates/upgrades	Business-oriented consulting
	Refurbishing	
	Recycling/machine brokering	
Relationship-based services	*Maintenance services*	*Operational services*
	Preventive maintenance	Managing maintenance function
	Condition monitoring	Managing operations
	Spare parts management	
	Full maintenance contracts	

Table 5 – The four stages towards servitization (Oliva and Kallemberg, 2003)

Every research about servitization seems to pose some challenges that have still to be faced by the most of manufactures, and scholars strive to provide applicable suggestions from empirical field on how to deal with them. Gebauer et al. in 2010 carried out a research to investigate if and how small medium enterprises could move to services. Their work mapped four possible situations depending on value chain position and the external environment conditions. The former dimension is split in two categories named suppliers, indicating a downstream position in the supply chain, and original equipment manufacturers (OEM), position nearer to the end user, whereas the latter is composed of "few customers" indicating a particular relationship with customers that have direct

access to the provider as well as the possibility to collaborate in order to satisfied their sophisticated service needs, and "many customers" indicating a set of multiple market relations with no access to customers and research of technological standardization. It is suggested that a particular servitization strategy is suitable for each of the four possible cases of the two-by-two matrix created with dimensions' categories. In particular:

- suppliers selling to few customers focus on logistic and repair strategy, involving customers and logistic providers in the development process, setting up a repair centre and pursuing the road to put engineers work together for value co-production, in a service logic that stems from a customer-oriented attitude;
- suppliers selling to distributors try to move downstream in the supply chain encouraging an improvement of services provided by distributors, they strive to develop consulting services and training and technical assistance for distributors, while building a service network with specific performance measures to catch the service functions;
- OEMs selling to few customers derive a relationship-based portfolio including maintenance services, aiming at customized services and managers involvement in creating a devoted business unit, with matrix organization and clear rules to define employee roles and performances;
- OEMs selling to distributors tend to integrate with them in order to deliver better standardized services, by offering training sessions and technical education while trying to define also inter-firms collaborations, with distributors and customers working as service partners.

Servitization demonstrates to be a real rich source for debates and investigation as it is transversal to the firm functions, and challenges many companies' areas representing a strategic choice with really high operational impacts. About that an important contribution is given by Kindstrom and Kowalkowski (2009) who tried to depict a general new service development process valid for those manufacturers that aimed at servitizing. It is thus proposed a four-stage framework, which prescribes:

- market sensing, the first step towards servitization is analysing and structuring exiting services trying to get all useful innovation indications both from internal sources and external ones, catching every suggestion from customers and striving to both exploit a structured portfolio and explore systematically customers' side for new ideas;
- development, defining good processes and coherently designing attractive service is quite challenging, since this field is perceived as different from the core one and there are some competences' gaps to fill, the key issue in this phase is to select and carry out investments so

as to involve the customer more intensively, innovating only by extending virtuous product development cases but also moving to new customer-provider interactions offerings;

- sales, servitization roll out should lead to a commercial attempt to get the new services sold, where the selling perspective is really different from the product one and has to focus on value in use rather than value in exchange, sales personnel has to change the commercial focus and develop new bargaining skills so as to promote the new value proposition, on the other side some specific measures for controlling the servitization performances have to be implemented and should result in service management sensibility development;
- delivery, this is the crucial part of the process, where all efforts should find their justification bringing returns, and where differences from products' propositions emerge dramatically with the high level of customer involvement and co-production. Difficulties may arise from technological infrastructure appropriateness as well as from managing new direct interactions, making services visible and fancy for customers could be problematic, too.

What seems to be clear and largely shared is the great variety of possible servitization moves that may be pursued, from tactical maneuvers to strategic trasformations, inserting services from maintenance to consultancy, from customization to home delivery, from training to financing. A key common point is for sure the focus on the value in use, that characterizes the new perspective aiming at attaining a full control of customer operations by the provider, offering this way a sort of guaranteed performance that releases the client to deal with any problems, almost "forgetting" its processes. This is actually a total different view from selling products, the supply is no more about transferring the ownership of goods but it is a form of collaboration that takes the responsibility of a part of customer's operations, dealing with all necessary materials, tangible and intangible aspects. Many researchers have tried to formalize and investigate the reasons that made manufacturers change their original unique devotion to products, rationalising and pointing out some servitization benefits, always accompanied by associated transformation risks. These issues are treated in the next sections evidencing those aspects that are mostly sustained by the scientific community and are fundamental for conceptual development of this research.

1.4.2 – Servitization benefits

Servitization seems to stem from a profound transformation of business environment during last twenty years, that implied an adaptation of operators necessary to survive. The external business context's influence on manufacturers' strategies is two-fold: first, the increase in competitive intensity has made competition based only on the product dimensions extremely fierce, as a consequence mere product advantages are no more defendable (Gronroos, 1990), as a matter of fact

margins and profitability are threatened by the continuous reduction of product differentiation. This is due to the fact that imitability has augmented through diffusion of technology and fall of economic barriers and knowledge protection, pushing companies to consider the extension of the service business an adequate response to this challenge (Malleret, 2006). Second, to a growing extent business operators are analysing what their core competences are, in order to focus on them and resort to specialized service providers or product components suppliers for other complementary activities, about which "make or buy considerations" entail their externalisation. This way products' parts providers and components manufacturers are called to a more complex role rather than mere objects suppliers, with an higher interaction with customer processes and needs, mixing activities such as designing, manufacturing, selling, maintaining, with a substantial share of services focusing on improving customer productivity (Wirtz and Ehret, 2009) and operational availability. Customer demands are thus becoming more complex and open new challenges and opportunities, as they don't just request pure products but expect providers' involvement in guaranteeing also service support throughout the whole product life cycle (Neu and Brown, 2005), triggering the service business development in manufacturing industry. New needs create this way demand for more complete offerings, and servitization could meet these expectations resolving contextually many difficulties arisen from products' centrality reduction. Scholars agree that three desirable benefits are particularly important as result and drivers for its servitization undertaking, they are: financial, strategic and marketing benefits.

Financial drivers often mentioned in the literature refer to better performances in profits and revenues, that is a substantial growth of the former and a higher stability of the latter (Wise and Baumgartner, 1999). Some researchers pointed out that for particular high-installed product based manufacturers, for instance aerospace and automotive sectors, service turnover can be twice the amount of incomes generated by new product sale, as it is connected to a huge historical product base which requires continuous operating maintenance. Sawhney et al. (2004) identified some companies that were able to exploit this logic (e.g. GE, IBM and Siemens and Hewlett Packard) and achieved stable revenues from services despite significant drops in sales, resisting to the alternative consequent drop in profits and exposure to default. For example during the nineties General Electric has increased very much service contribution to its profits, accounting nearly the 60% with a continuous growth (Slater, 1999). Hence revenues have been moved downstream in the supply chain, owing to the fact that a lot of modern products require specific interventions along the product life-cycle. This has changed the value mapping creation, with a lower part due to the upstream network and a more significant fraction generated by the interactions near to the end user of the offering (Baines et al.; 2009). However, there are also some open issues about how to get

profitability through services, as some key points are not specifically addressed and resolved in literature, such as costing and pricing. Actually most of the costs associated with services are fix and indirect, hence difficult to link to single performance margin, and sometimes their low visibility is a fostering element in service development (Anderson and Narus, 1995). Consequently price is not easy to define, unknowing variable costs makes "mark up" policies inapplicable, so many practitioners have chosen an alternative road not to charging for services, seeing them as an investments in supporting long-term relationship and enhancing products sales (Hawes, 1994). Despite this, sometimes product-service combinations are charged and they tend to be less sensitive to price-based competition, as they work on an exclusive relationship base in which trust and stability play a fundamental role, generally allowing higher levels of profitability in comparison to offering the physical products (Frambach et al., 1997). When services are not offered for free another decision should be taken about whether to bundle prices in products' offering or splitting them, facing challenging questions about how to propose only services required by the customer or how to identify the single service price and correctly present it to the customer, without being subjected to negative bargaining. As far as this point is concerned it is argued that a detailed pricing seems to be more appropriated in mature markets, where higher competition obliged justification for every component billed, and the same information is used to challenge all providers on the same supply (Mathieu, 2001). On the other side service sales tend to be counter-cyclical and more resistant to the economic cycles that affect investment and goods purchase as they are more flexible, indeed it is argued that when financial compact forces a reduction of investments, there should be an increase in demand of maintenance repairing and other operating assurance services. On the other hand during economical expansion new development consulting and customization services may be proposed in addition to physical investments, securing a regular income and balancing the effects of mature markets and unfavourable economic cycles (Brax, 2005). These aspects have been suggested to be able to reduce the vulnerability and the volatility of cash flow, allowing this way higher shareholder value of the firm, which is of primary importance for basic activities of financing, as it works as a guarantee of solvability (Srivastava et al., 1998).

Strategic drivers are usually linked to those aspects that let the firm preserve its competitive advantage on the market. Such an advantage is in particular the possibility do differentiate from competitors' offering trying to develop unique skills and competences, that are not strictly linked to physical imitable products but are rather based on deep knowledge of customer needs and problems. These competences are devoted to guarantee customer overall satisfaction with the "total supply", not just with the tangible part of it (Gebauer and Fleisch, 2007). On the other side, competitive advantages achieved through services are often more sustainable than products innovation research

efforts since, being less visible and more labour dependent, they are more difficult to imitate as the experience part and the outcome itself can't be embedded in a technical catalogue or summarized in formal specifications. Besides, the phenomenon of commoditization of markets has made positioning of products, built sometimes on huge efforts in time and money for product innovation or cost reduction, really difficult to protect from incumbents and competitors from all over the world (Coyne, 1989). This has encouraged the infusion of value added by services to enhance the customer evaluation to the point where homogeneous physical products are perceived as customised thanks to intangible component addition. Notwithstanding services must no be considered as an automatic weapon able to lead to success by itself, as many innovative services may become rapidly consolidated and diffused over the market, and their differentiating effect is mitigated and sterilized by large adoption. This is the reason why moving towards services implies also a proactive attitude in keeping update about customer's needs and coherently propose new solutions.

Marketing improvements are generally deemed regarding augments in sales. Actually service elements are well known to affect the purchasing decisions as a differentiating element, which may transform offerings adding extra order winner characteristics able to meet specific customer expectations. This aspect has been found particularly worthy in business-to-business or industrial markets, where customers are described as increasingly demanding for services (Vandermerwe and Rada, 1988). The main motivations for these stems from the necessity to elevate efficiency and effectiveness focusing only on the very core competences of the firm, and be very flexible with regard to complementary activities, recurring this way to external specialized providers. Services are also considered strategic to foster customer loyalty (Correa et al., 2007) creating, when possible, dependency relationships that may not be easily broken, as they are based on a deep sharing of knowledge and trust. Furthermore service elements are responsible of repeated sales as they intensify contact opportunities with the customer, letting the supplier uncover new needs and involving him in providing more complex solutions. In addition, market share and competitive intensity are positively affected by service infusion, letting firms acquire higher shares of customers' orders according to five main reasons that emerge from clients (Vandermerwe 1994):

- customers want more value, which is associated to the use and performance of systems;
- they want comprehensive solutions and not just mere physical characteristics;
- they want to take full advantage of their suppliers' know-how, and not to be just a counterpart for products exchange, so as to enrich innovation sources;
- they want an integrated global offering, able to minimize the number of different providers without compromising service level and quality;

- they want customized relationships that make them feel unique and privileged, avoiding all those costs of misunderstandings delays mistakes and complexity for reciprocal diffidence that arise every time a new contact starts.

This way services become means to catch opportunities that bore from new business features, tough in reality those opportunities would be considered threats without any indications about how to face all competition challenges they advance. In the end, benefits of servitization have been deeply studied and tested by scholars, highlighting a certain absence of determinism for their realization. Actually these advantages are not easy to attain, and they always imply the application of management skills to face connected risks and difficulties, as described in the following paragraph.

1.4.3 – Servitization challenges

Many researchers recognized that the servitization process poses significant cultural and corporate challenges to cope with, as firms have to face all managerial and operational activities typical of an innovation roll out. That presents difficulties associated to novelty, absence of previous experience, diversity from the historical core competences of the firm.

One of the main challenges is the service design, since service nature itself is really difficult to define and translate into specifications, sometimes without knowing performances and offerings of competitors that can be customers or suppliers (Slack, 2005). The process itself may present some unpredictable difficulties since providers have to undertake some activities previously performed by customers, whose peculiarities are unknown, with relative risks to fail that don’t compensate potential benefits. The communication phase is critical too, with probability to promise something impossible to be delivered at a satisfying level.

Another crucial point is the capability of companies to adapt their organizational structures to the new service oriented strategy, with connected problems to implement control mechanisms and delivery procedures that sustain the combination of product-service operations (Wise and Baumgartner, 1999). Organization has to change from internal perspective focused on getting higher efficiency and effectiveness, to a higher involvement of customers' processes, building the offering together, participating in their troubles and co-developing solutions that may mutually sustain common business. Operations visibility is a fundamental point to improve, so as to permit customer appreciation and demonstrate all internal competences, as well as information traceability and data input and retrieval, that become essential to run customized client-centric performances (Miller et al., 2002), even if service management principles are often at odds with traditional manufacturing practices.

Service culture is indeed one of the most latent risks that may be under-evaluated and may cause the failure of the servitization strategy if not adequately considered. Consolidated manufacturing soul of firms should progressively be smoothed to welcome a service view that implies a shift in culture aiming at prioritising services' development, and a different way in dealing with customers not as hostile counterpart of a transaction but as commercial partners in creating value for the end user (Oliva and Kallenberg, 2003). Accepting the transformation and the challenge towards something new is quite a transversal topic that refers to change management and innovation issues. Its importance has to be underlined as it has been demonstrated that fears of infrastructure modifications, internal resistance due to steady defence of acquired rights, passive imposition in maintaining current mansions may undermine the entire process. Thus, making people understand firm's intentions and market needs is determinant to foster a form of proactive support from all the organization's members, using direct communication and training sessions that can pave the way to the change. People make the difference in delivery high quality services, and their commitment to objectives and mission is vital, especially during the starting phase where errors and problems may abound.

Service design, organizational strategy and cultural change are not the sole challenges that have to be faced, as beyond the operational level there are some economical targets to pursue that make the outcomes of servitization rather uncertain. In fact, servitization may be risky and negative for economical performances of the firm, leading to reduced profits, augment of the cost of goods sold and sometimes resulting in bankruptcy. A study by Neely in 2009 highlighted the main dangerous aspects of servitization in terms of economical risks exposure, in particular some specific measures were provided: the annual cost per employee is much higher (about 30%) in servitized manufacturers compared to non servitized operators, the working capital per employee reflects the same difference with a spread of 16%, the total assets per employee are aligned to the former trends too, with investments of servitized firms a 13% higher than classical manufacturers. On the other side revenues per employee seem to be greater in case of servitization, with an improvement about 24%. This data taken together seem not to justify any servitization endeavours, as net profit per employee is negative due to higher costs incoming, that are mainly associated to more qualified personnel and consultancy services that are typically as expensive as necessary to foster the change. More in depth, firms' size is proposed as an interesting moderating variable, affirming that larger companies may better take advantage of servitization maneuvers, thanks to their stronger capability to face investments and bear incremental costs through economies of scale. However, even this intuitive assertion is challenged, since the conjoint effect of firm's dimension and decision to servitize affected positively net profits, but only for smaller companies up to 3.000 employees,

while the number of services offered results in a negative outcome for profitability. All in all, servitization poses really intriguing questions about the advantages attainable and the difficulties in carrying out a profitable process, in particular service infusion seems to be more critical for large firms where incoming costs don't lead to adequate earning to cover the investments, with many arising latent costs and difficulties, from shifting culture focusing on customers value in use to modernizing attitude towards building long lasting relationships. Besides, managing time scale complexity of multi years partnership and financial implications of long term investments are key criticalities, as well as refining business model and customer offering in terms of development of new service culture and performing processes. In the end, economical success of servitization is really an open issue, indeed while increase in revenues is quite secure, there is no certainty that profits improve, with higher risks due to the number of services inserted and the size of the firm, whose inertia is more difficult to handle in a transformation process.

Two other components have to be considered in the overall evaluation of servitization challenges, namely competitive costs and political costs (Mathieu, 2001). The former are mainly connected to the strategic development of innovative services that may distinguish firm positioning and erode competitors market share: when the entire product related know-how has been exploited in providing and delivering services, companies strive to enter new unexplored field of service sector, trying to acquire new competences to enlarge service offering and to extend the competitive perimeter, facing sometimes stakeholders customers and environments never known before. This way the servitizing manufacturer has to cope with new emergent costs, such as the impossibility to exploit previous knowledge and experience, the incurrence of errors, the necessity to resort to specific consultancy, sometimes new investments in technology. These costs are all associated to the exploration of new fields beyond the well known product-oriented system, where uncertainties abound and economies of scale and learning curve advantages are strongly reduced. Furthermore, political costs stem from the perception that some units within the organization are losing importance and have to face consequent reduction of resources and responsibilities. Several parts of the organization may feel threatened by the incumbent transformation, particularly those closer to traditional manufacturing operations, that could even react with different forms of resistance, harming the global process in terms of time to market, or even not permitting an adequate development of service culture and operations. These are the reasons why servitization is also deemed a political process, in which managers should educate and convince every part of the organization to work together to foster the change.

All things considered, servitization literature points out as many advantages as risks, calling for some new research contributions that can lead to in-depth knowledge of virtuous practices

depending on the specific application context. What's sure is the absolute need for manufacturers both to consider opportunities of completing their business, as well as to avoid jumping the gun accelerating too much the process.

Servitization is a real global complex phenomenon. Besides literature contributions on the aforementioned key aspects, it is useful for thesis development to provide some interesting examples to understand the variety of forms it can take. There have been several classifications for services delivered by manufacturers, for instance Wise and Baumgartner in 1999 proposed four categories:

- services embedded into the product and that were usually delivered downstream in the value chain, such as Honeywell control and monitoring systems for engines;
- comprehensive services, that don't depend on physical characteristics of products, such as General Electric capital's financing activities;
- integrated solutions, that embrace all customer needs beyond the mere product, such as Nokia telecommunications' network infrastructure solutions;
- distribution services, such as Coca Cola responsibility to manage shelf refilling without ordering in high volume supermarkets.

Furthermore Howells (2000) discussed the adoption of a functional perspective in manufacturers' business model to take responsibility and risk for customer processes, reporting the Rolls-Royce case, with the manufacturer offering guaranteed flight hours of its aero engines, using comprehensive tariffs that protect customers from operating risks or service failures. Mont in 2001 described Xerox innovation from photocopiers producer to "document management solutions" provider, with substantial advantages for customers in terms of smaller investments in non-core machines and shift to pure variable costs. There are also interesting examples of manufacturers moving up and down over the supply chain, in order to provide tailored solutions able to meet customers' desires, such as Alstom transport solutions for train maintenance and controlling systems, Ericsson's mobile networks and Thales's training solutions. Other manufacturers go even further, explicitly competing with their customers such as W. S. Atkins and Cable & Wireless through their strong systems integration capabilities.

Another clear classification of servitization options is given by Neely (2009), identifying five alternatives:

- integration orientated product–service systems, that involve going downstream, where the ownership of the tangible product is still transferred to the customer, but the supplier seeks vertical integration, by moving into retail and distribution, financial services, consulting

services, property and real estate services, and transportation and trucking services, that is products plus services;

- product-oriented product–service systems, with the ownership of the tangible product transferred to the customer, and additional services directly related to the product are provided, such as design and development services, installation and implementation services, maintenance and support services, outsourcing and operating services, procurement services, that is products plus services that are integral to the product;
- service-oriented product–service systems, that incorporate services into the product itself, ownership is still transferred, but additional value-added services are integral part of the offering, such as health usage monitoring systems and intelligence vehicle health management, in this case product and services are coupled, there is no just an addition;
- use-oriented product–service systems, that are focused on services delivered through products, whose ownership is often retained by the service provider, selling their operating performances, via modified distribution and payment systems, such as sharing, pooling, leasing;
- result-oriented product–service systems, that seek to replace product with services, this way eliminating the need to own physical assets, a classic example would be voicemail services where the service itself replaces the need for individuals to own their own answering machines, or cloud storage services that don't make the customer buy any hardware.

To end with, it is important to provide a brief description of the main concepts that stems from servitization strand in literature, and are pivotal for thesis development:

- a product–service system is a form of commercial offering which integrates products with service components;
- servitization involves the innovation process of a company that results in a better creation of mutual value with customers, through a shift from selling product to selling product–service systems;
- the global value system is the distributed network of suppliers, customers and partners who have to co-operate to ensure that integrated product and service offerings delivering value in use.

All concepts presented in this chapter will be used across the research. Since servitization is one of the most transversal trends that has dominated last decades, service management discipline should consider also peculiarities of services in manufacturing firms. Key distinctive elements of servitization are:

- services, according to the final definition of paragraph 1.3, are the ending point of a process

that moves from focusing on physical product features to the ultimate customer needs satisfaction;

- process, servitization doesn't happen instantaneously but it is a continuous transformation that involves every part of organizations;
- customers, independently from billing decisions servitization must be noted by the market, as firms aims at building closer relationships and attaining competitive advantage through market recognition of their initiatives.

This research deals with operational impact of service recovery practices, and wants to highlight how firms organize their operations to deliver recovery activities, evidencing if different business contexts (sectors) exert particular influences on their implementation. For that reason, in order to provide insights from very different fields, servitization literature plays a fundamental role in explaining what services in manufacturing firms are. In addition, it allows to deepen why service recovery is a key issue to deal with, owing to the increasing demand for service performances that involve also products, and the fact that engaging challenges are associated with servitization strategies, due to possible errors always behind the corner, caused by inexperience, variability and operational failure. Services are no more considered intangible haircuts or teaching lessons, they are new offerings to meet complex customer needs, that go beyond tangible aspects of products and, in order to be a competitive leverage, should be delivered according to market's expectations. Despite this, zero defect services are no possible and recovery practices are fundamental to get customer satisfaction. Next paragraph presents literature review about this theme and coherently draw the research questions.

1.5 – Service Recovery

Service recovery, with its extension to the servitized manufacturing field, is the key research issue of this thesis. Literature review specifically deals with service recovery, as it is the main topic that underpins this thesis, and encompasses typical challenges that are faced also by servitized manufacturers.

Literature about this theme is huge and it embraces an enormous range of application fields. If we run a quick search through Google Scholar (1st September 2013) writing "service recovery" as exact key expression, we find more than 13.500 results, from 1990 to 2013, with an incredible variety of research fields that comprehend clinical processes, information technology, marketing, psychiatry, and publications in tens of journals with really different focuses, such as retailing, banking, insurance, marketing management, human resources management, operations management, electronics and so forth. This remarkable variety witnesses how the concept of

recovery is really transversal as it refers to actions taken to correct a wrong output or undesired situation, that may happen everywhere and anytime. Even narrowing the scope searching the same expression just in title, 1.150 results are found, still presenting a notable breadth of settings from healthcare studies to psychology analysis, from personnel management to culture and tourism inquiries (Liao, 2007; Carson et al., 1999; Dasu and Rao, 1999; DeWitt and Martin, 2009). Taken for granted the incredible multi-disciplinary nature of this theme, it's interesting to notice the intensification of literature production during recent years. Chart 4 represents the distribution of the aforementioned results during last 20 years and highlights the progressive increasing attention paid to this theme by scholars, which has become even more attractive during last five years.

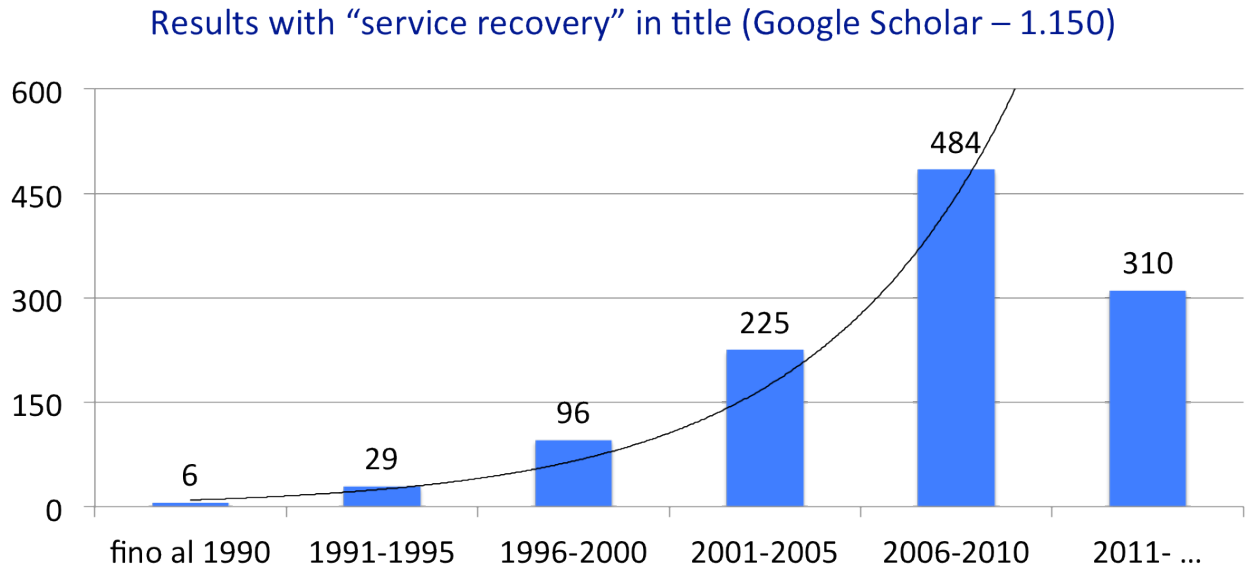

Chart 4 – Time distribution of results from Google Scholar looking for "service recovery" in papers' title

This literature review is carried out in order to identify main contributions about service recovery theme, present and discuss the most important strands and point out research gaps so as to propose interesting research questions that will be addressed in thesis development. At the first stage a restrictive selection of papers to analyse was executed during the first trimester of 2012, starting with the results obtained from the insertion of "service" or "recovery" as keywords in title, searching in EBSCO, Scopus and Isi Web ok Knowledge databases. Further filters were applied to select only resources pertinent to this research, so Business Source Premier was used from EBSCO, whereas the subject areas "business management and accounting" and "business economics or operations research management science" were selected for the other databases. A total number of 401 unique results were found, but only 215 of them strictly related to management issues useful for this thesis. To end with, a relevance criterion was applied to select only those papers published in authoritative journals, identified by the presence of impact factor according to the journal citation

report of 2010 (the last available in 2012). In order to run a comprehensive review in terms of relevance of contributions some other papers have been selected on the basis of number of citations and pertinence with the operational topic of the thesis, leading to final database counting more than 130 papers. Table 6 summarizes the typologies of research methods of the analysed papers, highlighting how the large majority of investigations adopted quantitative research approaches to validate and test constructs and hypothesis. Case study analysis is used less frequently, this is due to the greater attention paid to the single respondent (customer) behaviour in a specific context, rather than understanding firms strategic choices and operational implementation, leaving somehow unexplored the process that lead to recovery strategy definition and coherent execution.

METHODOLOGY	FREQUENCY %
Survey	**51%**
Scenario experiment	**20%**
Case study	**16%**
Conceptual research	**9%**
Modelling	**5%**

Table 6 – Distribution of methodologies employed in the analysed papers

Service recovery demonstrates to be a very large comprehensive topic, both in terms of field of study and methodologies of investigation. This review analyse the main strands that emerge from the selected papers, trying to execute a classification so as to identify research gaps and coherently propose suitable research questions. First of all it is important to start with defining service recovery, which is the set of the initiatives that are designed and run to prevent and minimized negative consequences of service failures (Gronroos, 1988). Since "zero defects" is an unrealistic goal in service delivery, service firms must consider recovery strategies to correct service failures and strive for "zero defections" of customers, rather than flawless processes (Reicheld and Sasser, 1990). It is thus evident that service recovery exists because it is necessary to deal with problems that happen during service delivery, in order to remedy failures that may cause customers' dissatisfaction. Prior to the 1970s and early 1980s, the term '"service recovery" dealt largely with restoring computer or telecommunications outages, or recovering from natural disasters (Brown et al., 1996), to demonstrate the very "solving" nature of this issue, that stems from the necessity to split and better manage service quality. This topic has caught much attention during last decades in academic and managerial contexts with a continuous enrichment of perspectives and new themes, that are originated both from research progression and business development. In 1990 a milestone

paper by Hart et al., titled “The profitable art of service recovery”, opened with the recognition – rather supported in literature – that zero defects services are really difficult - almost impossible - to achieve, and managers’ focus should move from dreaming perfection to being ready to correct mistakes and catch these situations as opportunities to positively surprise the customer. The authors indeed stated that “errors are inevitable, but unsatisfied customers are not”, and described some real episodes that highlight the importance of those practices calling for a major research consideration of the theme. After a decade, in 2001, Lewis and Spyrakopoulos asserted that a growing number of researchers have identified service recovery as a rather neglected aspect of service marketing, which deserves higher research attention, referring particularly to the study of customers’ behaviour after having incurred in failures and recovery, so as to identify useful guidelines and assess consumers’ perceptions. Meanwhile other definitions took place adding new points of view, for example Armistead et al. (1995, p. 5) defined service recovery as “the specific actions taken to ensure that the customer receives a reasonable level of service after problems have occurred to disrupt normal service”, highlighting the importance of delivering the promised service level, whereas Zemke and Bell (1990, p. 43) referred to it as “a thought-out, planned, process for returning aggrieved customers to a state of satisfaction with the organization after a service or product has failed to live up to expectations”, underlining the “process” nature of recovery actions and their final target that is customer satisfaction. Service recovery theme has matured different declinations, such as the process of putting the situation right (Johnston, 2001) that exalts the capability of recovery actions to prevent problematic situations’ outcomes, the part of a service firm’s quality management strategy with the ultimate objective to maintain the business relationship with the customer (Schweikhart et al., 1993), that concentrates on the relational implications of the service encounter, an attempt to solve problems at the service encounter before customers complain or before they leave the service encounter dissatisfied (Michel, 2001), proposing to accelerate the improvement of consumers feelings before they exit the service. Many other definitions have been provide, such as doing things very right the second time (Hart et al., 1990) that highlights the importance of not mistaking twice, “a ‘bundle of resources’ that an organization can employ in response to a failure” (Smith et al., 1999, p. 357), that mentions the complex aspect of multiple elements put together to correctly deliver a satisfying recovery. In 2012 service recovery still offers new research opportunities, particularly in the operations management field, which has not been considered as it should have been in the previous years, with the large majority of papers dealing with marketing psychological themes (Smith Karwan et al., 2012). With many positive effects having been demonstrated, practical suggestions and operational insights become even more important and desired by practitioners. Actually service recovery gives a determinant contribution

to enhance the competitiveness of firms, as customers expect more and more quality despite the huge increase of service variability sources, and it has also been demonstrated that it is a suitable support for companies' positioning, representing another element of differentiation that can be also incorporated in provider's mission (Mitchell, 1993; Mitchell and Critchlow, 1993). In fact providing immediate assistance and support in case of failures is a very appreciated capability, and sometimes becomes an order winner that makes the customer feel safe and relaxed about possible problems. Service recovery techniques are useful to manage critical situations in which customer has encountered a failure and dissatisfaction arises as natural response to customer's expectations betray, trying to restore a positive feeling with service provider and protecting the commercial relationship for the future. Its systematic use may prevent unpredictable customer defection, as only 5% to 10% of the dissatisfied customers complain and rest just move away without giving any possibility to recover (Dubé and Maute, 1996). Other studies confirmed the criticality of errors in precluding future re-patronages of customers, for example, a research by Andreasen and Best (1977) showed that only 30-53% of customers who experienced problems with services they purchased were satisfied with the resolution, in addition Berry and Parasuraman found in 1991 that only 50-67% of customers who experienced difficulties were satisfied with the final outcome. Miller et al. (2000) found that 90% of customers whose problem was solved intended to return for further service, whereas only 22% of those whose problems were not solved intended to return. More recently it has been argued that failures and wasteful practices create serious problems to organizational efficiency, worsening results by imposing a 20–40% increase in costs, which consumes 5–45% of revenue (Maycock and Shaw 1994). Real benefits have largely been studied and documented along different service contexts and failure types, and there is a remarkable bulk of consolidated knowledge about positive effects that come from effective recoveries. In fact, since Gronroos definition has been given a lot of different perspectives and effects have been studied in order to build a comprehensive coherent body of theory about this particular strand of service quality. If quality aims at fulfilling customers expectations through a mix of experience and outcomes, with the possibility of errors always behind the corner, service quality must considers failures as undesired but predictable moments of truth (Gronroos, 1990), in which advanced provider's capabilities should emerge in order to mitigate clients' disappointment and restore the original customer satisfaction. Moreover Johnston in 2004 found that recovery activities are fundamental for customers, as they are part of the consumers' evaluations and contribute to the implementation of service excellence. Table 7 reports the expressions collected among the interviewed customers about virtuous and negative recovery behaviours of providers; asking what

the important factors for service excellence are, “deal well with problems and queries” turned out very critical according to customers, as represented in chart 5 and 6.

They deal well with problems	***They don’t deal with the problems***
They were happy and willing to sort it out	They did nothing, there was no plan B
They took responsibility	They denied responsibility
It was quick and easy	They make it difficult to talk to them
They did not pass me around	They gave me the run around
They believed me	They blamed me
They did the work	I had to do all the work
They gave open and honest explanations	They didn’t phone me back
They phoned me back	They fobbed us off, just a couple of gift vouchers
They know what to do if there is a problem	There was no apology
When it goes wrong THEY sort it out	They don’t learn from mistakes
	They pass the buck
	You have to keep repeating yourself
	Things go wrong too often
	I ring them every month and each time I have to tell them the whole story
	You spend half an hour trying to get through and when you do they don’t know anything

Table 7 – Relevant service recovery considerations that affect service excellence (Johnston, 2004)

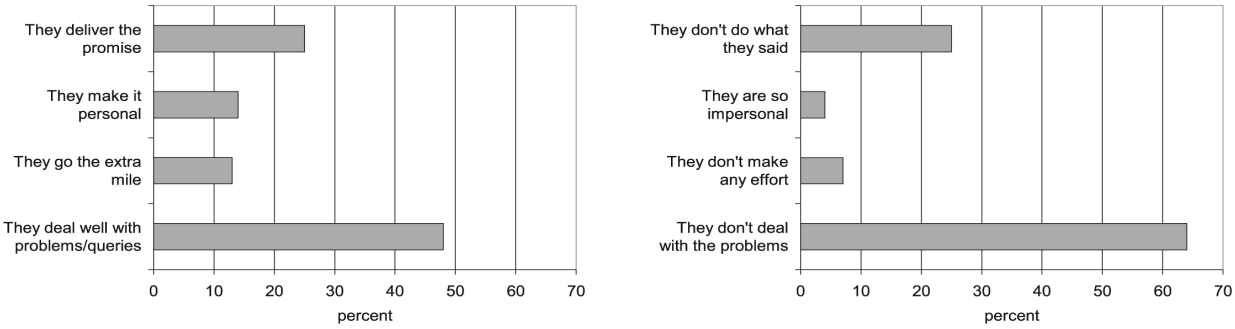

Chart 5 and 6 – % of customers mentioning “service recovery” as an important aspect (Johnston, 2004)

Indeed, the frequency of the service recovery category is really high both in the description of excellent service and in the poor service one. This means that overall evaluations of customer is largely affected by recovery performance of firms, that play a pivotal role for customer satisfaction. In order to assure customer satisfaction, it is necessary to stress the centrality of two aspects, related to the final aim and the methodologies to run recovery practices. They are the transposition of two key service quality dimensions, as presented by a milestone paper by Parasuraman et al. in 1985: outcome and process. The former dimension deals with the result of service recovery actions, in order to guarantee customers’ satisfaction and meet their expectations with the regard to the content of the recovery, whereas the latter concerns how to design and offer an adequate recovery experience lived by the customer. These dimensions, largely studied in service literature, are pivotal also in service in service recovery. Recent research has stressed the importance of addressing process management to integrate a mere functional perspective of service quality (Kumar et al.,

2008), and some authors argued that the process is even more important in determining customer satisfaction after a failure has occurred (Berry and Parasuaman, 1991; Spreng et al., 1995). However, previous research has mainly dealt with those dimensions from a customer point of view, Johnston and Michel in 2008 (p. 80) affirmed that "the vast majority of the literature currently takes a marketing view of recovery, primarily concerned with the impact on customer satisfaction", and still Smith Karwan et al. in 2012 (pp. 1-2) highlighted that "the majority of research on service recovery has explored the topic from a customer perspective while following two general streams; practice effectiveness and outcome evaluations and/or future intentions. The first stream has focused mainly on assessing the specific recovery practices that are used as well as the evaluations of customers as to the effectiveness of these practices (e.g., Kelley et al. 1993; Boshoff and Leong 1998; Homburg and Fürst 2005). Studies in the latter stream have placed more emphasis on investigating post-recovery customer evaluations coupled with assessments of the future purchase intentions of customers (e.g.; Tax et al. 1998; Smith et al., 1999). The results of these analyses are typically used by researchers to offer recommendations pertaining to effective recovery practices and strategies". Put differently, both process and outcome dimensions have been investigated, but the customer point of view has largely prevailed in literature, to provide insights about what the most suitable recovery options are and which the most appropriate manner to deliver them is, according to customer appreciation. On the other side, few contributions have coped with firms' point of view, trying to provide useful indication about how to implement operations able to deliver recoveries that match customer desires. In particular, operational aspects have been neglected, and are actually the key focus of this thesis. In the following, literature review is organized in three main streams (the marketing-oriented, the intermediate, the operations-oriented), to reflect whether papers mainly adopt a more customer-centric perspective (and their interaction with firms' decisions) or provider-oriented one.

Next paragraphs will illustrate the content of the main contributions in the three aforementioned areas, which let the author identify literature gaps and draw coherent relevant research questions.

1.5.1 - The marketing-oriented stream

The marketing-oriented stream is really large and deals with important constructs that refer to the interaction between customers and service providers and tries to identify antecedents and consequences of customers' satisfaction. Besides this, many interesting phenomena emerged from practitioners and caught the attention of scholars, delving deeply into specific marketing and behavioural topics. One of the distinctive aspects of this strand is the focus on relationships, in fact the perimeter of the studies almost always embraces both providers and consumers, and most of

findings regard their interactions. The most important constructs and findings referring to this strand are presented in the following.

One of the most discussed topics is the so called service recovery paradox, that witnesses the great impact of proficient recoveries on satisfaction and perceived quality of service, dealing with the recovery ingredients that can lead to a customer satisfaction higher in the failure scenario than in the normal delivery one. The term "service recovery paradox" was first coined by McCollough and Bharadwaj (1992) and indicates those situations in which a customer's post-failure satisfaction exceeds non-failure satisfaction. The recovery paradox theory contends that an effective recovery can not only maintain customer satisfaction, but also propel it to a higher level. Many researchers have recognized the relevance of the notion of recovery paradox (e.g. Smith and Bolton, 1998; Spreng et al., 1995; Tax et al., 1998), but recently this theory has found as many supporters as detractors and has become a really interesting issue of discussion, in order to identify what are the contingent enhancing factors for obtaining the paradox. A study by Magnini et al. highlighted in 2007 the important role of some variables, indeed they found that the probability that the recovery paradox happens increases with the tolerability of the failure, and conversely it becomes harder to realize when the failure is perceived as severe; a similar negative effect is played by the number of failures that have occurred previously. Actually the service paradox is more likely to happen if the customer is incurring in the first service failure and has only experienced previous positive encounters; on the other side the length of the relationship between customer and provider without failures seems not to be a significant determinant for recovery paradox. Indeed, trust strength built on past positive transactions, that could make a particular problem appear as a temporary occasional accident minimally affecting quality evaluations, is not sufficient to assure full satisfaction with a recovered service. Despite this, if the customer perceives that the failure cause is unstable and not linked to the intimate service design the paradox's likelihood to occur is higher, and the same positive effect is played by the perception that the failure cause is out of the reasonable control of provider's action, that somehow justifies or reduce firm's responsibilities. A work by Michel and Meuter in 2008 started from the review of literature about the service recovery paradox and identified four shared guidelines to for its existence:

- the failure permits recovery (McCollough et al., 2000);
- the customer believes that the problem hasn't been created by himself (Hocutt et al., 1997);
- the failure occurs just once and it is not repeated (Maxham and Netemeyer, 2002a, b);
- it is possible for the customer to notice to be part of a small group of delighted consumers, that receive excellent recovery compared to a large number of "normally" satisfied customers (Bolton and Drew, 1992; Boshoff, 1997; Hocutt et al., 2006).

Consequently the authors focused on the last point, and found that those customers who received a correctly delivered transaction in the first encounter have lower overall satisfaction rates than customers who have experienced an initial service failure followed by an excellent service recovery (that was much more fulfilling than expected). Furthermore, recommendation intentions and positive word of mouth seem to improve with an excellent recovery, demonstrating that the overall effect of outstanding corrections may be more beneficial than the normal delivery on customer satisfaction. In the end the study suggests that, in order to attain desirable consequences of paradox, service recovery should be both very positive and surprising, exceeding customer expectations and going the extra mile. Other studies were carried out in order to understand what the necessary premises of recovery paradox are, and whether and how this phenomenon should be taken into account by managers. Ok et al. in 2007 confirmed that a higher post-recovery satisfaction is attainable only through exceptional measures, and that double deviation scenario strongly compromises the possibility to achieve high satisfaction level. Besides, they addressed the hypothesis to voluntarily create small failures in order to surprise with glorious prepared recoveries, and did not suggest this practice, firstly because customers expectations may vary (increase) during time and the risk not to be adequate may be fatal, secondly because setting exceptional recoveries would be too costly and may harm firm profitability without significant benefits. Another interesting contribution was given by Priluck and Lala in 2009, analysing the retail sector they argued that there can be three types of satisfaction: with product, with store, and with relationship. In particular, in case of product failure strong recoveries may led to the restore of satisfaction with the store, but no paradox seems to be possible for product satisfaction. Conversely, relationship satisfaction can exploit these opportunities in order to delight the customer. In fact, it is proposed (p. 55) that “a product failure may be an opportunity for companies to raise relationship satisfaction beyond what existed before the problem” if the full compensation recovery is pursued. In addition, in retail environment what seems to be crucial is the product satisfaction, with a neutral effect of strong recovery or moderate recovery about store experience or relationship. All in all service recovery paradox demonstrates that under certain conditions it is possible to take advantage of failures situations, remarking the importance of recovery practices to maintain customer satisfaction high.

Another largely discussed theme is the “perceived justice” from the customer point of view, a construct that tries to explain the motivations of clients’ behaviour and desires after service failures and recovery. Three particular types of justice have been explored and connected to appropriate actions for their realization (Oliver and Swan, 1989a, 1989b; Thibaut and Walker, 1975; Bies and Moag, 1986; Gustafsson, 2009):

- distributive justice, related to the content and the outcome of the service, aiming at the delivery of fair value coherently with what the customer was expecting, prescribing techniques such as monetary compensation, replacement, refund, discounts;
- procedural justice, focused on the sequence of activities necessary to let the customer receive the recovery, indicating speed of recovery, facility to complain, reduction of steps and interlocutors, transparency of rules and procedures as virtuous practices appreciated by complainants;
- interactional justice, concerning the interactions between the aggrieved customer and the frontline employees (FLEs), suggesting simple and spontaneous behaviours such as atonement, apology, empathy, responsibility acknowledgement to show firm care about customer's problem and enable a recovery of his negative feelings.

The concept of justice refers to the assumption that during a transaction the customer pays a price in order to receive an adequate value, if somehow goes wrong and product defection or service failure occur, the customer may perceive a feeling of injustice, due to the unfair mismatch between his expectations and concrete delivery. The different typologies of gaps are described by three different justices, and several studies focused on the role played by them in composing customer feeling and consequent behaviour, reporting interesting insights with many practical implications. De Ruyter and Wetzels in 2000 found that the use of apologies (related to interactional justice) is secondary with respect to other practices that mostly address service outcomes and the possibility for the customer to fully complain. This way, the sole use of apologies appears rather weak to foster customer satisfaction after a failure has occurred, while concentrating on the result of a favourable outcome for the customer is more appreciated. In addition, giving the possibility to express their own feelings and paying attention to them increases customers' fulfilment, interactional fairness in the form of apologies doesn't affect significantly the customer satisfaction. On the other side the authors found that the same "voice" and "outcome" (that refer to procedural and distributive justice) are good ingredients in order to enhance loyalty behaviours, while paradoxically apologies without listening to the customer may lead to negative effects. To end with, all three justices are relevant to support the level of trust, which is actually one of the key elements that protects future intentions of customers, a relevant moderating role of service context was found determining the relative importance of justice dimensions. These conclusions are also supported by Chang and Hsiao that in 2008, who carried out a study in the hotel industry analysing the interactions between perceived justice, perceived value and perceived risk, that is the perception that something may not satisfy the expectations and may arise before or after the purchase. In their work service recovery is demonstrated to play a pivotal role in delivering customer value, which is

the matching between customer needs and service outcomes, and essentially represents the achievement of the main purpose of personal value. High perceived justice, with its declination of distributive (service result), procedural (service process) and interactive (relational aspects) justices, positively contributes to the delivery of customer value, as well as the perceived risk reduction. Service recovery practices act as enablers to enhance perceived justice and reduce perceived risk, leading to customer value achievement despite service failure. Figure 2 represents the scheme described, with the explosion of main constructs.

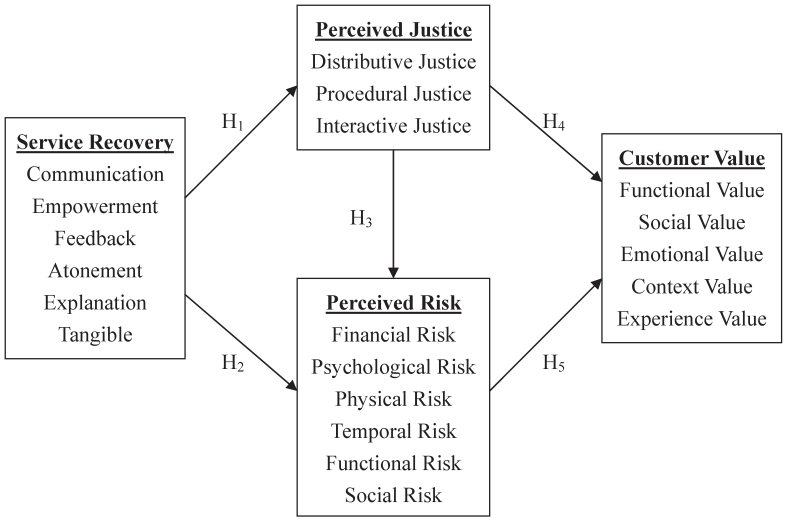

Figure 2 – Effect of service recovery of perceived justice and risk (Chang and Hsiao, 2008)

Del Río-Lanza et al. in 2009 supported the importance and positive contributions of the three justices in improving satisfaction with service recovery, and partially demonstrated that their absence (in particular for procedural justice) results in negative emotions about service recovery. Moreover, their work tried to point out whether there were differences in justices' contribution to overall quality evaluation of service recovery, and they actually found a relative higher weight of procedural justice, underlining that results seem to be strictly dependent on the particular service business, calling for a deeper understanding of which the determinant factors of justices' importance are. Furthermore, an interesting mediating effect of emotions on overall satisfaction with service recovery emerged, that means that the final results on customer behaviour are determined also by the arising emotions during the process.

All things considered justice theory connects after failures consumers' intentions to specific gaps that should be addressed and filled, it focuses on each of the three dimensions, determining their relative priority depending on the specific service business, confirming the general finding that justice perception is determinant for service recovery success.

Another significant stream deals with positive consequences of service recovery, in terms of impacts on customer future behaviour. This issue is treated by many researchers and has a

multifaceted nature involving different constructs that refer to commercial benefits generated by recovery practices. Reicheld and Sasser in 1990 found that by retaining just 5% more of their customers companies can increase profits by up to 100%, and several academic contributions confirm the need of maintaining actual customers instead of bearing the costs of finding new ones (Almquist et al. 2002), in addition Hart (1990) stated that recruiting new customers costs up to five times more than keeping current customers happy. Service recovery is credited with fostering positive impacts on customer intentions after a failure has occurred, for instance customer retention really benefits from recovery actions, leading to a 70% of customers re-entering the service in spite of previous problems (Kelley et al. 1993). A study by Maxham in 2001 demonstrated that service recovery may have really significant impacts on future firm success, acting on commercial relationships that are vital for long-term profitability. In particular, it was found that levels of satisfaction, purchase intent, and positive word of mouth are lower than their post-service failure levels after a low service recovery effort is perceived. This result is not obvious and underlines the criticality of recovery factor: it can be useful or harmful for customer behaviour depending on his perception of firm endeavour to cope with the problem, if nothing is done or provider's competence is perceived insufficient to turn the situation right the overall impression of the service is worse than no recovery effort has been spent. The message is clear, do not joke with aggrieved customers, if you want to take care of them you should do that seriously and assuring their approval of recovery outcomes. On the other hand levels of satisfaction, purchase intent, positive word of mouth are greater than their post-service failure levels after a moderate or high service recovery effort is perceived. In any case, providers ought to assure that customers are correctly informed about their activities in dealing with problems, so as to make them aware of any extraordinary workload that is sustained to guarantee the promised outcome. Furthermore the same study shed some light on the positive consequences of good recoveries, finding that a moderate service recovery results in higher ratings of satisfaction, purchase intent, and positive word of mouth than a low service recovery does. However, there is no evidence that high service recovery leads to an increase in commercial benefits compared to a moderate service recovery, the marginal improvement is not relevant enough to justify large expenditures that secure customers' expectations fulfilment. In other words, there seems to be a sort of continuum of perceptions and consequent actions depending on the specific hues of service recovery perceived efforts and effective results. Customers behaviour is not binary with regard to recovery initiatives but presents a kind of logarithmic relation with firm endeavours and capabilities to meet customers recovery expectations: the better you perform (up to a satisfying level), the higher your customers' satisfaction and re-patronage intent will be, buy extraordinary gestures may not be recognized. Other researchers specifically addressed particular phenomena

such as positive word of mouth, which has generally been considered to have extremely powerful influence on the consumer purchasing process (e.g. Brown and Reingen, 1987; Furse et al., 1984), because it consists of an exchange of ideas or observations between consumers that are not professional marketing operators (with economical interest in promoting firms), resulting this way in a higher level of communication trust (Bone, 1992; Mowen and Minor, 1998). Swanson and Kelley in 2001 approached this theme within service recovery context using the attribution theory. It suggests that customers make judgments about cause and effect relationships that influence their subsequent emotions, attitudes, and behaviours, based on three dimensions of causal attributions: locus, control, and stability (Weiner, 1985). These dimensions become crucial for a deep understanding of customer decisional processes to exit or going on with the service. More explicitly locus deals with the responsibility of the failure, that is who has originated the problem and who should repair; stability is connected to the probability that the failure recurs and this way supports an imagine of weak consistency of the recovery; controllability refers to the possibility of the responsible to manage the cause of the failure. Some interesting findings emerged about the role of these dimensions on post recovery word of mouth behaviour: the stability of service recovery attributions is positively related to customer intentions to discuss the recovery with a wider range of people and to make recommendations and convince others to use the service. When the outcome of recovery is perceived stable, that means that there are no chances that the failure happens again, positive word of mouth is stronger and negative effects are mitigated. Similarly, locus plays a significant role in customer overall judgement, as service recoveries initiated by customers will lead to intentions to discuss the recovery with a wider range of people, and stronger intentions to make recommendations and convince others to use the service than with recoveries attributed to the service firm and frontline employees. In other words, attributing failures to the firm, which may be referred to mistaken service design or opportunistic voluntary underperformance, or to the employee, with possible operative errors during delivery, leads to worse word of mouth outcomes compared to customer self attributions and self-initiated recovery. This is because people usually prefer to deny their own mistakes and take credit for successes (Bitner et al., 1994). On the other side, the more a failure could be controlled by service provider, the worse customer evaluation is, blaming the failure on a fall of attention and accuracy of service processes, that are under provider's control and must be monitored so as to prevent any possible failures. Hence, it is clear that several elements should be taken into account in designing effective and efficient recovery practices. Moreover, service recovery can be interpreted through two different philosophies: the former is represented in Figure 3 and depicts a transaction-focused perspective aimed at ensuring customer satisfaction at "the 'moment of truth,' when the customer interacts with the service firm" (Zeithaml

and Bitner, 1996, p. 105); the latter is proposed in Figure 4 with a more relationship-focused view, whereby the purpose of recovery is not only to correct specific instances of failure, but also to improve the service delivery system to prevent future failure occurrences, enhancing customers' overall perceptions of service quality, and assuring long-term relationships with loyal customers.

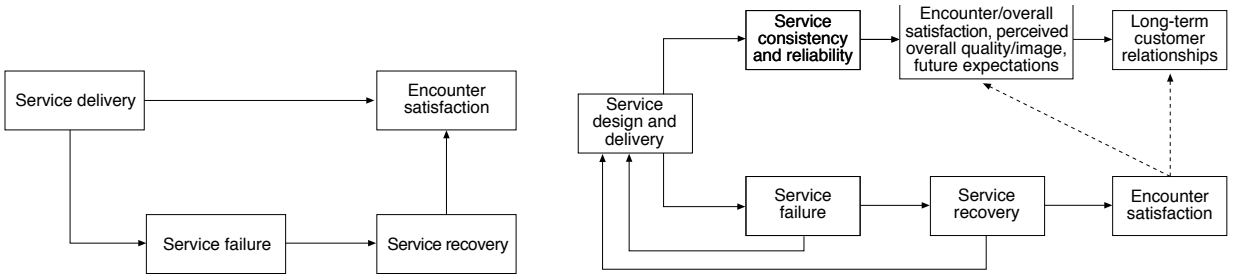

Figure 3 and 4 – Transaction and relationship-focus recovery perspectives (Zeithaml and Bitner, 1996)

An interesting research by Brown et al. in 1996 coped with this two-fold view and confirmed previous finding about relevance of service recovery on future customers' intentions, which determines their profitability with the firm. In particular, once again it is supported that customers that experienced service recovery after the failure are more satisfied than those who have not received any recovery treatment. Moreover, consistency and recovery actions were contrasted in order to understand their appropriateness after a service failure, and it emerged that service recovery tactics have a more positive impact than prior service consistency on outcome measures of satisfaction when it is measured at the specific transaction that created the need for the recovery. In other words when consistency fails it is worthy to focus on recovering rather than pursuing previous normal delivery in order to attain encounter satisfaction. On the other hand, consistency of service during previous encounters has a more beneficial impact than service recovery on measures of satisfaction which relate to factors beyond the specific transaction during which the failure occurred, in terms of overall satisfaction, overall quality, perceived image of the service firm. As a result, in order to maintain service attractiveness and be appealing for customers' future purchases it is appropriate to strive to guarantee a consistent normal service level. What seems to emerge is the primary role of service reliability rather than recovery efforts in the creation on long-term relationships, it is much worthier to be continuously proactive and apply improvement interventions than trying to secure customer future purchases just on recovery capabilities. In the end, service recovery may lead to very positive effects on customer side, fostering satisfaction, repurchase intentions, loyalty and positive word of mouth. In order to make it happen, firms have to focus on specific factors such as failure severity, perception of customer about provider's engagement in

solving the problem, speed of recovery, locus of responsibility, stability of solutions, proactivity in making the process flow correctly.

In addition, empowerment and human resources' management are key constructs of service recovery literature as part of the study of frontline employees role, with many contributions that support self-managed teams, use of improvisation, decision power attribution, human resources' investments in training selection and rewarding. Most of researchers have stressed the central role of frontline employees in dealing with aggrieved customers, providing appropriate assistance and demonstrating emotional atonement, exalting the importance of their proximity to the customer as a key enabler for the recovery intervention. Besides, their contribution is fundamental as a factor that enhances overall service quality perception by using a personal touch, according to the service excellence paradigm elaborated by Johnston in 2004. Empowerment encompasses very different aspects as it deals with humans and can be this way integrated with many other constructs, also with other disciplines such as psychology and sociology. Maintaining a management scope, empowerment has to be distinguished by delegation in order to sort out its benefits, indeed there is little difference between them if empowerment of lower-level employees is not accompanied by a reciprocal "disempowerment" by managers (Eccles, 1993). If this doesn't happen, empowerment just helps employee doing things right, but not doing the right things. On the other hand, the optimal configuration prescribes that employees are responsible for their own performance (Belasco and Stayer, 1994) unlike delegation where the final responsibility still lies with the superior. A research by Boshoff and Leong (1998) tries to integrate empowerment as an ingredient of a bundle of tools to use in order to assure satisfaction with service recovery. Empowerment degree is measured as the capability of the frontline employee to solve the problem immediately without obtaining authorization by his superiors, and its importance is compared to attribution's and apology's one. Results confirm that empowerment is really important for customers in terms of reactivity and speed of recovery, and a quick immediate response from the frontline operator is much more appreciated than other alternatives such as counselling with supervisors or calling manager's intervention. Notwithstanding, the three dimensions considered are not equally important to customers, indeed the assumption of responsibility by the firm (attribution) is more important than having an empowered staff member handling complaints, which is again more important than the manner in which an apology is delivered. It means that once a service failure has occurred, customers expect the service firm to own the problem, they prefer to deal with staff who are fully empowered to manage the situation quickly, they would like to receive personal or telephone apologies. Empowerment is a very concrete variable that needs specific action to be implemented, for instance Furlong (1993) gave clear indications about how realize it:

- obtain top management's genuine commitment;
- understand that middle management won't be happy to notice that their "power" will be reduced;
- accept that frontline staff often know best customer expectations and allow them to bring their contribution;
- use staff input and provide feedback so as to encourage proactivity and accuracy;
- remove any barriers that could restrict staff ingenuity, so as to incentive improvisation;
- recognise good performance but do not punish mistakes.

Despite several useful applicative guidelines, some authors concentrated on non-operational aspects of empowerment, addressing more psychological issues. Lin in 2009 focused on its influences on service recovery analysing employees' cultural values, "exploring the influences on service recovery by the integrated analytical view of overall cultural values and individual emotional intelligence, psychological empowerment and management involvement" (p. 670). In this research the emotional intelligence role, which is the individual capability to connect with others and effectively recognize and evaluate his own affection toward others (Goleman, 1998), is analysed in a service recovery context. Empowerment actually seems to be affected by emotional intelligence, as employees with higher emotional intelligence don't need management involvement and adopt different recovery measures from those adopted by operators with lower emotional intelligence. Besides, employees with western cultural values adopt different recovery measures (immediate recovery, compensation, apology and concerns, product discount) from those with traditional eastern values (avoid the same mistakes, change the product at the same price, involve managers), while employees with higher perceived psychological empowerment level are more likely to adopt active recovery as their needs are satisfied and this way the are more prone to help customers in fulfilling theirs. To sum up, the possibility to self-manage recovery situations is beneficial both for customers outcome and for employees availability to be more respondent. Many other authors dealt with this stream giving contributions from very different perspectives. Bowen and Johnston (1999) dealt with employees as internal customers that have to be stimulated and satisfied, protecting them from helplessness through empowerment, social support, high management decisions involvement, in order to enhance their external recovery performance; whereas Gruber (2011) studied the customers' expectations about employees competence, courtesy, responsiveness, empathy, trust, efficiency and personalisation. Furthermore Boshoff and Allen in 2000 tested several operative suggestions to increase frontline staff service recovery performance:

- adequately rewarding employees both for delivering quality service and for effectively handling customer complaints paying attention to process fairness;

- fostering empowerment of frontline staff to give them the authority and responsibility to make all the necessary to assure customer satisfaction;
- sponsoring high level of affective commitment from the frontline employee towards the service firm to reinforce the feeling of belonging and deeply sharing the mission;

in turn these practices are expected to lead to an effective service recovery performance by frontline employees, that also:

- decreases their intention to resign;
- exerts a positive influence on their job satisfaction assuring their support in the medium term.

Service recovery has stimulated an intense research production in the human resources management field, with particular attention regarding empowerment, which seems to be one of the essential ingredients to pursue high performances by frontline staff, that is in turn strategic for the overall evaluation of service recovery, representing the terminal contact point with the customer.

This section has presented the main literature evidences that come from the "marketing" stream of service recovery production, with four macro areas that have been largely studied over the last two decades. Next paragraph will present the intermediate section, that mainly addresses customer satisfaction providing suggestions for internal improvement.

1.5.2 - The intermediate literature

While the mentioned strands (i.e. empowerment, service paradox, justice, commercial benefits) are mainly focused on aspect and dynamics that mostly refer to service recovery outcome and quality in terms of effects on customer satisfaction and behaviour, there are some two-fold contributions addressing customer satisfaction issues by providing process operating prescriptions. Actually positive effects driven by service recovery call for practical suggestions about what a service provider has to do in order to perform good recoveries and prevent negative consequences of failure. This need promotes a research strand on recovery options and practices, with prescriptive approaches. Regarding this, some borderline researches try to start from literature evidences and coherently suggest managerial actions to take advantages and prevent problems of recovery practices. One of the most common indications is to act quickly in recovering from failures. Time dimension is crucial and is indeed one the cardinal pillars of procedural justice. Many authors recognize its relevance in assuring customer satisfaction with service recovery (Blodgett et al., 1997; Bitner et al., 1990; Smith et al., 1999), as the firm should restore the normal service attempting to minimize inconvenience for customers. "Act fast" is the direct prescription give by Hart et al. in 1990 to catch the criticality of recovery waiting time. In the same paper the authors present other pivotal indications such as measuring the costs, so as to evaluate profitability of

recovery actions, breaking the silence and involve the customer helping him complain, training and empowering front line employees. Other authors aligned to this stream of practical suggestions largely enriched by real examples and narrative descriptions. For example Schlesinger and Heskett in 1991 focused their managerial guidelines on the human resources management side of service recovery, suggesting employees' organization in winning teams like task forces with the specific mission to satisfy the customer. At the same time, they invited managers to move from usual individual wages level considerations to the aggregate labour costs evaluations, that should take into account also the costs of missing quality. In addition they suggested that recovery performances have to be measured and the feedbacks should be communicated in order to put in place a virtuous cycle of continuous improvement. Once again training and empowerment underpin the final positive result, that is represented in figure 5 and shows how investing in frontline personnel may conduct to a successful cycle that involve both operators' productivity and customer profitability.

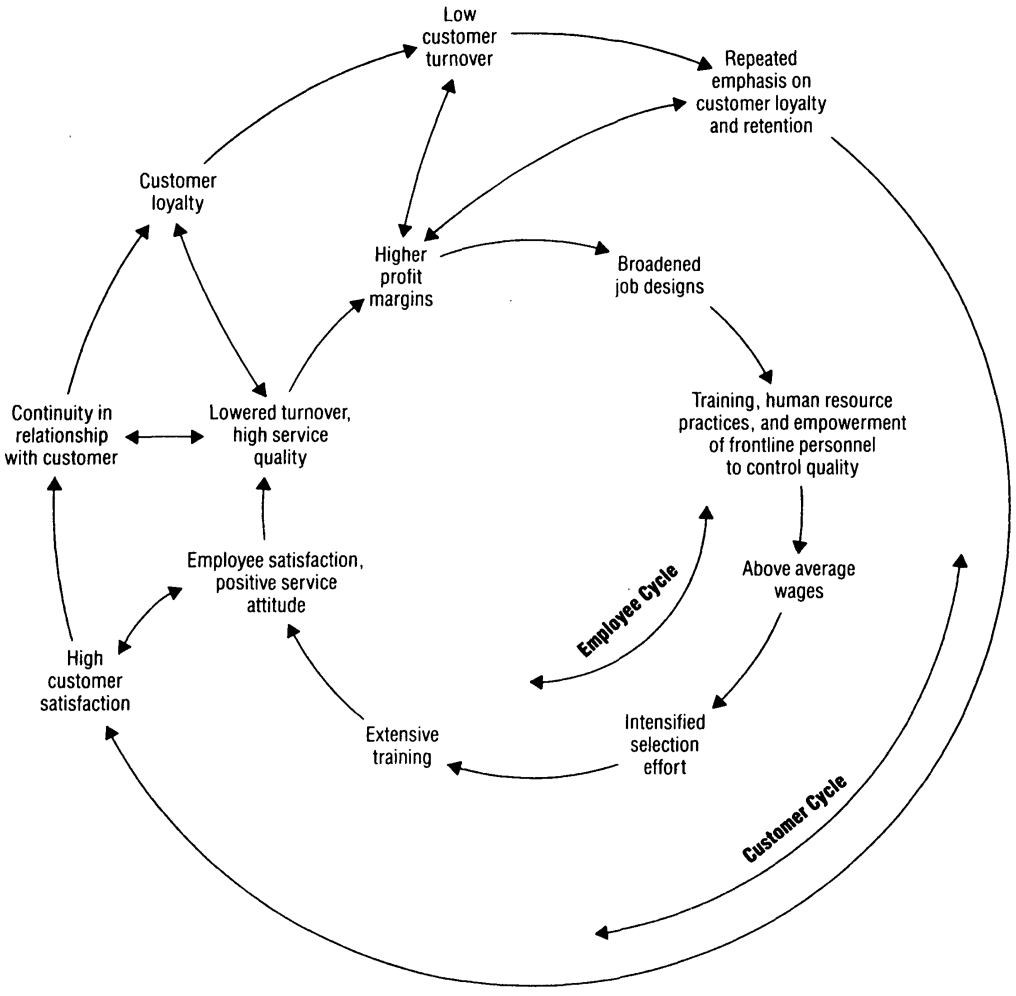

Figure 5 – The virtuous service recovery employee cycle (Schlesinger and Heskett, 1991)

In 1998 another paper by Tax and Brown tried to summarize common sense evidences, presenting them as managerial statements to maximize recovery benefits. In particular they pointed out the following guidelines:

- set performance standards, to better identify service failure or underperformed deliveries;
- communicate the importance of service recovery, to share the common mission with all firm personnel and underline its role for strategic goals;
- train customers in how to complain, to facilitate complaints' collection and processing and most of all to avoid that some failures don't emerge;
- use technological support, to focus human resources on relationship activities and critical phases and leave mere repetitive adjustments to software, increasing at the same time users' comfort in signalling problems via internet;
- establish guidelines, so as to be prepared about what to do in case of failure and do not leave everything to improvisation or contingent available resources configuration;
- provide fair outcomes processes and interactions, to secure the justice associated with the transaction and prevent customer exit from the service;
- maintain databases, so as to build a significant basis for continuous improvement.

It is quite clear that these guidelines are rather aligned to marketing stream results, which define what is useful but don't provide explicit examples about how to implement those directions. Regarding this, some scholars studied service failures types and their influences on customer intentions, connecting process analysis with outcome considerations. Craighead et al. (2004) created a map of failure types based on customer loyalty and failure severity dimensions. Three kinds of failure situations were found and coherently different recovery strategies were pointed out, as represented in figure 6. The service recovery strategy for failure type 1 is essentially severity reduction, in fact customers are loyal, even though they have incurred a severe failure. Therefore

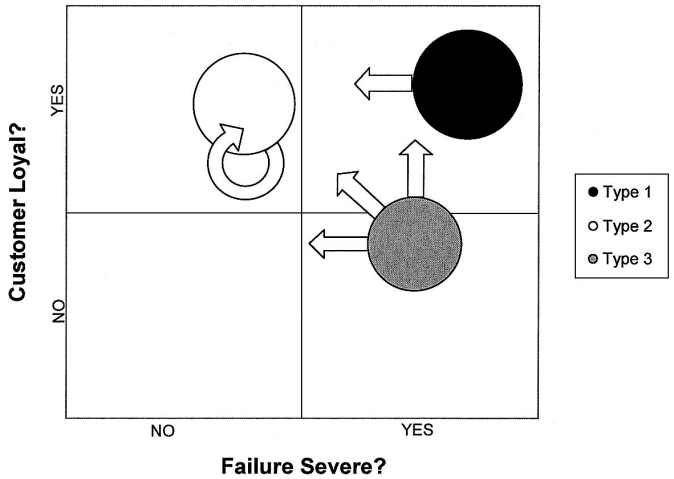

Figure 6 – Different profiles of possible failures (Craighead et al., 2004)

the recovery strategy should attempt to reduce the perceived negative effects (loss of time, money and disappointment) of the incident maintaining customer loyalty. Failure type 2 consists of loyal customers with non-severe problems for whom it is suggested a maintenance strategy. It means that careful attention should be paid so as not to worsen the situation. Finally failure type 3 provides the most interesting potential benefit for providers, indeed in that case members are non-loyal customers with severe problems, as a consequence the strategy has several alternatives to improve overall relationship both reducing severity and developing loyalty.

Several authors considered failures and tried to classify them. A. K. Smith et al. in 1999 connected failure context, described though two dimensions (type of failure - outcome or process and magnitude of failure - from very severe to light), to the suitable strategies that lead to higher customer satisfaction, demonstrating a moderating role of those dimensions on recovery actions' effects on perceived justice. Cheng-Tsang e Ching-Shu in 2009 studied service failures and recoveries in restaurants and matched each of the 17 typical failures with its more effective recovery action, providing useful applicable insights about both process analysis and recovery choices. Other authors focused on identifying failure typologies: Johnston (1995) found four categories depending on the cause of the problem that were service system, physical goods, customers' body failure and customers making a mistake. Bitner et al. (1990) classified incidents in four groups referring to the particular origin of the failure: employee responses to customer needs, such as particular desires and tolerable customer error; employees' responses to service failures, such as unavailable or slow service; employee scarce reactivity, in terms of attention paid to the customer and performance under adverse circumstances; problem customers such as lack of co-operation unkind answers or behavioural hostility. Armistead et al. (1995) identified three types of service failures: service provider error, customer error, associated organization error (when third parties out of the transaction create problems). Lewis and Spyrakopoulos (2001) analysed service failures in banks pointing out five categories of failures: banking procedures: (bureaucracy and slow banking, failure to keep customers fully aware of their banking situation); mistakes; employee behaviour and training (employees ignorant of certain banking procedures, employees unwilling or slow to help the customer); functional/technical failures (long and/or unorganised queues, ATMs out of order, limited network of ATMs, limited network of branches, incomprehensible statements of accounts terms of loans and other services); actions or omissions of the bank that are against the sense of fair trade. Usually failures' analysis are connected to recovery interventions, that represent another issue extensively investigated in literature. In the same paper Lewis and Spyrakopoulos found the following recovery strategies: corrections (correcting the problem, eliminating the cause of the dissatisfaction); exceptional treatment of the aggrieved customers; explanations, apologies

(from an employee or a manager); compensation (monetary or other); re-direction of the complaint to another employee or higher level of management; nothing. Those options are evaluated in terms of efficacy after particular failure, in order to give practical indication about how to behave when problems occur. Kelley et al. in 1993 found through the critical incident technique applied in retail business seven recovery strategies: "discount - a means of compensating the customer for the problems and inconvenience caused by the failure; correction - courteously correcting the situation without doing anything more; management/employee intervention - the involvement of management or another employee to help resolve the situation; correction plus - providing additional compensation to the customer, such as free merchandise or upgrades; replacement - the replacement of a defective item; apology; refund - the provision of a full refund for the item" (Johnston and Fern, 1999). Johnston and Michel in 2008 summarized previous knowledge about recovery activities through seven points: acknowledgement, declare that a problem has occurred; empathy, adopting the customer point of view to understand the problem; apology, demonstrating sorrow to the customer; own the problem, taking responsibility of customer satisfaction; fix the problem, correcting errors; provide assurance, give certainty that the failure won't occur again; provide compensation, providing a refund, and/or a token and/or compensation, depending on the severity of the problem. Recovery options are quite consolidated in literature and research work is focusing on their effectiveness depending on specific service context and failures.

These papers usually report useful indications and provide successful examples of real cases but don't analyse operational impacts or activities necessary to implement such directions. So, many "what" managerial suggestions have been largely provided, leaving partially unexplored the equally important "how" instructions. Although the importance of service recovery has been largely recognized and studied in the "marketing stream", even as a key component in order to put the service-profit chain to work (Heskett et al., 1994), there seems to be not adequate investigation about how to implement it at the operational level. The "operations-oriented stream", presented in the following, deals with those issues that concern mostly how recovery may be delivered and its implications for organizations.

1.5.3 – The operations-oriented stream

This strand is complementary to the "marketing-oriented" one and refers to those issues that encompass the execution aspects of service recovery dealing with organizational and operational challenges. Papers belonging to this stream investigate criticalities of recovery delivery mainly from the provider point of view, trying to point out insights about recovery implementation. Its production is smaller than the marketing one, and stems primarily from operations management

field, which is deployed in very different topics. The research of Berry and Parasuraman (1991) suggested outcome is a primary driver of consumer evaluations during the initial service encounter, whereas process is the main driver during service recovery, and Spreng et al. (1995, p. 16) affirmed that "whereas the original service outcome attributes have a strong effect on consumers during their initial experience, the service recovery process dimensions may assume great importance when consumers have a complaint". Despite that, little attention has been paid to companies' difficulties in carrying out proficient recoveries, and operational literature, except for a couple of solid constructs, is quite dispersed in granular punctual contribution lacking cohesion. They are presented in the following, starting from the most consolidated topic concerning process failure analysis.

Tracking main process defects, trying to capitalise errors through improving actions, is a key operational topic associated with service recovery. Several techniques are illustrated in literature to identify relevant causes of dissatisfaction: complaints analysis, that originates from the spontaneous manifestation of the customer and is costless and relevant for the complainant, but can exploit poor datasets (only few customers complain) and could omit important explaining information leading to strong bias (Kendall and Russ, 1975); critical incident technique, that concentrates on the proactive and systematic investigation of customer experiences, which are deemed particularly remarkable for positive or negative effects, allowing deeper understanding of problems but being time consuming and difficult to summarize, due to the complexity of obtaining standardized responses (Strauss, 1993); sequential incident technique, that combines blueprinting practices and critical incidents techniques, and it is based on continuous mapping and monitoring of service production and consumption processed (Stauss and Weinlich, 1997), using a "story-telling" component by customers that permits to deepen particular significant episodes. Tracking failure data has been generally recognized as a cardinal activity for process improvement, that is strictly connected with service recovery outcomes (Hart et al., 1990; Tax and Brown, 1998; Johnston and Michel, 2008)

Few other authors coped with process dimensions of service recovery using different perspectives, aiming at rationalising organizational decisions that have to be made to implement recovery actions. Davidow in 2003 focused on how the organizational response to customer complaints affects the post-complaint behaviour, and proposed a model that describes organizational responses through six separate dimensions (timeliness, facilitation, redress, apology, credibility, and attentiveness), in order to inquire each of them and point out their effect on customer satisfaction. Addressing customer satisfaction is a pivotal "must" of service recovery research, as it has been demonstrated that satisfied customers are easier to retain (Fornell, 1992; Sabharwal et al., 2010). Indeed the marketing outcomes of service recovery have been largely deepened by scholars, who have rather neglected the operational arena. E Cunha et al. in 2009

asserted that “researchers have mainly concentrated on the outcomes of the process [..] but paid less attention to the process itself”, and contributed analysing the role of improvisation in recovery process.

They recognized peculiar characteristics of improvisation in terms of intentionality, meaning that it is the result of deliberate efforts on behalf of the organization, extemporaneity, as it cannot be planned, contemporaneity, since improvisation occurs during action, meaning that organizational members do not stop to think about what the best response to a problem could be. They argued that improvisation should be integrated as an opportunity for effective processes, whereby spontaneity creativity and solving potential of employees may emerge and lead to better recovery performances. This way the role of operators itself is enriched by adding to rules, that maintain positive contribution of guidelines, the responsibility to assure quality whatever problem occurs. This research supported also the role of empowerment as a process tool to release personnel commitment to correct errors against the mere use of standardized non-motivating systems. Actually people seem to be a very important factor to manage in recovery processes, as they represent the physical aspect of the firm and are vital for relationship building (Rust et al., 1996). Rod and Ashill in 2009 analysed the influence of job resourcefulness, which is the enduring disposition to garner scarce resources and overcome obstacles in the pursuit of job-related goals, on service recovery performance in a call-centre setting. In particular they found that availability of resources to support the task execution leads to the reduction of emotional exhaustion, which has negative consequences on recovery performances. Besides, job resourcefulness exerts a significant negative effect on emotional exhaustion, and positive on recovery performances. In other words, in order to achieve better performances, managers should consider the enhancing role of resources. They are really various, from training and rewarding policies, to support frontline employees in being more engaged and motivated during service recovery: effective and efficient operations are essential to pursue that goal. In addition, positive impacts of staff satisfaction on customer satisfaction have been confirmed also aside the service recovery arena (Maddern et al., 2007). Some synergies among employees processes and external actors (i.e. customers) emerge, and some authors underlined risky possible trade-offs that stem from different needs around the same failure phenomenon.

Johnston and Michel in 2008 studied the triple nature of service recovery, that is customer recovery, process recovery and employee recovery. Under the first category they comprised most of the constructs that have been described in the aforementioned marketing stream of service recovery, such as the impact of recovery on loyalty, satisfaction and profit, and those contributions that referred to possible actions to take in order to recover, such as acknowledgement, empathy, apology, own the problem, fix the problem, provide assurance and compensate, which were

considered as borderline in this review classification, dealing with applicative suggestions. The second category regards process recovery, which is one of the under-researched areas of service recovery, as Simons (2004, p. 11) affirmed: "However, while service recovery has anecdotal support, the literature has so far not offered management tools for analytically evaluating a system's needs for recovery measures or assessing their potential benefit". Process recovery comprehends several topics: failure types and impacts, profiling service failures and deriving coherent recoveries, linking operational factors with customer consequences and financial outcomes, process improvement with associated collection analysis and interpretation of data (Cook et al. 2002; Miller et al., 2000; Zhu et al.,2004; Michel, 2001). The third category, employee recovery, deals with the initiatives taken by firms to protect employees from bad feelings and stress that arise working with aggrieved annoyed customers, providing them with support and all necessary resources and rewarding that are necessary to let them act with competence and courtesy. The authors linked the three kinds of recovery with the financial performance of the firm and found that the most financially relevant practices are process recovery and employee recovery, that are paradoxically under-researched when compared to customer recovery. That is, in order to make the customer be profitable in the long-run, firms should strive in continuous improvement, and training and motivation of the employees, minimizing their turnover and stimulating their work towards a sustainable quality commitment. Another research (Michel et al., 2009) caught the triple nature of service recovery and recalled the three aforementioned perspectives, referring to "operations recovery" as the orientation that "focuses on production and delivery processes and how to learn from failures to improve processes so as to prevent failures in the future, (deals with) internal and procedural and technology factors, dominates operations function's approach to recovery, (and is) emphasized in the OM research literature" (p. 255).

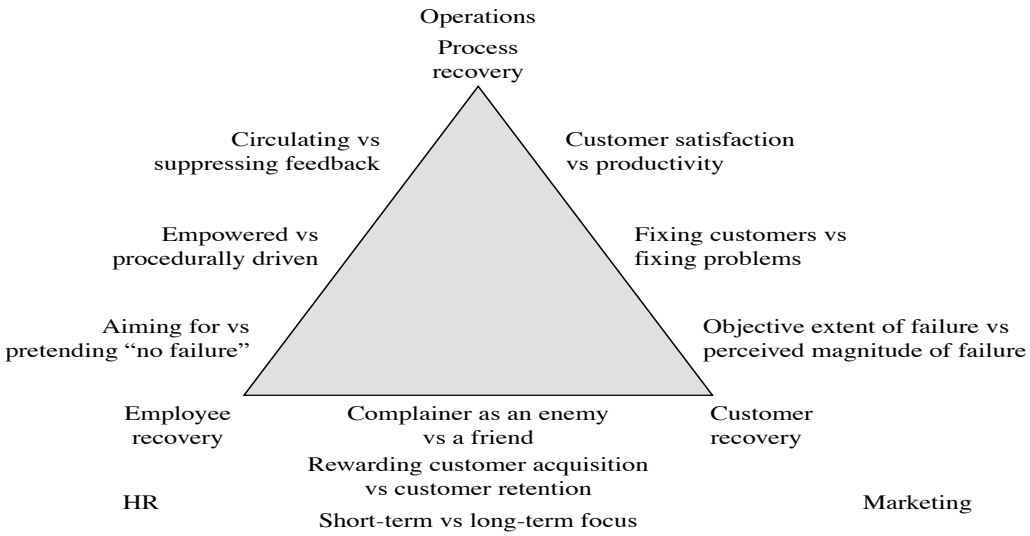

Figure 7 – Three tensions between customer employee and process recovery (Michel et al., 2009)

They analysed the tensions among the three outcomes of service recovery, concentrating of those trade-offs that make the contextual fulfilment of different needs very difficult to achieve. In particular, a triangle (Figure 7) was chosen to represent the different sides and the problematic contraposition of contrasting objectives that characterized each couple.

Process recovery and employee recovery present interesting challenges in terms of feedbacks use, which should be a pivotal practice for process improvement but is in reality under-considered, as personnel tend to interpret every error as an isolated incident that must be corrected (Tax and Brown, 1998) and meaningless to report to managers. Furthermore process perspective is usually prescriptive and based on clear procedures that explain specifically what has to be done, but this way employees become mere operative executors and may fall into frustration and resignation really soon, while empowerment would exert a positive effect both on their motivation and consequently on performances. In addition processes want accuracy and zero-defects, but as humans are much more variable than machines it has to be taken into account that it is not suitable expecting "no failure", whereas it is much more reasonable aiming at zero-defects deliveries but preparing to effective recoveries (Schweikhart et al., 1993). On the other side some tensions emerged from the relation between customer and process recovery, which derives from the need to assure customer total satisfaction against the goal to maintain productivity and profitability. This tension deals with management of limited resources and efforts that could be invested in fixing customers or fixing problems depending on the firm priorities, from the perspective of measuring objectively failures' severity against the adoptions of a customer centric point of view. These dualities are the basis for many decisions that lead to resources' allocation, defining which performances are more important sacrificing somehow the others. The key role of processes is thus recognized and linked to other constraints that augment the complexity of recovery operations.

In addition, some authors investigated how particular components of recovery delivery may enhance process effectiveness, such as service guarantees, that formalize and systemize recovery steps conveying an image of proficiency and proactivity, and customer participation in co-creating service recovery, fostering procedural justice and complainants' immediate involvement (Dong et al., 2008, Lidén and Scalén, 2003). As it can be noticed, operational literature about service recovery is rather spotted and present dispersed contributions that catch several aspects, but don't address explicitly operational problems, leaving this way many open issues. Boshoff in 1997 interpreted recovery as another service defined by the questions: how should recovery take place? Who should recover? How quickly should recovery be delivered? It was argued that many options can be chosen for each question (e.g. apology, compensation, tangibles, correction, discount – employee, marketing manager, director – immediately, soon, later), and results supported that the

best process is characterized by a high level of atonement, a quick recovery and a person (whatever responsibility he has) who interacts with the customer. Despite an increasing attention paid by academics and practitioners to service recovery, many urgent topics haven't found adequate dissertation in literature, in particular about how firms organize resources, and there are few papers that specifically address operational questions. Miller et al. in 2000 tried to map a typical recovery process identifying different phases, and providing operational insights about constituent elements of this practice. These elements include: outcome measures related to customer satisfaction and retention; antecedents to successful/unsuccessful recovery; the phases of recovery; types of recovery activities; the delivery of service recovery. More in depth, three different recovery phases were found, represented in figure 8.

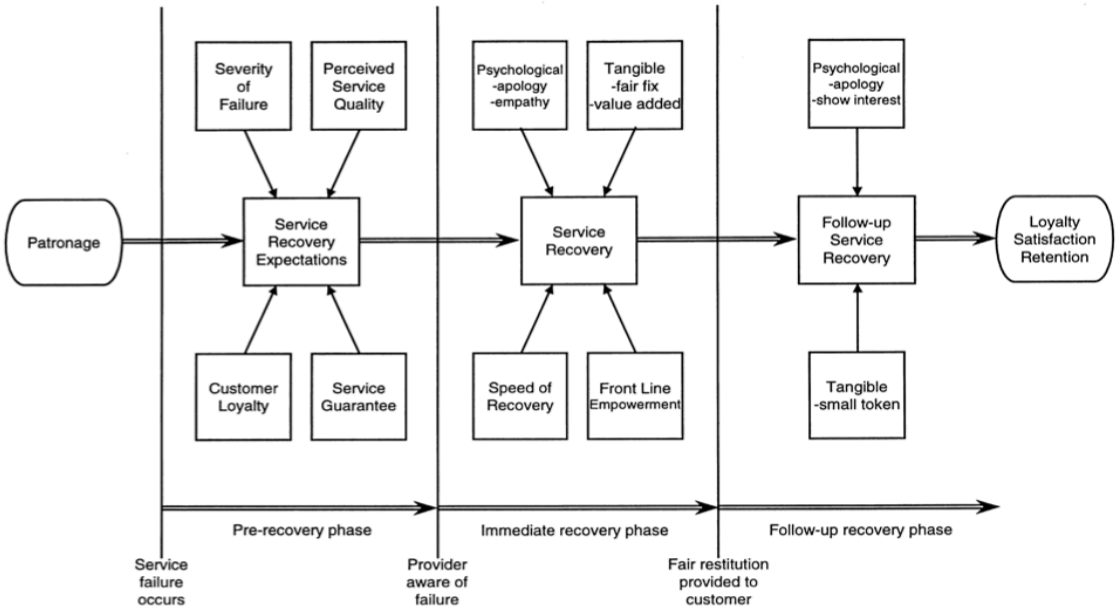

Figure 8 - A representation of service recovery process phases (Miller et al., 2000)

Pre-recovery phase starts with the service failure and concludes when the provider notices and becomes aware of the problem, and represents the time span of failure invisibility to the firm, during which the customer matures dissatisfaction and recovery expectations. The immediate recovery phase begins when the provider realizes that a failure has occurred and finishes when fair restitution has been give to the customer. This phase should be as short as possible (Hart et al., 1990), beginning immediately after the failure and concluding immediately later. Indeed, loyalty and satisfaction decline significantly as a result of slow response to customer complaints (Schweikhart et al., 1993; Spreng et al., 1995). Finally, follow up recovery phase starts after full recovery has been correctly delivered and deals with relational actions that aim at surprising the customer, showing particular attention to his inconvenience, using small tokens such as simple gifts or calls. The shortness of the first and the second phases as well as the presence of the follow up

seem to support the efficacy of recovery, whose activities are classified as psychological (empathizing and apologising) or tangible (compensation and atonement). This study supports the need of acting fast and empowering and training frontline employees, and raises the topic of "how" the failure is detected, reporting that when the firms anticipate customers facing the problem before any complaints have been presented, the retention rate is about 100%. In the end, the authors claimed that "timing, sequence and cost effectiveness of service recovery techniques are essential components of the process that are not well understood" (p. 398). Michel in 2001 studied service failures and recoveries with a process approach, using sequential incident technique that starts from asking customers to provide evaluations for each step they experienced in the process. The research shows the important effect of processes in moderating the main recovery variables, demonstrating their centrality for specific applications. In fact, different processes results in different satisfaction levels in case of failures, in different failure probability, different failure tolerance, different frequency distribution of failures' types, different effects of recovery paradox. The author moved the attention to the process, that becomes the pivotal unit of analysis for recovery decisions, identifying specific failures for banking industry processes': failure of employee in advising and consulting the customer, failure as a negative deviation from an expected process; failure in the personal interaction between front-line employee and customer; failure in documents (account statement, contract, password notification); failure based on verbal, written or electronic information; failure or error related to interest charges, expenses; failure related to ATM's, internet banking, banking cards; failure caused by a third party. In other words, in order to better understand recovery dynamics it is necessary to focus on specific processes rather than the entire service as a whole, this way operational considerations are more precise and may easily foster process improvement. In 2005 Simons and Kraus recalled the need of practical indications for resources management, in spite of the persuasion of service recovery importance they found no studies that dealt with resources allocation in service recovery processes. Basically, the authors suggested to carefully evaluate resources allocation so as to be coherent with firms' goals, maximizing overall system reliability or minimizing the percentage of dissatisfied customers. That is, in order to pursue strategic goals it is necessary to intervene at the operational level studying failure rates of service stages. Operations management literature about service recovery seems to present very different contributions without a sort of continuity or strict relationships between them. This way operational research presented so far appears quite spotted, it lacks cohesion and doesn't deepen organically specific aspects about how service recovery should be delivered. Despite many the operational gaps persist, some research has recently arisen around a well-defined set of constructs, that represent the conceptual core of this thesis and are presented in the following.

1.5.4 – Structural dimensions of service recovery systems

One of the most important contributions, that has inspired this thesis and has been analysed from different perspectives, is the identification of structural dimensions of service recovery systems. It stems from the realization that literature doesn't distinguish between service recovery activities or practices and the fundamental constituent parts or dimensions of working recovery systems. Actually they represent design characteristics of a recovery system, and have been elaborated and validate though a large survey that tested proposed items drawn from literature and anecdotal experience. The resulted dimensions may be used to make decisions about operational implementation of recovery processes, and are useful to explain and summarize the way in which the system is arranged. Smith et al. (2009) found seven relevant structural dimensions, supported by empirical investigation and literature rationales:

- formality, presence of clear rules, procedures, and codified activities that prescribe how to recover;
- decentralization, full empowerment of frontline personnel;
- comprehensiveness, be inclusive and exhaustive in studying the failure and searching adequate responses;
- accessibility, ease in contacting the provider and complaining;
- influence, capability of the system to adapt to specific needs out and cause customers participation;
- human intensity, training, rewarding and all investments in human resources;
- system intensity, the degree of learning and monitoring failure data in order to improve.

Measurement items have been tested and connected to each dimension, as reported in the following. Formality validated items were:

- the process of service recovery is formally documented
- written guidelines exist to control the recovery process
- policies and procedures govern the recovery process; decentralization items were:
- employees are expected to fix any problems they encounter when delivering the service
- it is the responsibility of employees to correct any mistakes made in the delivery process
- employees are empowered to rectify service failures
- employees are permitted to use their own judgment in solving problems; comprehensiveness items were:
- our organization attempts to be exhaustive in gathering information relevant to our options for fixing a service failure

- we try to consider all possibilities when deciding on our recovery actions after a failure has occurred
- all possible contingencies are examined during the recovery process; accessibility items were:
- our customers have a variety of ways by which they can report failures (e.g. internet, telephone, fax, in person)
- we provide the means whereby customers can voice their complaints
- it is easy for our customers to notify us about problems they encounter
- customers with service problems have many ways to inform of the failure; influence items were:
- the recovery process is often altered based on the input of the customer
- the organization allows customer input to determine how a mistake is corrected
- customers have a great deal of influence over how a failure is rectified
- organization allows customer input into how a failure is fixed; human intensity items were:
- employees are trained in how to deal with complaining customers
- employees are continually trained on how to correct mistakes that occur in the delivery process
- managers regularly communicate information about the benefits of service recovery to employees
- employees are recognized for outstanding recovery efforts; system intensity items were:
- a database is maintained for tracking and monitoring failures and recovery performance
- recovery performance is formally tracked
- failure data are gathered and monitored regularly
- costs associated with service recovery are tracked and analysed.

This work is the first contribution about service recovery that tries to catch both from literature and empirical evidence indications about how are organized recovery systems. This way some guidelines are provided about what elements should be taken into account in designing recovery systems, and represent a solid foundation for future research. In fact Smith and Karwan in 2010 exploited that research to define three empirical profiles of service recovery systems, based on differences on structural dimensions, utilization of recovery practices (basic and extra), recovery outcomes (external and capability improvement), performances (customer satisfaction and market performance), organizational size and organizational ownership. Three cluster were identified: recoverers, firms that better perform on all the structural dimensions and present higher levels of performances, recovery practices' utilization and outcomes, usually larger than firms of other groups and organized in branches; laggards, firms that don't pay much attention to recovery

practices and are actually the worst performers; followers, that occupy an intermediate position and give high attention to accessibility. Again Smith et al. in 2010 coped with operational themes in terms of technical systems (procedures, policies, authority structures) and human elements components, proposing that stronger socio-technical systems result in better recovery performances. They found that integrated recovery systems, with high-level recovery components (dimensions), are synergic with social systems and foster personnel self-efficacy and diminish avoidance behaviours, leading to an overall higher recovery performance and satisfaction also of employees. These studies witness how operational focus is important to sustain benefits of service recovery, providing indications that may be considered by managers when improving recovery systems through actions on specific dimensions. Further attention to dimensions role in determining characteristics of recovery systems comes from the work of Smith et al. (2012) that recalled the fundamental role of integrated systems. In particular the authors demonstrated that excelling recovery systems with high levels of implementation of the seven structural dimensions are expected to positively impact external outcomes, that are performances over the three perceived justices in terms of effectiveness (distributive), speed (procedural), employee empathy (interactional). On the other side, such systems seem to support also the internal improvement capability, that is the ability of the firm to adopt practical solutions reducing failure rates, attainable learning from failure data and exploiting previous experience. Once again the pivotal contribution of service recovery operations is recognized as cardinal for market performance achievement. A further study on service recovery operations was recently provided by Smith Nagy et al. (2012) that used the structural dimensions of service recovery systems in order to demonstrate the contingent nature of service recovery system structure. Based on the classification of service processes along two dimensions - “degree of customization” and “degree of labour intensity” - that identify four service categories, the authors demonstrated that structural dimensions of service recovery systems take different levels depending on the specific service process, that represent a significant contingency for operational implementation.

	Service process matrix quadrant			
Recovery system dimensions	Service factory (SF)	Service shop (SS)	Mass service (MS)	Professional service (PS)
P2: formality	High	Moderate	Moderate	Low
P3: decentralization	High	Moderate	Moderate	Low
P4: comprehensive	High	Moderate	Moderate	Low
P5: accessibility	Moderate	High	Low	Moderate
P6: influence	Low	Moderate	Moderate	High
P7: human intensity	High	Moderate	Moderate	Low
P8: system intensity	High	Moderate	Moderate	Low

Figure 9 – Different level of structural dimensions depending on service context (Smith Nagy et al., 2012)

Figure 9 represents the formulated propositions about dimensions' level in different service contexts, and a further hypothesis was proposed about the irrelevance of operating environment in determining recovery performances. The research provided partially support for most of the hypothesis, arguing that service environment may affect recovery dimensions' levels, and service types are thus important contingencies that have to be considered in order to fit specific context's characteristics through response variables (dimensions levels) and get good performance.

Even the description of the seven structural dimensions has been enriched as the research on them progressed, and some additional meanings emerged. Hereunder a more complete description is provided reporting all the items that have been associated to dimensions, considering the five papers by Smith et al. that deal with them:

- accessibility - ease in contacting the provider and manifest the complaint, provide open lines of communication to customer, having a variety of means of communication to be contacted by customers, means are provided by the organization and are easy to use, the customer may choose how to signal the problem, use technology solutions and provide the customer with clear indications about how to complain, enable the customer complaining behaviour to capture his voice;
- comprehensiveness - availability of a complete range of solutions to face failures, the extent to which attempts are made to be exhaustive or inclusive in evaluating all potential recovery activities in response to a failure, to have multiple strategic planning options, having broad knowledge of scenarios and potential solutions, considering all possible contingencies and possibilities in recovering, gathering all useful information, disposing of a range of solutions that are feasible, fair and understood, the capability to accommodating complex failure situations, provide a menu of possible recovery options from which to choose;
- decentralization – full empowerment to frontline personnel, employees have the responsibility and are expected to solve the problem they created, they have the power to rectify service failure using their on judgement, they have the authority to handle aggrieved customer in autonomy, giving the contact employee the possibility and permission to react immediately;
- formality - presence of clear norms that dictate recovery activities, explicit formal rules, procedures, codified activities, prescriptions about how to recover, use of high-quality policies and standard routines, presence of official documentation and written guidelines;
- human intensity - training, evaluations and all investments in human resources, employees are trained in how to deal with complaints, employees are informed about the importance of dealing well with complaints and queries, performing employees are recognized for their results, the extent of organizational resources dedicated to employees training and evaluation;

- influence - the capability of the system to adapt to specific needs out of usual routines or procedures, the ability of the customer to exert a control over the handling of a failure, the customer influences what the recovery looks like and how it is delivered, customer input is required and accepted in determining the recovery, use of customize solutions, give the customers the possibility to have voice in recovery, the degree in which the system may be altered to match the needs of the customer, the level of co-production of recovery;
- system intensity - the degree of learning and monitoring failure data in order to improve, the amount of resources dedicated to system improvement, the magnitude of resources committed to tracking and monitoring service failures and recovery efforts, use of formal databases, formal tracking of recovery performances, failure data are gathered stored and monitored regularly, the frequency and richness of the evaluation of the system effectiveness, the capability to develop feedback loops of learning and improvement.

The dimensions have assumed a multifaceted meaning that involves several aspects of the organization, representing cardinal concepts of the design and implementation of recovery systems, which require further investigation in terms of their managerial use.

All in all, the work by Smith et al. during the last four years seems to be the most relevant structured contribution in operations management discipline about service recovery. Actually, it is the only case found in operational literature where five significant papers have arisen around the same core constructs, which are the seven structural dimensions of service recovery. Since they are extensively used in the analysis part of this thesis, it is necessary to specific a fundamental aspect of these dimensions. Indeed, a crucial point of the seven structural dimensions of service recovery systems is that the word “service” could be omitted. In fact, there are no items that relate to specific service industries or that use terminology, constructs or concepts that are inapplicable to other sectors. For instance, formality dimension refers to use of procedures and written guidelines, that could be present and used in many settings, from a post office, to an health organization or and even a quality division of a car manufacturer. The same is for human intensity, that addresses training and rewarding practices of recovery personnel, and obviously is independent from the sector in its definition (while may vary in its implementation). Analogue reasoning is valid for all the dimensions, whose power is actually the generalizability not only in terms of service recovery systems, but regarding recovery systems in general. Their definition is accurate but not context dependent, and all the used descriptive elements are referable also to manufacturing contexts, under the condition that there is not just mere product recovery, whose definition will be provided in the following paragraphs. Put differently, the codified dimensions, thanks to their generalizability, are appropriate to describe all the recovery systems - independently on the business sector - that deal

with the commercial relationship with the customer, when companies deem recovery activities, to solve product-service failures, pivotal for customer satisfaction and business success. All these considerations are largely exploited in the design and execution of this research.

This thesis deepens the operational meaning of the proposed dimensions (according to gaps emerged in literature), both observing how they are implemented and considered by manager, and exploring the contingent effect of some factors, presented in the following paragraphs.

1.5.5 – Concluding remarks

Some other topics are treated by contributions about service recovery, mainly dealing with psychological or cultural themes that deepen personnel or customer behaviour paying attention to mental processes or personal antecedents (Wong, 2004; Mattila and Patterson, 2004; Kanousi, 2005). They represent another strand that focuses on people feelings and behaviours, not necessarily with a commercial business perspective. They are out of the scope of this thesis, which is more operations-oriented, and are this way not considered in the present review.

To end with, it is possible to map the literature production about service recovery through the main dimension introduced at the beginning of the review, that deals with the perspective and point of view adopted by researchers. In other words it represents papers' focus in terms of customer-marketing orientation or internal-operations one. Furthermore, an intermediate relevant area is identified between customer-centric and firm-centric streams. This dimension of analysis catches the typology of constructs and propositions that are developed, depending on their main research goal belonging to marketing domain or operations management. Every analysed paper has been categorized along this dimension by assigning it to specific stream, determining whether it was more customer-centric or firm-centric. For instance, papers concerning the empowerment theme have been classified in the "marketing stream" as most of them analyses its role in determining the success of recovery, understanding whether this practice is relevant for customer satisfaction and to which extent. Similarly, managerial indications and improvement suggestions are present in the intermediate category as they often rationalize anecdotal success stories providing some "take away", that connect operational aspects to marketing benefits in an overall comprehensive guidelines list. Trying to classify papers in such categories is really difficult since some of them have particular unique perspectives and should be treated as a single contribution. Despite this, the author argues that the adopted dimensions would lead to a meaningful understanding of literature production about service recovery, coherently with the objectives of the thesis and other reviews present in literature (Krishna et al., 2011). This way, a synthetic matrix has been created in order to illustrate service recovery production, grouped by constructs and analysed along the

aforementioned dimension. The result is represented in table 8, where every cell is filled with the most relevant issues that summarise papers assigned to that specific stream.

Cultural issues	Marketing-oriented	Intermediate	Operations-oriented
Out of scope	• Service recovery Paradox • Commercial and marketing benefits • Justice theory and its implications • Empowerment and HR management effects on customer satisfaction	• Managerial indications • Recovery options strategies • Analysis of failure types • Improvement suggestions	• Defects tracking • Dispersed contributions • Recovery systems components

Table 8 – A summarizing framework of service recovery literature

As it could be expected and has been illustrated during the literature review, contributions that deal with the "marketing-oriented" perspective of the recovery theme are more customer-oriented, on the contrary papers "operations-oriented" are more firm-centric, with an intermediate group that appears equally distributed. It is very important to underline that the number of papers in the marketing-oriented stream is much greater than the totality of those belonging to the other groups. This is due essentially to the origin of service recovery theme that stems directly form service marketing and quality production, as many researchers have confirmed. Although the number of relevant topics seem to be equally distributed over the cells of the matrix, there are decades of papers for each of those in the "marketing dimension", that strongly consolidate all the presented and discussed topics, while few researches are available for "operations dimension" ones (those presented in this thesis represent the entire population, whereas just a small significant sample has been considered for marketing literature), and are rather scattered, lacking in continuity and coherence (Smith and Karwan, 2010; Johnston and Michel, 2008; Smith Karwan et al., 2012).

All in all, the following conclusions may be drawn from the literature review:

- service recovery is still an interesting research, stimulating increasing attention by scholars;
- recovery theme is largely interpreted as a branch of service quality that

- may lead to remarkable commercial and strategic benefits in terms of customer satisfaction, which underpins loyalty, repurchase intention and positive word of mouth;
- literature about this theme is mainly focused on marketing side that deepens what the key success variables to consider are, so as to foster customer satisfaction;
- operational issues are emerging in the last years affirming the need of linking "what" findings to "how" suggestions so as to explore implementation aspects of recovery strategy;
- one of the core contributions to operational investigation of service recovery is the research about the structural dimensions of recovery systems, that offers solid foundations for operational insights and exploration.

These considerations will be integrated in the following paragraph that presents the research questions.

1.6 - Research questions

This paragraph highlights the literature gaps that consequently let the author formulate coherent research questions. Before focusing on literature gaps, it is important to notice the substantial extent of scientific production about service recovery, which continues to present a growing trend and witnesses the relevance that this theme occupies in academic research. On the other hand not only has the scientific literature noticed the importance of the "recovery theme", but the business world has done as well. For example, Bain (consulting organization) reports the recent cases of Dell and JetBlue, the former estimating that its customer service teams can convert a detractor to a promoter more than the 30% of times, the latter using real-time Twitter customer service recovery, that received much attention for its adept handling of a December's problematic lasting snowfall. JetBlue effectively converted stranded passengers from detractors to promoters by quickly rebooking them on new flights. And these successful recovery efforts were witnessed by JetBlue's 1.6 million Twitter followers. JetBlue estimates that its customer service recovery over Twitter is much more productive than when delivered over alternative channels' (Barry et al., 2011). Besides, a Mc Kinsey survey (Nunez and Yulinsky, 2005) showed how service recovery processes are key in banking, highlighting that customers having a negative experience during the previous 24 months kept 4% less with the bank than did those who experienced positive moments of truth. Other cases are represented by Delta Air Lines, which recently has communicated an update of its compensation policy to be more responsive to damaged customers. Again, specific sector studies for credit unions have shown that, for every 100 dissatisfied members, four will formally complain, 91 will tell 8–10 others, and five will tell 20 others, turning into over 800 people receiving a negative view of the organization. Other investigations demonstrated that good recoveries can lead to augmented

spending behaviour, while a poor recovery causes a contraction (Schoenherr, 2009; Temkin, 2012). Furthermore, customer satisfaction is strictly monitored by specialised organizations, which provide insights into sectorial situation, providing evidence that service quality is becoming more difficult to attain. As reported by Michel et al. (2009, p. 254): "according to data provided by the American Customer Satisfaction Index, the overall satisfaction score for US companies moved from 74.8 in 1994 to 74.4 in 2006 (ACSI, 2007). In some industries, customer satisfaction has significantly decreased (O'Shea, 2007); for example, complaints filed with the Association of German Banks (Bundesverband Deutscher Banken) increased from 1,510 in 1993 to 4,136 in 2006 (BDV, 2007). A recent study involving 4,000 respondents from nearly 600 US companies concludes that 56 per cent believe their companies are slow to respond to and fix recurring problems (Gross et al., 2007), and 41 per cent of respondents to a 2006 survey of Austrian and German firms indicate they have no complaint handling process in place (Bruntrup, 2006). In the UK, various organizations (e.g. holiday providers, train companies, police services) report complaint increases of 8-40 per cent per year (Johnston and Clark, 2008). Although certainly some companies and industries have improved, the more widespread perception holds that modern "service stinks" (Brady, 2000)". In light of this, there're no doubts about the importance of service recovery theme both for managers and academics. However, two different important gaps emerge, in terms of operational insights and contingencies factors, that are presented in the following.

1.6.1 – Operational gap

Referring to the literature analysis matrix proposed above, the most relevant gap has been identified in the operations firm-centric cell, that is the area of service recovery that deals with operations configuration adopting companies' perspective. As far as the first gap is concerned, numerous contributions over the last decade have pointed out the need to reinforce operational understanding of service recovery, demonstrating how, despite its importance, it has been quite neglected. In 1999 Johnston observed that "much organizational practice in the area of complaints and recovery has regressed into mere marketing ploys" (p. 115) and then, in 2005, reaffirmed that "research in the area of service guarantees, complaints and in particular service recovery has been prolific, though with limited focus on using them for operational improvement" (p. 1299). These quotations are evident examples that confirm the perception of the huge attention that service recovery has been receiving, but also point out the limited focus on operations management issues that, have marginally considered. In 2000 Miller et al. stressed the need to fully understand the entire recovery process, and in this vein Davidow (2003) asserted that organizations need adequate infrastructures to address service recovery and that research should better understand the multidimensional

complexity of the complaint handling process. Craighead et al. (2004) hoped for more studies that examine segmenting or profiling variables also outside the marketing literature, as "it is important that operations management researchers take a long look at the implications and meaningfulness of these variables in the operational context of service recovery" (p. 318), again in 2005 Simons and Kraus affirmed that research is still needed to provide prescriptive approaches addressing the timing, sequence and cost-effectiveness of service recovery techniques. It is quite evident that the same authors that dealt with process issues of service recovery are those who noticed the scarcity of literature about them and first tried to fill some gaps. Process aspects of service recovery were thus identified as an under-researched important area during the 2000s, with few contributions that coped with particular issues but without a sort of continuity or theoretical interrelation. Indeed at the end of the decade, in 2009, Sousa and Voss advised that most of the research dedicated to the theme of SFR's (Service Failure and Recovery) impact on loyalty has appeared in research outlets outside the operations management field, and mainly in the marketing and general service management fields, supporting that during an entire decade the research about service recovery has maintained a marketing-oriented focus, without concentrating, as it had been suggested, on process/operational issues. The research executed by Smith Karwan and Markland addressed operational themes in 2009, dealing with structural dimensions of service recovery systems and exploiting this construct using different perspectives. Despite their work there has been a continue call for operations management researches about service recovery, as it is clearly indicated in their first milestone paper (2009, p. 166): "The majority of research on service recovery has been reported in the marketing literature with the goal of more fully understanding customer reactions to failures and recovery practices. [..] A perspective that has seen considerably less coverage, despite its clear significance, is an understanding of how organizations actually organize the systems from which recoveries may be enacted". The same gap was identified in 2010 by Smith Fox and Ramirez who precisely expressed the large prevalence of non-operational contributions, that deeply define "what" the antecedents and the outcomes of service recovery are, but don't provide "how" investigations that explore implementation issues. Quoting from their paper (2010, p. 440): "several notable works investigate the positive effects of service recovery on satisfaction, retention, and loyalty (e.g., Tax, Brown and Chandrashekaran, 1998). Extant research, however, falls short of providing prescriptions that can be implemented at both the organizational and the individual levels to ensure effective service recovery and positively affect firm-wide performance. More specifically, service recovery research indicates what outcomes are desirable, such as speed of recovery and feelings of equity, but does not yet effectively suggest what mechanisms lead to these outcomes". These clear words are the summary of the core gap that has been found through the literature

review, and that finds adequate support in several scientific contributions. In 2012 Smith et al. confirmed that "less frequently scrutinized is the way in which organizations systemically structure their recovery efforts to ensure that failures are corrected. In fact, it has become increasingly apparent that there is a need to better understand how managers might best synthesize studies of best practice". In particular, some authors focused on the seven structural dimensions of service recovery systems, pointing out their role in contributing to overall recovery performance, evidencing their beneficial effects also in terms of socio-technical aspects of recovery systems, highlighting how different recoverers profiles are identifiable through their analysis, and showing how some possible contingency factors may affect their implementation. Despite this, there are no clear contributions that explicit the operative meaning of these dimensions and the managerial challenges of their application. This way, the first research gap is defined: the thesis investigates how recovery operations are organized highlighting the main decisional variables and factors that are considered by managers, in order to deeply understand the operational constituents of recovery strategies' implementation and execution. Such an investigation, according to the most relevant contributions in operations management field, deepens the understanding of recovery systems structural dimensions introduced by Smith et al. by studying their implementation at the very operational level. Indeed, the same Smith et al. (2009) called for a more profound investigation of the meaning of their dimensions, and some recent researches have contributed in completing their meaning (Santos-Vijande et al., 2013). Thus, the research aims at finding the operational constituents of recovery operations that are addressed by practitioners in decision making processes, that are second-level categories stemmed from recovery dimensions, but more relevant for understanding the recovery design and execution challenges faced by practitioners.

1.6.2 – Contingency theory

Despite the vast literature about service recovery, operational knowledge still presents relevant gaps. In fact, since the beginning of this topic, findings have maintained a sort of universal validity approach, and just recently a more mature context-focused perspective has emerged. Indeed, as research advances and deeper understandings of phenomena are achieved, universal principles require discussion and insights, and several factors – contingencies – emerge to affect the hypothesized relationships and call for appropriate investigation (Sousa and Voss, 2002; Ketokivi and Schroeder, 2004). Regarding this, few contextual factors have been analysed in order to catch their effects on firms' recovery implementation, introducing this way some contingencies in the service recovery operational arena (Smith and Karwan, 2010; Smith et al. in 2012). This point is one of the central topics of this research, and represents an important theoretical framework used to

design the case study selection criteria and analysis. Before entering the specific illustration of the present work, it is necessary to introduce the main concepts of the contingency theory.

Basically, contingency theory states that organizations with different characteristics on particular factors adopt different strategies (make different decisions) to get high performances. These factors represent the contingencies, variables that have to be considered to coherently implement winning solutions (Donaldson, 2001). Put differently, companies with diverse characteristics on the contingent factors will achieve comparable high performances implementing different strategies, according to the principles of adaptation and equifinality (Sousa and Voss, 2008; Zeithaml et al., 1988). Adaptation is a key concept, that refers to the capability of the firm to modify its responses in light of particular stimulations or characteristics of the context in which it operates. These contingent aspects may consist of really different factors, from competitors' strategies to environmental disasters, from organizational structure to national culture. Adaptation is fundamental together with equifinality in describing the core of contingency theory, as it deals with the capability of firms with different features to reach comparable high performances. In other words, two companies with substantial differences on the contingencies factors (could be size, available infrastructures, business sector, etc.) attain good results using different responses. That is, if there are some variables that make firms adopt different strategies to achieve high performances, they are referred as contingency variables (or factors), and they are relevant for managerial decisions. This theory implies that firms interact with context in a dynamic evolution, without implementing static universal doctrines (Scott, 2003).

The contingency approach has received remarkable attention in manufacturing operations management, exploring contextual factors such as firm size (Cagliano et al., 2001; Shah and Ward, 2003), national context and culture (Sila, 2007), industry (Lai and Cheng, 2003; Ahmad and Schroeder, 2003), market growth and complexity (Filippini et al., 1996). Service operations management has used it too, studying service control systems' contingencies of process type and life cycle (Brignall, 1997), proposing that service volume-variety are relevant contingencies for implementation of service TQM (Silvestro, 2001), finding that design of back office and front office tasks is dependent on the distinction between contact/non-contact activities (Zomerdijk and de Vries, 2007), arguing that service operations design is contingent on the service concept and customization (Ponsignon et al., 2011).

Since recovery practices have been considered within the service management area, the same evolution from "universal truths" to context-dependent indications has occurred (Hoffman and Kelley, 2000), as a result of research maturity that confirmed that not all recovery approaches may be effective to face all various failure situations (Blodgett et al., 1997; Tax et al., 1998). Indeed,

service recovery, initially studied just as a convenient practice to avoid switching behaviours, has gained much importance becoming one of the long-term service strategy pillars (Santos-Vijande et al., 2013). Consequently, scholars have deepened its investigation to provide specific applicable findings for practitioners, wondering whether and which context variables could be relevant in determining recovery practices effectiveness (Goodwin and Ross, 1992). Sundaram et al. in 1997 explored the contingent role of service consumption experience in affecting customer satisfaction with restaurants service recovery strategies, whereas Hoffman and Kelly (2000) found that distributive and interactional justice importance is contingent on six factors relating to the service encounter and the kind of relationship, moreover Krishna et al. (2011) proposed that recovery paradox effectiveness is contingent on six customer-based variables.

Despite some work has been done to explore contingency factors relevant for service recovery effectiveness, it has basically been neglected by operational research, where just a few researches has adopted it around the 7 structural dimensions introduced by Smith et al. in 2009. Indeed, their implementation has been related to contingencies such as customer contact/customization and degree of labour intensity, which identify the service environment (factory, shop, mass, professional) (Smith, Nagy et al., 2012). However, partial support for the contingent impact was found, and some open issues endure. Furthermore, organizational size and organizational ownership have been studied as potential contingencies. Size has been linked to availability of resources, professionalism and long-term vision, whereas organizational ownership has been operationalized in terms of monosite/multisite locations and headquarter/branches-francises organization: both the variables appeared significant in characterizing different profiles of recovery systems (Smith and Karwan, 2010). More in depth, a peripheral organization has been found more prone to learn from errors and quicker to adapt to customer needs, whereas larger firms are characterized by greater amount of resources invested in system improvement and efforts. Despite these works, significant gaps are still present about the contingencies of recovery implementation, and the same Smith and Karwan (2010, p. 121) required “more detailed study and tight comparisons across divergent contingency variables”.

In particular, staying at service recovery literature, two specific contingencies seem to deserve more attention, the business sector and the organizational configuration, that are illustrated in the following paragraphs and represent the contingency factors investigated in this thesis.

1.6.3 – Business sector

An important gap of the literature comes from the context – specifically the business sector – of application of service recovery researches. The totality of literature analyses recovery systems in

typical service settings, with a relevant part of studies from financial sector, restaurants, hotels, transportation, telecommunication, healthcare, retail, e-services and personal services (hairdresser, leisure etc.). An interesting cluster of researches is emerging transversally to the previous macro classification and seems to focus mostly on analysing service recovery within contexts with homogenous business sector characteristics. Actually business sector is crucial to propose coherent managerial actions, and several papers adopt a particular business scope in order to attain extremely applicable findings. This way, as research has progressed, it has become more context-focused, tending to limit its findings to a particular setting, where its validity and reliability are higher. Some examples are the paper by Puga and Lopes Pereira (2003), that analyses service recovery at a financial institution, the study of service failures and recoveries in Taiwan restaurants by Chen-Tsang and Ching-Shu (2009), the investigation of service recovery effects on loyalty and customer satisfaction in an airline setting by Yu-Wei Chang and Yu-Hern Chang (2010), or the examination of perceived justice risk and customer value run by Hong-Sheng Chang and Han-Liang Hsiao in the hotel industry (2008); in addition these contributions address the main service sectors that have been mostly studied in literature. Besides, De Ruyter and Wetzels (2000) highlighted the importance of business context on service recovery decisions, demonstrating how different service settings may affect recovery actions effectiveness. Many scholars actually deal with service recovery in specific settings, such as hotels, retail, airlines arguing that different settings deeply impact on recovery findings due to specific consumers' customs, affirming that "each market niche must develop a unique recovery strategy" (Chang et Hsiao, 2008, p. 527). The importance of the business environment for service recovery implications is largely supported, as customers have different expectations depending on the content of the transaction. Many researchers deepened the influence of business context on service recovery characteristics, and pointed out that the value of recovery strategies is contingent upon the context in which service firms operate (Mattila, 2001). Supporting this, recent studies has confirmed the need to deeply consider business context, as the best recovery performance is achieved if system components are coherent with the contingent environment in which the firm operates (Smith Nagy et al., 2012). Few years before another study proposed some questions for future research: "another area of inquiry that can arise concerns issues surrounding system implementation and/or environmental effects. Specifically, do certain barriers exist to explain why more organizations are not using the optimal or best-practice system? What are the best ways to implement these systems? Do certain conditions or environmental characteristics lead an organization down a specific path?" (Smith and Karwan, 2010, p. 121). Again Smith Fox and Ramirez in the same year affirmed that future research might test recovery systems components' theory across different operating environments (e.g., high vs. low customer contact or

dynamic vs. static competitive landscapes) and organizational ownership features (e.g., wholly owned vs. franchised operations). They argued (p. 449) that "given the possibility that system effects may be context dependent, this would provide insights into how organizations can more effectively implement the various components of a service recovery system. [..] Finally, additional investigations could more closely examine marketing and operations' joint capacity to manage service recovery. Since the research presented suggests that integrated organizational efforts are effective at preventing and resolving service failures, explorations that study the effects of cross-functional or boundary-spanning activities in this process may prove worthwhile". Moreover, the importance of focusing on specific contexts has also been supported by several works about performance management systems, this is due to a largely shared assumption that performance measurement systems need to be tailored to the specific context, as they should reflect and be originated from the strategic objectives (Bourne et al., 2005; Kaplan and Norton, 1996). Other authors remarked that is more appropriate to study service contexts rather than just characterize the context as service or manufacturing, indeed this distinction may be overcome by the complexity and variety of modern services that are present also within manufacturers offering (Jääskeläinen, et al. 2012). A collection of service-specific contingency factors that affect performance measurement is presented in table 9, which summarises the key points that influence what-to-measure and how-to-measure decisions in designing service PMSs.

Contingency factor	*Impact on performance measurement*	*Reference*
Choosing what to measure		
Customer's involvement in service provision	Quality in front line services of facilities management is critical due to impacts on reputation and image	Tucker and Pitt, 2009
	Public service productivity need the perspective of quality perceived by customer	Linna *et al.* 2010
	The customer expectations of consultancy services must be identified	Deakins and Dillon, 2005
The role of intangible inputs	In classic services with high customer interaction personnel-related intangible inputs have a key role in service provision	Jääskeläinen (2010); Peng *et al.* (2007)
Varying level of demand	In services where capability to meet demand is vital (e.g. fire brigade), there is a need to measure the ability to response to varying demand in every circumstances	Carvalho *et al.* (2006); Klassen *et al.* (1998); Kloot (2009)
Designing measures		
Output complexity	Intangible output factors (e.g. welfare services) are difficult to measure and commensurate	Jääskeläinen and Lönnqvist (2011); Lettice *et al.* (2006)
	When output is difficult to capture, throughput-oriented measurement approach may be used instead	Deakins and Dillon (2005); Jansen (2004)
Focus on impacts	Difficulty of capturing the impacts (not only outputs), e.g. the use of output-proxies (duration and number of calls) is not enough in measuring performance of call centers	Brun and Siegel (2006); Dawson (2010); Deakins and Dillon (2005); Robinson and Morley (2006)
Repetitiveness of service process	In repetitive process throughput or output approaches are possible; in not repetitive process, output-oriented approach is proposed	Jansen (2004)

Table 9 – A summary of the most important contingency factors for service PMS (Jääskeläinen, et al. 2012)

The attention paid to the business context clearly emerge in literature, and it is characterized mainly by researches that deal with different *service* context.

More specifically, banks have largely been used as a fascinating and rich setting for studying service recovery practices. This is due both to some industry characteristics, specified in the case selection paragraph, and the importance that recovery has in these organizations. Indeed, banks operate in a fierce environment, where recent falls in customer satisfaction and loyalty have been accompanied by a tremendous competition (Puga Leal and Lopes Pereira, 2003) coming from the progressive commoditization of financial services (Gilbert and Scott, 2001). The last World Retail Banking report (Capgemini, 2013) stresses that about 10% of customers are likely to switch banks in the next six months, while more than 40% are not sure if they will stay with their bank in the next six months, with the quality of overall service being the primary factor that drives customers to leave their bank. In addition, a 2012 survey by EY pointed out that 25% of European customers had at some point changed their bank account, and an additional 11% has planned to do, with main drivers being crisis, price, service and products. In such a context, exploiting the beneficial effects of service recovery on loyalty and satisfaction is pivotal to protect firms from switching behaviours and support customer satisfaction. For these reasons, that catch both academic interest and practitioners relevance, banking has been identified as one of the business sector to be studied, as detailed in the case selection paragraph.

On the other side, there are rare contributions about service recovery in the manufacturing context which, in light of the overarching servitization phenomenon, is facing challenges in terms of new offering and service quality. Actually, nowadays there are many services delivered by manufacturing companies such as maintenance, performance guarantees, customer care, customised design, installation, transportation, and they are often strictly linked with the physical products, being “product services” (Mathieu, 2001). Staying at the definition of service that emerged before, it is necessary to adopt an extended interpretation of service recovery. In fact, as services are intended as performances played by humans, machines or systems that meet customer needs which can’t be satisfied by the sole design physical characteristics of products, manufacturers may deliver several services though their physical products as the servitization literature describes. In such a context, addressing service recovery means also facing the challenges of product-service failures, as the service is often designed in addition and complementarily to the product. For instance: what happens if maintenance is too slow? How can the negative consequences of an incorrect installation be avoided? How can mistakes in product-service delivery be recovered? What if products quality doesn’t respect the supply service level agreements? Therefore, according to the product–service continuum (Oliva and Kallenberg, 2003), in manufacturing context it is possible to refer to service

recovery as well, with a mix of physical and intangible aspects that concur to define a failure and its correction. This concept is really distinct from the product recovery. Indeed, in literature authors tend to classify product recovery as direct recovery (direct reuse and resale) or process recovery (repair, refurbish, remanufacturing, cannibalisation and recycling; (Kapetanopoulou and Tagaras, 2011; Thierry et al., 1995). This product recovery approach, which could be labelled as "physical approach", is out of the scope of this thesis, which wants to catch service (or product-service) elements that have little to do with direct or process recovery. It wouldn't appear inappropriate to refer to product-service recovery in this thesis in order to catch the presence of traditional products in the recovery process, despite this just "service recovery" is used to clearly distinguish the analysed practices from what product recovery is.

An interesting contribution by Primo et al. in 2007 addressed the importance of supply recovery – which is service recovery applied in manufacturing – extending the concept of mere product recovery. The authors pointed out that "a few papers have examined how customers in firms that buy some kind of services react to service failures and recoveries [..], and a larger number of studies have examined the somewhat parallel question concerning how customers react to service failure and recovery", underlining that the focus has almost totally focused on service providers despite the relevance of this issue also for manufacturers. Their study examined the impact of failure recovery on manufacturers satisfaction, and connoted supply failures as something that goes wrong during the commercial relationship beyond technical defects (but that can be triggered by them), such as missed or delayed deliveries, unavailable capacity for modified orders, errors that affect customer's logistics or productive processes. They found that quick and appropriate response is really appreciated by buyers, and that service recovery actions are pivotal to maintain the business active in the long-term. In the end, literature highlights the importance of business context dimension in analysing service recovery practices, but no contributions are available about recoveries offered by manufacturers. The work by Primo et al. introduced the concept of "supply" recovery, which overcomes the sheer distinction between products and services and focuses on the need to pay more attention on commercial relation with the customer. Indeed, this approach is fully exploited in this thesis, where the 7 (general) structural dimensions of recovery systems are applied to different recovery settings using a service or supply recovery perspective.

Furthermore, some authors clearly address the possibility to extend recovery studies to other fields, for example proposing to assess service recovery impact in retail setting, in terms of length of purchase cycle, relative risk of product category, service product versus customer service, type of service customer (Brown et al., 1996). Besides, several authors explicitly refer to the manufacturing field when dealing with service recovery topic: Chang and Hsiao in 2008 wrote that "a

manufacturer unable to effectively deal with a service failure may lose not dissatisfied customers, but more potential future customers because of customer complaints (such as customers lost to negative publicity or complain to other organizations)" (p. 526); Metters and Marucheck stated that "manufacturers have much to learn from services, particularly as they offer products with significant value-added service features; [..] handling customer complaints, appropriate service recovery, fail-safing and service guarantees are just some examples of managerial challenges that have been long known in services, but are relatively new to manufacturing" (2007, p. 208). Other authors explicitly suggested to focus recovery studies also on industries with different properties from pure services, such as manufacturing and retailing (Lin, 2009). In addition, the importance of the "product presence issue" was highlighted, remarking that "it is not yet clear how recovery expectations are influenced by the tangibility of the product (good or service). One could expect that the failure of a tangible good leads to different recovery expectations than the failure of an intangible service" (De Ruyter and Wetzels, 2000, p. 94). An interesting study about service recovery in manufacturing firm was executed by Battaglia et al. (2013), that tried to find what the most relevant recovery dimensions for manufacturers are, and ended their paper by stating that "monitoring of the service recovery process is essential for companies involved in the manufacturing of technological products; in many cases, differentiation is added by after-sales, which includes the recovery process" (p. 960). Again, the same concept of recovery is becoming promiscuous between product and services, and some authors clearly refer to product failures to provide service recovery examples, for instance "an individual whose brakes on a new automobile fail will have higher expectations for recovery than an individual whose new radio malfunctions", or "a customer who has to send her computer to the manufacturer to be repaired and is without it for a week will have higher expectations for service recovery than if the manufacturer were to immediately send someone to the customer's home or office to fix the computer. Likewise, a businessman or woman who loses 100 hours of work when his or her hard drive crashes will have greater expectations for recovery than if he or she had lost only one hour of work". (Seawright, et al., 2008, p. 257).

Hence, the concept of service recovery involving manufacturers or supply recovery is already present in literature, but the business sector hasn't been addressed as a relevant operational contingency yet. To author's best knowledge, scant attention and research have been devoted to service recovery delivered by manufacturing firms which are facing a servitization process, where the risk of failure may be potentially higher due to the complexity introduced by product presence and the novelty of proposed services. This way, according to literature indications, this research analyses service recovery operations in different business contexts, taken from typical pure service

institutions and manufacturing firms. The focus will be on the differences of recovery operations due the product presence which characterizes product-service offering in manufacturing industries. Staying at literature, it is expected that relevant differences between service and manufacturing operations exist, and that they are reflected in recovery operations (Nie and Kellogg, 1999; Silvestro et al., 1992). This way, the first candidate contingency to analyse is the business sector. This research inquires whether and how its peculiarities (mainly in terms of product presence and regulation – as explained in the following) affect recovery operations in terms of structural recovery dimensions implementation, contrasting cases from manufacturing and banking industry.

1.6.4 – Organizational configuration

Organization role has received scarce attention in service recovery operations literature. A recent research by Smith and Karwan (2010) has first dealt with this contingency, addressing a relevant dimension influencing recovery operations (in addition to firms' size) called organizational ownership. In their research two very different profiles of firms were used to describe polar organizational ownership configurations: monosite headquarters and multisite organizations with branches/franchises. Their choice allowed to clearly identify two very different types of firms, with diverse approaches in terms of proximity to the customer that resulted in different level of performances, accordingly to their findings. In particular, organizational ownership seems to affect recovery performance and to be a significant variable in order to identify different firms' profiles in terms of recovery behaviours. Mono-location headquarters have been contrasted to multisite branches or franchises, and each of these options seems to result in a unique set of challenges. For instance, it has been suggested that single-entity organizations often face the resource poverty situations and consequently are more exposed to a higher chance of failure (Morrison and Lashley, 2003). It has also been argued that franchising is a way to lessen the resource burden while still enabling the freedom of independent decision making (Carney and Gedajlovic, 1991). Furthermore, they argued that "there is potential validity in the claim that wholly owned multisite locations may be particularly effective since benefits are recognized in terms of both resources and standardized control" (p. 115). In other words, previous research seems to assert that branches or franchises, that are peripheral entities part of a structured group, may attain better performances thanks to the capability to use sufficient resources and be able to learn from practices (or errors) that are run over the network (Smith and Karwan, 2010). This perspective seems to suggest that a particular configuration, with peripheral units controlled by a headquarter, may lead to better recovery results. Despite this, organizational structure has largely considered in literature as a powerful contingency that affects operational implementation, but which doesn't preclude in itself the possibility to get

good results. That is, the organizational configuration is for sure relevant for operations design and execution, but it is not directly related to the outcomes, and the crucial point is that good results are achievable if companies are able to adapt their choices matching their organization features (Morton and Hu, 2008; Ginzberg, 1980; Donaldson, 1987). Furthermore, one of the main organizational decisions deals with centralization/decentralization (Christie et al., 2003; Beretta and Del Prete, 2012; Siggelkow and Levinthal, 2003). Regarding this, no studies have been found addressing the contingency role of organizational configuration in affecting recovery operations, despite the numerous calls for deeper operational insights within service recovery arena. This way, a second candidate contingency factor to explore emerges: the organizational configuration. Referring to the work by Smith and Karwan (2010) and given the importance that operations literature recognizes to centralization/decentralization choices, two concepts are considered in describing the organizational configuration: the ownership and consequent position of a firm within the group, that deals also with the equity shares of the firm (holding/head of the group vs. controlled subsidiaries), and centralization/decentralization, that describes how resources and responsibilities are managed and distributed. The first member – ownership – refers to the specific role of the firm where service recovery is executed with respect to other entities that are legally or commercially interconnected. These relations may be based on equity participation (holding company of a group with several affiliated subsidiaries) or commercial agreements (e.g. franchising networks). The second member – organization – catches the level of centralization or decentralization of the firm/group, and refers to the locus of performance responsibility, controlling activities and significant resources with respect to the customer position (Armistead, 1990). In other words, centralized organizations locate centres of responsibility and monitoring activities quite distant from the frontline and tight to the central top management, whereas decentralized organizations promote attribution of responsibilities (with consequent appraisal of performances) to the peripheral units, so as to incentivize local productivity, fit the specific micro context, and exalt proximity to the customer. Similarly monetary and personnel resources are located in different positions according to the locus of responsibility. This way, two polar organizational configuration are considered in this thesis, that are centralized headquarters or decentralized subsidiaries, with specific respect to recovery practices.

All things considered, in analysing recovery operations in service and manufacturing contexts, the organizational configuration is addressed as a possible determinant of operational choices and implementation. Before proceeding further, it is important to remark that the decentralization dimension, which deals with empowerment of frontline employees to manage recovery encounters, is conceptually different from the organizational configuration candidate contingency, which is about the locus of performance responsibility and resources allocation.

This research inquires whether and how the organizational configuration (centralized headquarter vs. decentralized subsidiaries) affects recovery operations in terms of structural recovery dimensions implementation.

1.6.5 – Research questions

In the end, literature review and gaps analysis lead to the following research questions, addressing the two main gaps that come from the scant operational knowledge of recovery systems, and the absence of studies concerning the contingency role of business sector and organizational configuration:

- RQ1 – coming from the operational gap:

"*How are operationally implemented the seven structural dimensions of service recovery systems? That is: what are the operational constituents of the seven structural dimensions of recovery systems relevant for design and execution management?"*

- RQ2 – coming from the contingencies analysis: *"What are the relevant contingencies that affect the operational implementation of service recovery systems?"*

And in particular, staying at literature review and analysis:

RQ2-a) - "*How does the business sector affect the implementation of the structural dimensions of service recovery systems?*

That is: does the business sector affect the structural dimensions of service recovery systems? With respect to the seven structural dimensions of service recovery systems, which dimensions are affected by the business sector? How?"

RQ2-b) - "*How does the organizational configuration affect the implementation of the structural dimensions of service recovery systems?*

That is: does the organizational configuration affect the structural dimensions of service recovery systems?

With respect to the seven structural dimensions of service recovery systems, which dimensions are affected by the organizational configuration? How?"

A further explanation of what is intended by service recovery in manufacturing firms is necessary: it deals with all company's activities and interventions that are taken in order prevent negative effects of a service or a product-service failure. In particular this failure may refer to a product-service system, such as the software stuck in a navigator o errors during installation, or may be a product failure that entails service recovery expectations, that are different from the classical codified product recovery activities (cannibalization, recycling, remanufacturing, refurbishing, repairing), and may consist of compensation, apologies, further analysis, extra-warranties,

discounts, re-deliveries, and so forth. This way service recovery, beyond the core business of the company or the context in which it operates, refers to those actions, different from codified product recovery, that aims at maintaining the loyalty of the customer and are executed after a supply failure, be it tangible intangible or a mix. Similar constructs are customer recovery and supply recovery, already introduced in the literature (Michel et al., 2009; Primo et al., 2007).

Thus, this research wants to point out some propositions that will provide answers to the research questions and will be available for future testing through quantitative approaches. The next chapter presents the adopted investigation approach, that has been designed and followed to point out reliable and significant findings about the enounced research questions. In particular, the methodology is described in detail, explicating each of the design and execution decisions that have been made.

Chapter 2 – Methodology

This study has an exploratory nature, since it addresses the investigation of operational practices of service recovery that have marginally been treated in literature, providing implementation insights. This way the research aims at building theory (Glaser and Strauss, 1967; Eisenhardt, 1989; Lewis, 1998; Meredith, 1998), pointing out whether and how the business sector and organizational configuration may affect the structural dimensions of recovery systems and deepening their operational meaning. In addition, this research has many of the principal traits of the qualitative research (Glaser and Strauss, 1967; Van Maanen, 1983; Miles and Huberman, 1994; Gummesson, 2000; Macrì and Tagliaventi, 2001), actually:

- the author matured full awareness of what he was looking for only with work progression and field exploration;
- the research on operational insights into service recovery practices is at the early stage;
- the research design emerged as the study unfolded;
- researcher is the data gathering instrument;
- most of data is in the form of words, not just numbers;
- subjective and individuals' interpretation of events is important as participants' observations and in-depth interviews, in order to fully comprehend phenomena and understand the cause-effect linkages.

Thus, a qualitative research approach is used that is more suitable to uncover "what" and "how" aspects that underlie recovery systems components' implementation. In addition, the research wants to contribute by building theory about recovery systems' operational knowledge and exploring its application trough involving non pure service organizations. Investigating the effects of contingencies on structural dimensions of service recovery operations requires adopting a perspective that allows for deep insights into candidate factors at the operational level. More specifically, it is fundamental to choose a methodology that permits to get a full understanding of operative recovery practices as well as a deep comprehension of their interaction with contextual variables of business sector and organizational configuration. Such a detailed and profound inquiry needs to be executed and the very ground level, that implies entering and living the field of organizations' operating environment to collect evidences, data and get explanation of phenomena. In order to gain an in-depth understanding, the proposed method is the in-depth multiple case study research (Yin, 2009; Eisenhardt, 1989; Meredith, 1998; Stewart et al., 2002; McCutcheon and Meredith, 1993; Voss et al., 2002; Anderson et al., 1995; Hill et al., 1999). Four in-depth case

studies were executed (Meredith, 1998), in order to achieve profound insights, gather explanatory details and collect all necessary evidences to build research propositions for further research (Eisenhardt, 1989). Indeed, literature suggests its application when the phenomenon can be studied in its natural and meaningful setting, and relevant theory generated from the understanding is gained through observing actual practice. The case method is appropriate for the questions of why, what and how, to be answered with a relatively full understanding of the nature and complexity of the complete phenomenon. The case method lends itself to early, exploratory investigations where the variables are still unknown and the phenomenon not at all understood. Moreover, case study methodology has been largely used to explore contingency theory, since it allows good control of external variables and richness of data and observations, which enhances deeper understandings through a mix of qualitative and quantitative data (Ketokivi, 2006; Zomerdijk and de Vries, 2007; Silvestro, 2001, Sousa and Voss, 2001). Besides, it is an appropriate approach when the contextual circumstances are relevant to the phenomenon of study and research question presents some explanatory components (Yin, 2009). All these characteristics are present in this research, that starts from field observation and tries to explicit the operational meaning and constituents of service recovery components by comparing realities taken from different sectors.

The unit of analysis is an important aspect of the research design. As the purpose of the research is to catch the operational constituents of recovery systems components, drilling down to a deeper level of understanding and observing differences introduced by product presence, the suitable unit of analysis seems to be the complaint management division and its practices. In fact, choosing the specialised division that deals with customers' complaints allows both for the observation of internal operations and the understanding of their relationships with other firm's divisions (involved in the recovery process). In addition, this kind of department is quite clearly defined within structured organizations, which should be addressed by this research. Its perimeter is usually identified with specific offices, people, heads and roles within the organogram. Although recovery operations may be executed also by actors outside the complaints management division (frontline personnel for instance), the chosen unit of analysis is the complaints' department as it coordinates recovery operations all over the company, and above all it has the responsibility of customer's satisfaction with proposed remedies after a failure has occurred. This unit of analysis intercepts most of the recovery processes, which are carefully taken into account in order to provide comprehensive and exhaustive insights.

Choosing the unit of analysis at the office level it is possible to perform multi-site in depth case study, that allow for cross case analysis and the extension of theory in theory building (Eisenhardt, 1989; Wacker, 1998; Voss et al., 2002; Meredith, 1998; Glaser and Strauss, 1967). Using

Eisenhardt's (1989) process of building theory from case study research, the research design is defined and represented in figure 10.

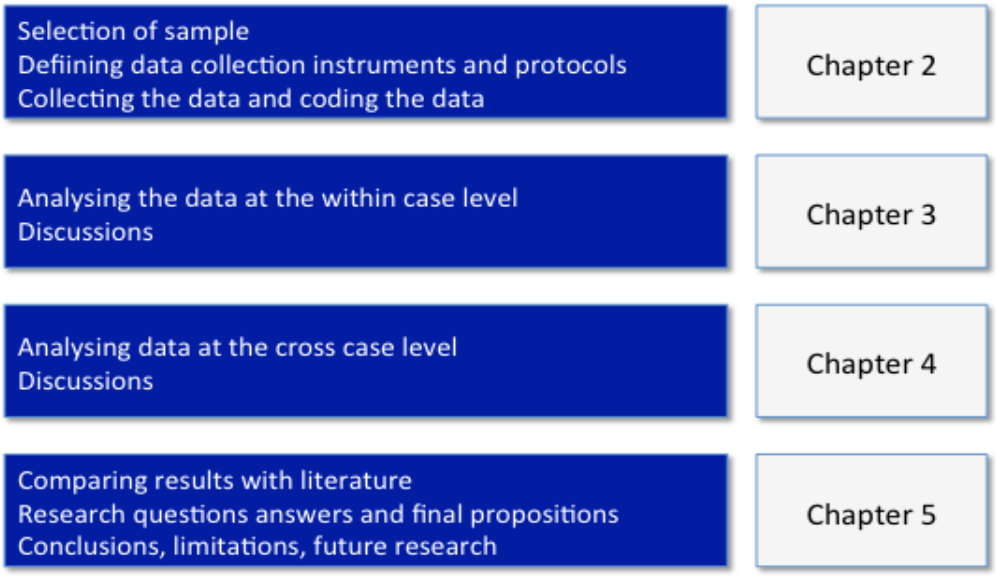

Figure 10 – Research design and distribution over thesis chapters

2.1 – Case study selection

The sample selected for qualitative research should be purposeful and based on some theoretical underpinnings, in order to fill theoretical categories (Glaser and Strauss, 1967; Eisenhardt, 1989; Miles and Huberman, 1994), in opposition with theory testing research where random samples of population are often suggested (Meredith, 1998; Voss et al., 2002).

To study the constructs that characterize service recovery operations, the selection should first consider companies that offer services, or companies, in light of the servitization phenomenon and the general meaning of structural dimensions, that carefully pay attention to the relational and commercial details of products and product-services delivery. Furthermore, the research is interested in pointing out the operational constituents of service recovery systems' components, and this way the sample of companies should present quite organized recovery divisions, with a relevant role within the firm mission, in order to catch the implementation characteristics in a context where organizational decisions have not been made casually but are originated by managerial considerations, that are illustrated in the analysis section. On the other hand, in order to investigate the role of different business sectors on the recovery operations an equal (balanced) number of pure-service and non-pure-service firms should be selected to let the gathered evidences be adequately contrasted. As a constraint, the research was limited by time geography and the will to carry out deep analysis, which made the author choose for a limited number of profoundly studied cases. Before enouncing the selection criteria, it is necessary to recall literature so as to get useful indications in terms of case studies' characteristics. Indeed, selecting firms within service and non-

service contexts would be quite difficult without any guidelines, due to the enormous variety of companies. Thus, in order to choose the most appropriate service industry, it is necessary to recall the objectives of this research and the theoretical restraints that have to be respected. First of all, in order to catch the effect of the business sector on recovery structural dimensions it is necessary to identify business fields that are clearly representative of their categories, so as to select cases which are likely to replicate or extend the emergent theory, choosing them as clearly distinct situations and polar types where the issue of interest is transparently observable (Pettigrew, 1988). For a consistent research design it is fundamental to identify clear distinct relevant theoretical categories, so that case studies may enhance replication logic (both literal and theoretical). Due to the relevance of the servitization phenomenon and the hints given by many scholars about extending service recovery topic also to the industrial field, the two main contrasting categories that play the role of different business service are pure-service organizations (banking, as anticipated) and manufacturing firms. Literature analysis is pivotal in suggesting how to select service and manufacturing firms adequate to this study.

2.1.1 – Pure service organizations

As far as service firms are concerned, this thesis is interested in investigating contexts where service recovery is really important and creates particular stress for the business, that may imply much attention paid to operations. Such a context would actually be particularly interesting for those considerations that have underpinned recovery operational choices, that are the core of this research. This way, it is argued that suitable service firms should be characterized by tension on recovery activities, high business competition, notable attention received by service recovery literature. A substantial number of papers have addressed this practice in a particular field that seems to be really complete for studying recovery dynamics, that is the financial sector. This sector is particularly fascinating as it encompasses service activities such as insurance, banking services, investments' services, which are really influenced by national regulation and are stressed by high competition as well. Indeed banking is characterized by complex regulation (Wallison, 2005), which is usually issued by central banks. Many concerns in bank management are about the impact of regulation on operational efficiency (Paradi and Zhu, 2013), and actually government regulation is one of the causes of complexity to measure efficiency in banking (Kinsella, 1980). Impacts of banking regulation on the operational efficiency have been studied all around the world (Berg et al., 1992, Canhoto and Dermine, 2003; Leightner and Lovell, 1998), with the common belief that deregulation is beneficial for cost efficiency and operations productivity (Berger and Humphrey, 1997). In addition, the outcomes of bank regulation are peculiar within nations, and some

contradictorily results have emerged among different countries (Sturm and Williams, 2004). Besides, government banking regulation should be committed to enhance transparency and competition as well as facilitate financial operations and fair technology adoption (Reeves and Sabharwal, 2013; Gardeva and Rhyne, 2011), and many authors recognize the intrusive role play by regulation in banking sector, even with specific norms about service recovery. There are many contributions that analyse service recovery in such organizations, remarking their valuable role in terms of research setting. Michel in 2001 used a major Swiss bank to carry out a survey in order to find whether failure probability, tolerance, frequency distribution, recovery paradox, differ between processes; while Boshoff and Leong (1998) selected banking scenarios in order to test the "optimal service recovery combination", in terms of relative importance of full empowerment, acceptance of blame by the service firm and personal apology. Duffy et al. analysed the impact of recovery efforts in banks, highlighting how "listen and fix" are the most relevant ingredients in determining post-recovery satisfaction. In the same paper the authors reported a study by the Royal Bank of Scotland that demonstrated that the probability that a customer recommends the bank to someone else is three time greater when they found satisfactory recoveries. Research findings by the ABA Banking journal clearly indicate service recovery as a pivotal driver of overall satisfaction, reminding at the same time the historical difficulty in assuring customer satisfaction after a failure, as almost half of the time customers found recoveries unsatisfactory. The authors finally asserted that the particular high failure rate in banking, that appears to be quite tensioned sector, calls for future studies in large institutions. Berry and Parasuraman (1991) found in a banking research that six of the top ten factors that enable customer satisfaction refer to problem resolution, while Lewis and Spyrakopoulos in 2001 studied failures and recoveries in a retail bank and affirmed that failures in such contexts are perceived as more severe in customers minds, due also to the relative high switching costs. Actually consumers perceive that banking has more serious financial and credit-oriented implications (Harris et al., 2006), and this tension is expected to be coherently reflected in operations' design choices. Puga Leal and Lopes Pereira investigated how operational internal factors affect external outcomes related to customer behaviour, and chose a financial institution as a very interesting context, affirming that "financial institutions in general, and the banking sector in particular, are among the service organizations that face tremendous competition all over the world. They also have become increasingly aware of how important quality improvement can be to satisfy customer demands and expectations. Beyond these considerations, the banking industry is a rich observatory for valuable research, namely with regard to the challenge of integrating internal and external variables, which can lead to appropriate service recovery" (2003, p. 647). Many other authors selected financial sector as ideal setting where service recovery may be investigated,

Iglesias in 2009 carried out a research in retail banking to deepen the effects of attribution of service failure on customer evaluations, whereas in 2008 Michel and Meuter addressed a major Swiss bank to test the relevance of service recovery paradox, since it was the perfect environment where to find a large number of pure service failures and consequent attention to recovery. Again Boshoff and Allen (2000) studied the relationship between frontline employees characterization and recovery performance in a retail banking context, which was viewed as an ideal environment to test their hypothesis due to its highly competitive nature, high levels of customer contact and relatively long-term relationships with customers, and the same did Yavas et al. in 2003 (in Turkish banks) since it is supposed to be a stressing sector for employees that deal with aggrieved customers for problems that involve money. Boshoff refined in 2005 the RECOVSAT tool in a large bank, so as to exploit its high volumes in terms of customers and multifaceted concept of quality that allowed a deep assessment of the instrument, while Michel in 2001 analysed with a process approach service failures within a bank, finding a quite high number of deviations reported by customers that stressed the importance of recovery practices In such organizations. Again Taylor in 2001 executed a research about service recovery impacts on service quality in the insurance sector, highlighting the need of that business to deeply consider recovery practices staying at the disappointing satisfaction indexes pointed out by several studies. Finally other authors underlined particular criticalities that characterize service recovery in financial institutions, such as the high volumes and variety that characterize this factor (Sousa and Voss, 2009), the fact that this process of defection becomes more complex due to the contractual and relational bonds that are often in place between a customer and the retail bank (Holmlund and Kock, 1996; Rust and Zahorik, 1996), or the need to fully exploit recovery opportunities since about the 80% of customers complain before switching (Stewart, 1998). In the end, “the banking industry has been a service sector eager to embrace these relationship-marketing strategies in order to secure strong relationships with their customers in the competitive retail-banking environment” (Colgate and Hedge, 2001, p. 201**).** All things considered, banking industry is chosen as specific business sector within the pure service organizations, due to its peculiar characteristics related to regulation, high volumes of failures and high attention paid to customer satisfaction.

In addition, the focus is on business-to-business (B2B) relations, which have been proved to be particularly intriguing and challenging for service encounters due to their unique characteristics (Jayawardhena et al., 2007). Indeed, B2B operators are usually characterized by a smaller number of customers than B2C, with a relative importance to the overall business that is thus more pronounced (McNamara, 1972), deserving more attention. Then the frequency intensity of B2B interactions is higher than in B2C environment, with a tighter relationship (Hardy, 1978) that is

empowered by modern technologies and results in facilitated personal communication (Hooks and Higgs, 2002), leading to a more direct contact in case of problems. Moreover, in B2B dynamics a service encounter is not just the accomplishment of a single task but rather an effort in a larger endeavour to build and sustain a long-term relationship (Jammernegg and Kischka, 2005; Miciak and Desmarais, 2001). Furthermore "both academics and practitioners recognize that business-to-business relationships are characterized by closer and deeper interfaces than consumer relationships" (Mehta and Durvasula, 1998, p. 40) and flexibility and innovative skills of employees become fundamental due to the potential non-routine elements in their jobs with professional customers (Dubinsky et al., 1986). These evidences led the author to address B2B relationships, whose complexity is expected to result in a more pondered design of recovery practices, deserving appropriate investigation as some service recovery studies have confirmed (Lockshin and McDougall, 1998; Durvasula et al., 2000).

For all these reasons service cases will be taken from the financial sector, where service recovery is really critical, and where the particular monetary relationship between (business) customers and providers requires very accurate operations, which have in addition to cope with strict regulation. Furthermore, tension in customer satisfaction with financial services has largely been confirmed by recent reports, calling for specific addressing of this industry.

2.1.2 – Manufacturing organizations

As far as manufacturing firms are concerned, there're seems to be no indications in service recovery literature that may be used in order to identify relevant characteristics or significant traits that should be considered in order to select appropriate realities. Thus, indications are drawn from servitization literature, trying to catch some criteria that may guide case study selection. Actually some clear points emerge from the objectives of the thesis: first, the presence of the complaints' management division is necessary, and it should be sufficiently structured to let the researcher appreciate managerial choices in implementing recovery operations; second, its role should be relevant for the company business, and not just marginal as a compulsory non value-adding division; third, the company mission must be significantly service-oriented (Oliveira and Roth, 2012; Colen and Lambrecht, 2013), that means that the firm explicitly mentions service components in their vision of the business, far from being mere product producer. This is important to assure that the supply of physical goods is enriched with service elements, that go beyond technical aspects of tangible products and their sheer ownership, and rather comprehend relational and commercial interrelations much deeper than pure market transactions, and are expected to be reflected in recovery practices. Fourth, the historical core business of the firm should be product-

based, so as to clearly identify its nature as manufacturer and allow for the investigation of the product presence effect of recovery dimensions.

Literature suggests different kinds of services offered by manufacturers, such as pre/during/after sales services (Paiola et al., 2012), or customer services product services and services as products (Mathieu, 2001), but such distinctions are not helpful, as the thesis purpose is not to analyse differences in operations generated by the particular service category. The need is rather to cover significant theoretical categories of servitized manufacturers that are present in literature. In literature there are many classifications of manufacturers position towards servitization, depending on the degree of the transition to services (Oliva and Kallemberg, 2003) or the way services are added to products (Wise and Baumgartner, 1999). Mathieu in 2001 classified servitization maneuvers along two dimensions, organizational intensity, which describes the relevance of the change, and the service specificity, which deals with the linkage between services and physical products. The former dimension is segmented as tactical, strategic, cultural intensity: due to the will of this thesis to catch recovery operational decisions in servitized manufactures, the attention is paid on those which are at the strategic level, which means that products are still pivotal for the value proposition but services are acquiring a determinant role, and a customer-oriented perspective has become dominant in designing the overall value offering, including all the aspects of supply recovery (Primo et al., 2007). The other dimension, service specificity, doesn't affect case selection criteria, as observing recovery operations running for different kinds of product-services enriches the study.

Another interesting point is the kind of value proposition offered by servitized manufacturers, that could be: asset, when the value is delivered by the product itself and its performance; recovery, when maintenance, repairing spare parts management and post-sales services are pivotal in the offering; availability, when the company tries to guarantee the serviceability and functioning of the system; outcome, when the provider's focus is on customer results and the mission is adapting the offering to its particular, even contingent needs (Smith et al., 2011). It is clear that the selected cases should have developed at least the recovery value proposition, in order to study recovery operations. Furthermore, some other interesting frameworks are available for manufacturers entering the world of services, which try to classify service growth options and suitable service strategies for manufacturers, depending on their particular position. Raddats and Easingwood in 2010 elaborated a two-by-two matrix (as reported in figure 11) that mapped four possible service growth strategies, depending on firm's focus on products or customers and to its attitude towards dealing also with competitors' products. Referring to this framework, this thesis addresses

companies that occupy the positions 1 or 3, that is those manufacturers that are still concentrated in proposing their products.

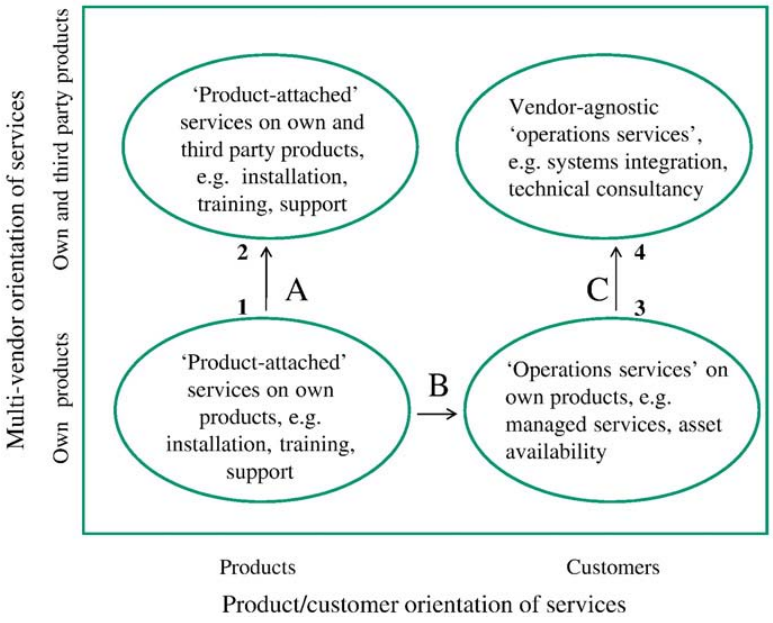

Figure 11 – Possible service growth strategies (Raddats and Easingwood, 2010)

The second dimension of the matrix - type of services offered in terms of product-services or operations-services - is not considered a differentiating variable, since they can coexist in the same recovery system and there are no evidences that this can create differences in the recovery operations at the analysed level, indeed they both are comprehended in the supply recovery. In other words, this thesis treats situations described in the lowest circles of figure 11, without exploring potential effects of third parties' product involvement, that are beyond the scope of this research. Finally manufacturers should be business-to-business operators, where recovery operations are supposed to be more stressed due to a relative higher pressure exerted by professional customers. It has been argued that a business firm has higher expectations than final consumers, and that large organizations are more exigent than smaller ones (Primo et al., 2007; Fine, 1988). Furthermore B2B context is also characterized by a concept of fairness associated to tailored customer service recoveries, that are many times enforced through specific contracts that act as safeguard for the buyer (Bowersox and Closs, 1996; Hutt and Speh, 2001).

2.1.3 – Case studies profiles and selection criteria

Literature analysis has led to the identification of the suitable case studies' characteristics to match the requirements contained in the research questions. As far as the first contingency is concerned, the banking sector and the manufacturing sector, with specific attention to B2B dynamics, have been chosen as the polar categories that permit the exploration of operational differences introduced

by the business environment (with particular attention for product and regulation roles). On the other hand, the second candidate contingency deals with the organizational configuration of the firm and, in light of literature analysis and theoretical elaboration, has been split in two clear possible configurations: centralized headquarters and decentralized subsidiaries, that represent the two polar categories which allow for the investigation of this factor's impacts on recovery operations.

This way, in order to explore business sector and organizational configuration effects on operational implementation of service recovery systems, four different case studies profiles are identified to meet theoretical categories useful to answer the research questions. The four profiles are characterized and identified by the two main dimensions of analysis, in order to be able to investigate the main differences between them across the case studies, deepening the specific effects of the proposed contingencies. Profiles are illustrated in figure 12, and are labelled with a number in order to allow recalling in the following.

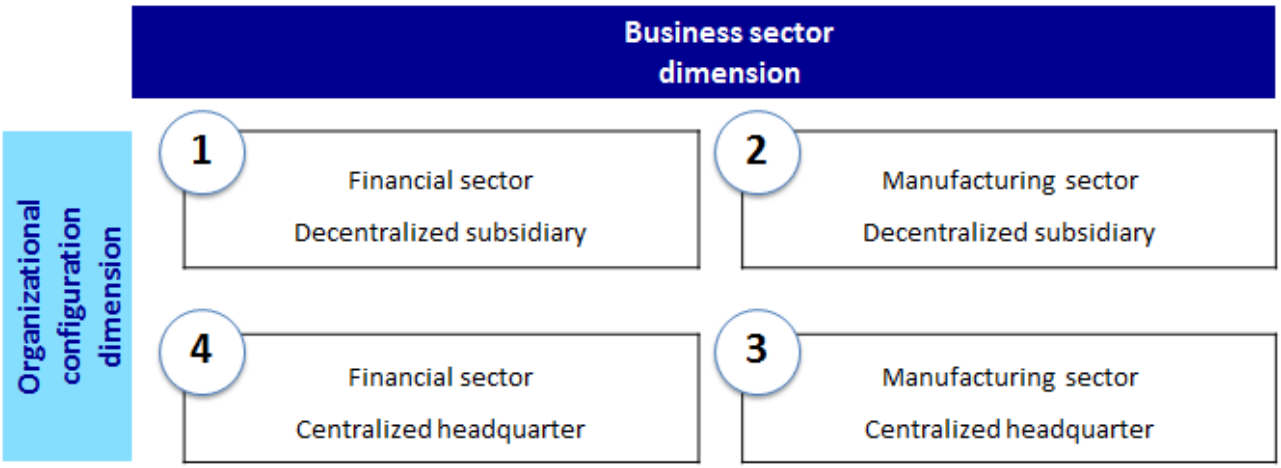

Figure 12 – Four theoretical case studies profiles drawn from literature analysis and elaboration

Finally case studies' selection criteria are formalised as follows:

- to be a pure financial company (retail bank with business customers) or a servitized (business to business operator) manufacturer that still maintains focus to products but also offers services as a strategic driver to success;
- to present a formalized complaints management division with its own responsibilities and tasks, with a clearly-identified head;
- to be a medium-large company in order to have relevant datasets and structured managerial culture;
- to be interested in research goals so as to obtain active participation;
- to have a clear commitment in serving customers and deem recovery actions critical as well as

fundamental for mission deployment;

- to provide full access to information and informants in order to catch deep understanding of operational choices and recovery implementation features;
- to be part of a group of companies and be clearly identifiable as head or a subsidiary of the group and centralized or decentralized in order to ascertain the organizational configuration;
- to be reachable.

An important aspect of this research is the role of the organizational configuration in determining recovery performances and characteristics. It catches (taken from Smith and Karwan, 2010) the relative position of a company with respect to the other entities of the group, and the organizational philosophy of the group, in terms of concentration of resources at the headquarter opposite to a more distributed territorial organization closer to customers. In order to be clearer this study considers equity-ownership relationships (equity share of the company as formally stated in its balance sheets) within a group of firms, as well as organizational structure with respect to service recovery practices, in order to be able to univocally identify whether the analysed firm is the centralised holding company or a subsidiary belonging to a decentralized group. This way, the sampling procedure equally distributes centralized heads and decentralized subsidiaries over the banking and manufacturing sectors. Due to limitations in time, funds, transfer possibilities, and the will to deeply analyse each company, four cases studied are selected. Their availability in participating with large effort in this research has been obviously a key determinant in case study selection, since firms have been intrusively investigated. The cases fully respect selection criteria, as within case paragraphs will confirm. Two cases are business-to-business manufacturers, carrying on a servitization process in which the recovery proposition takes a pivotal role, and two cases are financial institutions that recognize the primary importance of recovery practices.

Figure 13 – Theoretical profiles matching of selected case studies

All firms are part of a group, two of them – a financial institution and a manufacturer – are centralized holding companies, while the other ones are decentralized subsidiaries. The selected companies are: Intesa Sanpaolo S.p.a and Banca Nazionale del Lavoro S.p.a as financial institutions, Fiamm S.p.a (horns business unit) and Conergy Italia S.p.a. as manufacturing case studies. The selected cases' role is showed in figure 13, with a reference number to match them to the theoretical profiles. Two other companies were contacted as pilot cases – a manufacturer subsidiary belonging to a decentralized mechanical group and a centralized headquarter of a large centralized financial group (BT Tenute Meccaniche Rotanti S.p.a. belonging to BT Burgmann Group and Assicurazioni Generali S.p.a.) - in order to develop the research protocol, described in the next paragraph.

2.2 - Research protocol

The unit of analysis is the complaint management division of the firm, excepted for Fiamm S.p.a. which is the business unit complaint management division as its features fully respect selection criteria, therefore four case studies are analysed. The first contact with the companies was through high-level managers who introduced the researcher to the appropriate company responsible and sponsor reference for the research, who was the complaint's division manager for financial institutions, the quality manager for Fiamm S.p.a. and the after sales manager for Conergy Italia S.p.a.. The field research activities were performed between march 2012 and march 2013, proceeding in parallel.

Due to the first stage of the research, the qualitative technique of semi-structured interview was used (Spradley, 1979; Lee, 1999; Voss et al., 2002), which allowed for a deeper investigation of evidences and their causes while maintaining a kind of comparability between cases. Semi-structured interviews were developed after two pilot unstructured interviews, that have been taken with two managers responsible of complaints management of a large financial institution particularly active in insurance business (Assicurazioni Generali S.p.a.) and a rotating seals manufacturer owned by a German mechanical holding (Eagle Burgmann). These unstructured interviews were executed with the complaints' manager of the insurance company and the quality manager of the manufacturing pilot case, and provided useful inputs to develop a general framework which allows for comparability between service and manufacturing fields, as presented in the following.

This research has been carried out through different sources of data, that supported triangulation and solution of possible inconsistencies (McCutcheon and Meredith; 1993). Semi-structured individual interviews were used (Lee, 1999), as well as focus groups (Morgan, 1996), direct

observation of working environment, process mapping techniques, electronic tools assessments and consultation of firms' reports and official national regulation. Semi-structured interviews were carried out in every case with a different length depending on the complexity of its operations and managerial rationales to deepen. Globally, interviews lasted from 30 to 40 hours in each case and permitted analysing operational choices in depth, drawing elements that determined recovery systems features and theirs constituents. In each case four kinds of interviews were taken with different goals:

- an initial focus group with the top and middle management (marketing and complaints managers for financial institutions, quality and recovery managers and executive director for manufacturers) was executed in order to comprehend the strategic role of service recovery for company's success and check the alignment between high-level perspectives and operational implementation, this meeting lasted about three hours for each case;
- several one-to-one interviews were carried out with the middle managers of complaints management division, who were the firm representatives for the research and acted as key informants (Kumar et al., 1993;Voss et al., 2002), being the connection between strategic directives and operational implementation. These interviews involved three key informants in each organization and aimed at exploring how the division is organized and what the relevant operational constituents of recovery systems for managerial activity are, lasting from five to eight hours each;
- several single interviews with operative personnel so as to deepen the implementation characteristics of recovery practices and deeply observe process peculiarities and aspects that could enhance the answer to the research questions. These interviews were less structured and permitted to fully understand recovery operations and build a solid and reliable base of evidences to discuss the constituents of recovery systems with the middle manager (about a week of direct observation of the working environment in each case);
- a summary focus group meeting with middle manager and chosen experienced operatives, to draw conclusions and formalize the evidences gathered, refine evaluations and deepen the rationales of the findings emerged (from three to five hours);
- a final conclusive meeting with middle managers and top management to provide feedback of the inquiry and validate results at the highest available level within the firm (three hours).

Even if the interviews were not structured in detail and respondents were always allowed to say whatever they wanted, they were conducted so that informants touched each of the following aspects, depending on the interlocutors of the specific interview:

- company's mission and concept of service quality (with top management);

- business peculiarities that affect recovery strategy of the company (with top management);
- top management view of the recovery performance and its importance in firms priorities;
- the recovery process (with middle managers);
- the operational meaning of recovery service components in terms of relevant constituents for managerial design decisions (with middle managers);
- the characteristics of the operational implementation of recovery systems components (with middle manager and operatives);
- the specific influences of business sector (in particular regulation and product presence) on service recovery operations (with all informants);
- the particular influences of organizational configuration on service recovery operations (with all informants).

In addition, the direct observation of the organization at work during the interviews and the use of multiple respondents helped the researcher mitigate many potential sources of bias. For instance, interviewing the middle manager and the operatives of complaints division enabled the full comprehension of different operational aspects and let the author understand the multifaceted perception of process constituents. Moreover, different informal dialogues with employees gave also the idea of how recovery strategic vision reached the last level of the organization. This allowed for a multiple perspective of the same construct, thus coding of recovery implementation was not dependent just on a single respondent's perspective. This triangulation assured by comparing information from internal sources with different roles (top middle managers and operatives), and by direct observation and documentation analysis, allowed a greater confidence that data were valid (Miles and Huberman, 1994). Finally all conclusions were validated by all the key informants and presented to the top management to receive formal confirmation. Some inconsistencies between sources were found, but the deep analysis of processes led to their resolution and useful benefits arose also for companies in terms of role and interfaces clarifications. Hence, investigation methodology was scrupulous and delved into recovery operations lading to a full comprehension of the process and its managerial representation, that provided the explanatory indications required in qualitative research. The respondent bias was mitigated through interviewing multiple respondents, and in particular respondent with opposite bias, as the top managers (that aimed at stimulating continuous improvement actions), the middle managers (that wanted to exalt recovery processes' efficiency and efficacy under their control) and the operative personnel (that usually highlighted process problems, useless activities and excessive stress and pressures coming from inappropriate service delivery, and was very concerned to show daily problems and limits of the organization). This approach is appropriate, given the exploratory nature of the research.

Data analysis consisted of three phases – reduction, display, conclusions' drawing – following the indications by Miles and Huberman (1994). Every informant participated in 4 rounds of interviews (or focus groups) with different objectives, in addition to a preliminary meeting with all the informants so as to share research objectives and obtain employee collaboration, necessary due to some "intrusive" traits of the research. The first phase (two rounds) aimed at understanding which are the significant operational constituents of structural dimensions, used in the second phase to assess their implementation features (two rounds).

The goal of the first round (individual interviews with top and middle managers) was to understand the operational meaning of structural dimensions and catch possible relevant items to complete the original ones provided by Smith et al. in 2009, finding out the "operational constituents" of recovery dimensions. Indeed, the same authors auspicated further testing and validation of the dimensions "within and across specific industries and in additional or more tightly controlled settings" (2009, p. 179), and recognized the limitation of their method with one single respondent per organization, if compared to the deepness obtainable by multiple informants and triangulation of data. Data reduction was carried out through an open coding procedure (Corbin and Strauss, 1990) based on interview transcriptions, documentation analysis and direct observation. Every information and data source was taken into consideration in order to build meaningful segments that were labelled by the researcher. The second round of interviews (focus groups with managers and selected operative employees) displayed data and led to categories refinement and validation by employees middle managers and top managers solving few inconsistencies, and resulted in some new items that enriched the operational meaning of structural dimensions (see paragraph 2.4). The third round addressed the content of each dimension relating to the validated items, in order to point out its implementation features and the reasons why particular decisions were made. After that, a long phase of documents screening, information checking, process mapping (Hunt, 1996; Biazzo, 2002) and job observation on the field (sharing the desk with selected employees) took place and led to the final meeting (focus group with the same participants), which formalized and validated the evidences collected and allowed for the researcher to rely on the within case examination. In fact, analysis was carried out at single case level and cross case level (Yin, 2009; Eisenhardt, 1989; Voss et al. 2002). Within case analysis helps to examine the interpretation and implementation of service recovery system components in a single context, while the cross case analysis serves as a form of replication (Voss et al., 2002; Meredith, 1998), where the constructs of interest in one setting are tested in other settings, and permit the explanation of influences of business sector and organizational configuration on recovery operations.

Case studies were basically analysed with thematic coding to find out the key operational constituents of recovery implementation and their dependencies on organizational and business factors (Boyatzis, 1998; Flick, 2009). The coding process was performed after all four companies' data were gathered, that is after having interviewed key informants of all the cases. In fact, the coding of a case could have led to confirmation bias for next cases (Miles and Huberman, 1994). Only a brief check of notes was executed after the two pilot cases, which have been useful to elaborate an approach applicable both in service and manufacturing firms. However, at this stage there were no formal attempts to determine the variables that affect the implementation of recovery operations in different settings, and no effort was made to formally identify the factors that characterize recovery systems components at the practical managerial level. Delaying the encoding until data collection was complete let the researcher be more open to alternative explanations that could have raised in the next case studies (Pagell, 2004). The next paragraph delves into the thematic coding procedure.

2.3 - Variables and thematic coding

This research is based on the identification of variables that are connected with recovery operations, which exhaustively describe and explain managerial decisions about implementation features. These variables were gathered from the case studies and emerged from thematic coding of interviews, with the specific aim to deepen the structural dimensions of recovery systems identified by Smith et al. in 2009, and have been recently used by several authors to draw conclusions about service recovery operations. More specifically, given the seven codified dimensions of recovery systems, this research enquires their meaning through a managerial lens, in order to make their relevant constituents explicit, which are the concrete variables used by managers to make design and implementation decisions about recovery operations. The conceptual coding framework is presented in figure 14.

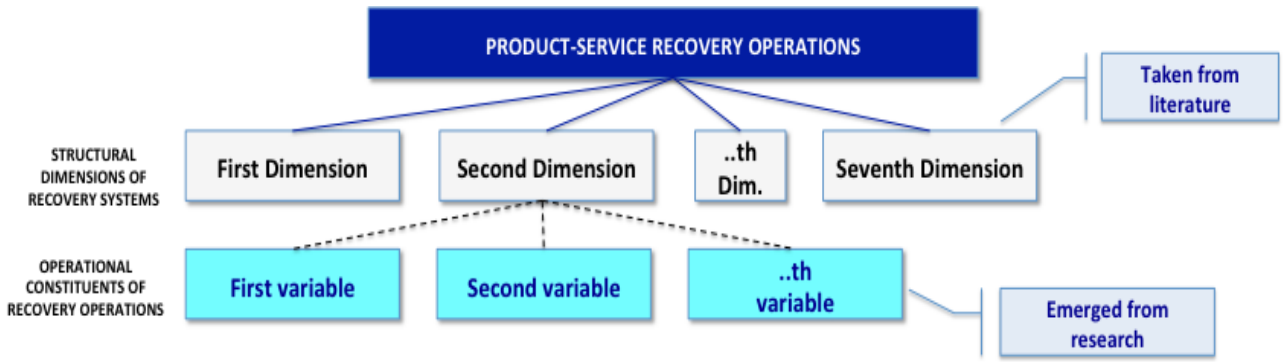

Figure 14 – A representation of the conceptual framework to answer the first research question

Finding those "second-level" constituents – in light blue boxes – of recovery structural

dimensions lets the author deepen the significant variables that are addressed by practitioners in implementing service recovery strategies, allowing for a full understanding about the reasons why certain operational decisions are made, with particular respect to the business sector and the organizational configuration contingencies. Thematic coding is used to discover the operational constituents of structural dimensions of recovery operations, that are the relevant variables whose specific implementation describes and explains how recovery strategies are deployed and what the influences of business sector and organizational configuration are. In other words, if the candidate contingencies are significant, they are expected to exert a clear influence on the structural dimensions, that can be explained and investigated in depth through the operational constituents' implementation analysis, as represented in figure 15. That is, operational constituents are the variables that permit to verify, observe and explain possible influences of contingency factors.

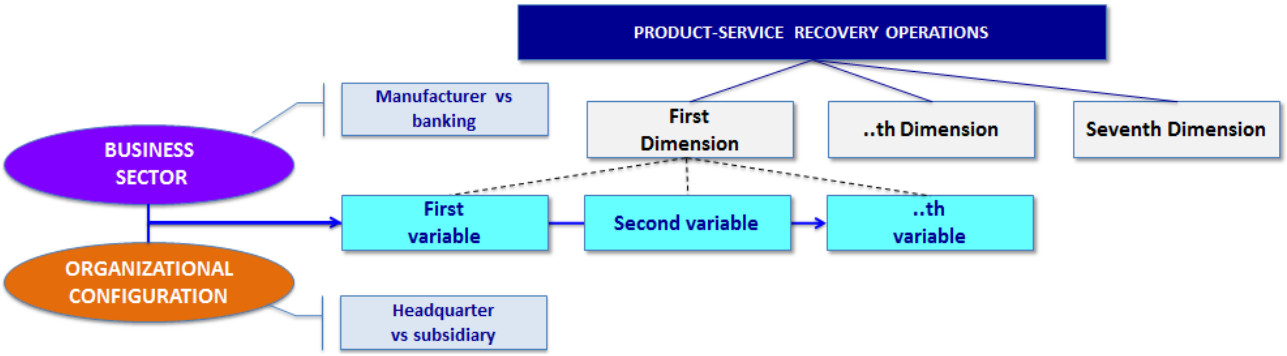

Figure 15 – A representation of the contingency effect visible through constituents investigation

Thematic (or open) coding is a research technique that supports the analysis of qualitative data (Glaser and Strauss, 1967; Corbin and Strauss, 1990; Miles and Huberman, 1994;). This technique consists in several steps: reading data, field notes and interviews transcriptions; identification of homogeneous significant segments that suggest information useful for the research objectives; labelling segments with a "code", which is usually a word or a short expression and is meaningful to recall the content of segments; summarizing the prevalence of codes, discussing similarities and differences in related codes across distinct original sources, that are essentially the different informants across the four case studies, and comparing the relationship between one or more codes (Boyatzis, 1998; Auerbach and Silverstein, 2003). This comparative procedure is crucial in this research as cases are drawn from traditionally different business contexts where even terminology is peculiar, and an intense work to code analogue variables emerged in different settings has been executed to enable clear presentation of results. Coding was conducted for each complaint management division, searching for significant information that could describe and represent the operational implementation of service recovery. During specific interviews with managers the meaning of structural dimensions, as they have been described in literature, was presented, then the

informants were asked to explain whether and how these dimensions had been implemented in their organizations and all the distinct elements they mentioned were coded. About sixty items were identified during interviews; they were labelled with names and expressions that were evocative for the researcher, not necessarily existing in literature (Glaser, 1978), and were deeply analysed to catch overlaps and assure uniqueness of each of them. A fixed procedure was repeated for all dimensions and all interviews. Original data were generated in Italian, so the exemplary segments reported in the following have been accurately translated to illustrate the applied methodology.

The first passage is an extract drawn from the answer by of the head of the recovery division of Intesa Sanpaolo, after having been asked to illustrate the company vision and implementation of the formality dimension: "Intesa Sanpaolo pays high attention to the quality of complaints processing and recovery formulation, and supervisors *control that each operator keeps strict adherence to our compliance indications*, even in terms of characters font and format used in documents. Another important point is represented by a *substantial deal of formal procedures* that have been created by internal audit sections and whose respect is continuously monitored. Furthermore, these procedures and guidelines require a *demanding activity of update maintenance and review* since they have to be constantly aligned to national regulation, otherwise they would be completely useless". The underlined segments were coded respectively "compliance appraisal", "procedures", "review policy". Analogous segments were found in most of the informants' interviews, which led the researcher to retain those constructs after the first refinement.

Another example is the following passage, written down from the answer given by the network workforce manager of Banca Nazionale del Lavoro, in response to a question addressing the vision and implementation of the influence dimension: "we always try to satisfy the customer, sometimes even if the complaint has no foundation, in that case we could decide to invest on that customer to maintain his loyalty and hope in his future profitability, depending on his assets. Every time we *try to customize the compensation that is offered to the customer*, and at the same time it is possible also to *adapt the process* to specific customer's needs that emerge from the failure situation (priorities, modalities, etc.), especially in the first part of the process where our capability to demonstrate atonement and availability to deal with the problem may result in an informal solution. Such a customer involvement is fundamental to avoid many official complaints, which lead to higher workloads and compromise trust between customer and provider. Furthermore*, this dimensions is guided by customer requests*, that are not just a mere triggers to carry out mechanical activities, but are rather the basic content of the recovery encounter, that have to be strictly considered in order to adequately bargain the compensation, trying sometimes to by-pass the normative imposition to answer specifically just to written customer requests". The underlined

segments were coded respectively “customization”, “adaptability”, “customer requests”. Analogous segments, expect for the last one, were found in most of the informants’ interviews, which led the researcher to retain those constructs after the first refinement.

A preliminary reduction to thirty one items was executed after having coded the four companies, based on the analysis of the frequency of each item: only items mentioned by the majority of the key informants, and mentioned at least by one manager in each organization, were retained. Actually, discarded items presented really few nominations (less than 4 out of 12 key informants). Then, a further refinement was carried out with another researcher and key informants of the case studies that led to nineteen final constituents. These items were validated by another researcher and all the managers, and the interviews were scanned again recoding every segment to match the nineteen items. Finally, they’ve been presented and discussed in three international conferences so as to receive feedbacks and collect doubts and criticisms about their meaningfulness, clearness and relevance. No concerning mismatches concerning the selected items were found. The final nineteen constituents and their connection with the structural dimensions taken from literature are presented in the next paragraph.

2.4 – The operational constituents

It is first necessary to recall the methodology that has been employed to detect the constituents. It has been actually a mix of interviews outcomes, dialogues, direct observation and documents reading at the companies’ offices, that led to the identification of the sixty items. The first activity, executed with managers, was the assignation of each item to one structural dimension codified in literature. Theoretically this part should have been quite easy, because managers were asked to describe the implementation features of each dimension, consequently the emerging items could have been easily assigned to the correspondent dimension. Despite this, some items presented ambiguity because they were mentioned in more than one dimension or because the manager couldn’t neatly distinguish their belonging. These items were temporarily assigned to virtual in-between dimensions (before checking their frequency), subsequently the reduction procedure led to their elimination, as they were usually replication and mix of two other clearly distinguished items. An example was the item “complaint form”, which was firstly assigned to the dimensions “formality” and “accessibility” and was in the end deleted, as two other items, “written rules” (under the first dimension) and “communication means” (under the second), were deemed more significant and exhaustive, and its frequency was indeed rather low. Another case was the “improvisation” item, which was in-between the “influence” and “human intensity” dimensions, and had been adsorbed by “process adaptability” and “training” items respectively under the former

and the latter aforementioned dimensions.

Furthermore, some other items were re-labelled or dropped. For example, the item "monetary compensation" was relabelled in "variety of recoveries", since further analysis of the interviews pointed out that it was mentioned as a particular instance of the available and suitable recoveries, that are the key variable. Some other items were dropped, mainly because they were adsorbed by other items or were deemed too generic and little significant in terms of operational decisions. For instance, "dependency" was adsorbed by "headquarter impositions", which was relabelled "headquarter dependency", and was finally included in "autonomy", in turn renamed. On the other hand, the item "collection", referred to complaints, was dropped because it didn't underpin any operational decision and was this way deemed irrelevant. Table 10 summarises the last stage refinements.

Retained 31 items	Freq	Dim	Refined	Dropped	Final constituents
COLLECTION	10	ACC		General concept, not operationalized	
COMMUNICATION MEANS	10	ACC	Renamed		COMMUNICATION CHANNELS
COMPLAINT RESTRICTIONS	8	ACC	Renamed exalting assistance availability		PROVIDE ASSISTANCE
LIST OF FAILURES	8	COM	Renamed		LIST OF POSSIBLE FAILURES
LIST OF RECOVERIES	8	COM	Include the concept of suitable options		LIST OF RECOVERY OPTIONS
MONETARY COMPENSATION	12	COM	Linked to the limited number of suitable recovery actions		VARIETY OF RECOVERIES
RECOVERY OPTIONS	10	COM		Adsorbed by list of recoveries	
AUTONOMY	8	DEC	Renamed and extended		EMPOWER FLEs TO IMPLEMENT DECISIONS
DEPENDENCY	8	DEC		Adsorbed by headquarter impositions	
EMPOWERMENT	8	DEC	Renamed		EMPOWER FLEs TO MAKE DECISIONS
HEADQUARTER IMPOSITIONS	7	DEC		Included in autonomy	
COMPLIANCE APPRAISAL	10	FOR	Renamed		APPRAISE COMPLIANCE

MANUALS	7	FOR	Renamed and extended with the content		WRITTEN RULES AND PROCEDURES
PROCEDURES	10	FOR		Adsorbed by manuals	
REVIEW POLICY	12	FOR	Renamed		MAINTAIN PROCEDURES UPDATED
RULES	8	FOR		General concept, not operationalized	
COMPETENCES	4	HRI			COMPETENCES
IMPROVISATION	8	HRI - INF		Adsorbed by adaptability and training	
REWARDING	8	HRI		General concept, not operationalized	
SELECTION	10	HRI		Adsorbed by competences	
SPECIALIZATION	12	HRI			SPECIALIZATION
TASKS ASSIGNATION	8	HRI		Adsorbed by specialization	
TRAINING	12	HRI			TRAINING
ADAPTABILITY	8	INF			ADAPTABILITY
CUSTOMIZATION	8	INF			CUSTOMIZATION
EXTRA MILE	8	INF	Renamed		GOING THE EXTRA MILE
BUDGETING	7	SYI		General concept, not operationalized	
CONTROL SYSTEMS	9	SYI	Recoded with consequent operational activities		IMPROVEMENT ACTIONS
DATABASES	8	SYI	Extended with instruments to elaborate data		DATABASES AND REPORTING
PMS	8	SYI	Renamed		CONTROL PERFORMANCES

REPORTING	8	SYI	Adsorbed by database and reporting

Table 10 – A summary of the refinement of 31 more frequent items leading to the final 19 constituents

In order to let better understand these tricky situations and fully comprehend the development of the research, a complete description of structural dimensions of recovery systems, as enounced by Smith et al. in 2009, is provided hereunder.

Accessibility (ACC) is the characteristic of a recovery system that describes its reachability from the customer point of view. In recovery literature this concept is often called "voice" and is defined in terms of providing open lines of communication to customers. Capturing this elusive voice of the customer is considered key because, without it, organizations cannot even attempt a recovery. Thus, accessibility is the provision for capturing the voice of the customer when failures occur. There are different methods for capturing the voice component, by using inexpensive phone technologies to facilitate feedback or exploiting the internet as a viable option for customer contact. This dimension essentially express the way a provider tries to be in contact with the customer and strive to guarantee easy and effective ways to complain.

Comprehensiveness (COM) is defined as the extent to which the organization make attempts to be exhaustive or inclusive in considering all potential recovery activities once a failure has occurred. To be comprehensive implies having figured out all suitable alternatives of recovery after any possible failures, in order to be prepared to face problems in a structured manner, counting on a multiple options list. This dimension witnesses the managerial attention given to recovery process and the possibility to anticipate the analysis of the moment of truth by setting a list of possible solutions to use when problems arise. Comprehensiveness is discussed in the recovery context since effective recoveries are achieved through systems, operations, and actions that are painstakingly evaluated, and it has also been proposed that firms need to manage service failure moments by having broad knowledge of scenarios and potential solutions. More in depth, service companies have to appraise feasibility, practicality, fairness and understandability of their solutions.

Decentralization (DEC) is described as full empowerment of frontline employees or devolution of responsibilities for handling recovery activities. It is also usually described and measured in terms of task delegation and resource autonomy, that occurs when employees have the authority to correct mistakes so as to ensure quick problem solution. This aspect is credited with implying several beneficial effects in terms of recovery performance. Furthermore, decentralization encompasses decision-making authority and is interpreted as a positive aspect of a system that stimulates operations' execution near to the aggrieved customer.

Formality (FOR) is the dimension that refers to the degree to which service recovery is

controlled by explicit rules, procedures, and norms that dictate recovery activities. It is useful to reduce potential dangerous variance that may exist across interactions after a service failure has happened. It is supported by several indications from literature that suggest the creation of guidelines and clear procedures to govern the action of the employees. This dimension is rooted in empirical and anecdotal contributions too, where the positive impact of clear rules and mechanistic recovery structures is exalted in stabilizing satisfactory outcomes.

Human intensity (HRI) addresses the extent of resources devoted to human component of the recovery system. It is the magnitude of resources committed to recovery as evidenced by the provision for employee training as well as the extent of employee. When human intensity is high, employees are trained to handle failure instances and evaluated in terms of their relative effectiveness in doing so. In the recovery context, the devotion of resources is often addressed in the form of properly trained employees, as employee training for service recovery allows for a universal understanding of the entire service system and an incentive for employees to function as integral components of that system. This dimension concerns also the recruitment policy and the stimulation and rewarding attitude of the firm to foster employees performance.

Influence (INF) and is defined as the ability of the system to adapt depending upon the situation and “position” of the customer, it addresses the ability of a customer to exert control over the handling of a failure and of the recovery system in general. It represents the capability of a recovery system to modify its operating procedures and outcomes to better meet customers expectations. In a high-influence situation, the customer may be able to dictate how a failure will be rectified based on his/her sense of the situation, needs, and desires to control the outcome. This concept appears in the form of control over either the recovery process or decision and is also addressed in studies where it has been noted that customer involvement in the recovery process is essential to ensuring positive outcomes. Thus, this dimension deals with the flexibility of the system to deliver satisfactory performances without compromising too much its efficiency.

System intensity (SYI) represents the amount of resources and efforts that are put in place to assure an adequate function of the system beyond its human component. Resources dedicated to the alteration and improvement of the recovery system itself reflect the degree of system intensity. More formally, system intensity measures the magnitude of resources committed to the tracking and monitoring of service failures and recovery efforts. The intensity of the recovery system deals with the ways in which data are gathered, maintained, and utilized. It embraces also the general efforts of the organization to provide adequate instruments tools and mechanisms that support people in accomplishing their recovery mission.

A graphical representation of items creation, connection to the dimensions, reduction, and final codification is provided in figure 16.

Figure 16 – Representation of the coding process

The final nineteen items are the result of an intense work of comparisons and conceptual analysis, which led to forty eliminations for overlapping or irrelevance reasons. Each of them refers to a unique structural dimension, representing its second-level constituents, which are managerial explicative variables used in the practical implementation.

All nineteen items are intensively used in the following chapters, which explain their meaning and their features in each case, in order to comprehend recovery operations, and build a conceptual framework to allow for comparability and address business sector and organizational configuration influences. The codified items are grouped by structural dimension and are presented according to the alphabetical order of their father:

- accessibility:
  - communication channels: it refers to the different means that are available to the customer to manifest the problem to the provider;
  - provide assistance: it represents the possibility for the customer to get help during the complaining phase;
- comprehensiveness:
  - list of recovery options: it addresses the capability of the firm to codify a comprehensive menu of suitable interventions that may be executed to correct problems and restore customer satisfaction;
  - list of possible failures: it is the capability of the firm to formalize and figure out all possible failures, resulting in a range of predetermined solvable problems;
  - variety of recovery: it refers to the variety of different solutions that can be delivered, depending on the particular constraints that characterize the firm or the business;
- decentralization:
  - empower FLEs to make decisions: it is the amount of power of frontline employees to

make decisions about the complaint handling, defining what should be done to properly recover;

- empower FLEs to implement decisions: it refers to the possibility of FLEs to act and deliver the recovery that has been defined;

- formality:
  - written rules and procedures: this item deals with the degree of codification of activities, guidelines and operative schemes that have to be respected as internal regulation, and are expected to be known and followed by all the employees;
  - appraise compliance: it refers to the intensity of procedural controls that verify prescriptions' respect and monitor written rules efficacy;
  - maintain procedures updated: it catches the need of rigorous review moments that may lead to improvement indications or change in routines;
- human intensity:
  - competences: it addresses the endeavour to identify and formalize a clear set of specific competences for recovery employees, highlighting which skills are required;
  - training: it refers to the presence of update sessions about recovery practices, and the importance that investments in recovery education have in firm culture;
  - specialization: this item describes how recovery tasks are distributed and what is the firm rational approach to organize the human recovery work;
- influence:
  - adaptability: it is the capability of the process to modify its normal steps and phases in order to fulfil customers' particular needs or desires;
  - customization: it refers to the possibility of the firm to personalize recovery outcomes (compensation extent, discounts, other services) depending on the specific failure and customer reaction;
  - going the extra mile: it describes the attitude of the firm to over-perform in order to delight the customer and exceed his expectations through an outstanding recovery;
- system intensity:
  - improvement actions: this item deals with the degree with which the firm plans and executes improvement actions based on failure data analysis;
  - databases and reporting: it refers to firm's investments in organizational efforts and technological support to recovery practices, especially in storing retrieving and elaborating failure data;
  - control performances: it addresses the provider's attention to performance monitoring,

highlighting what is measured and how it is measured.

It is important to underline that managers were asked to explain how the seven structural dimensions, as described in literature and reported through the complete definition provided above, were implemented in their organizations, with particular attention to what is considered in their deployment. This means that, despite the conceptual definition taken from literature, their contribution consisted of a clarification of the main operational decisions that have to be made. This concrete approach led to the identification of the nineteen constituents, which give deeper knowledge about how to manage the structural dimensions. Two specific considerations deserve attention, regarding comprehensiveness and decentralization dimensions. Comprehensiveness, whose definition in literature refers both to inclusiveness in considering all possible recoveries, painstakingly evaluation of failures and availability of a menu of suitable solutions, was basically intended by managers as appropriateness of investigation and propensity to provide adequate response with preconfigured scenarios. These elements are all present in literature definitions, and interviews focused on how they are achieved, leading to identify the presence of a structured list of failures and recoveries and the availability of a broad range of suitable solutions as operational elements that compose comprehensiveness dimension, and catch managerial decisions to implement it. This led the researcher to evaluate these emerged elements in order to understand the level of comprehensiveness implementation, uncovering also the reasons why particular decisions were made.

Furthermore, since decentralization dimension both in literature and from field evidence is related to FLEs power to make and implement decisions, its name is changed in “empowerment” (EMP), that allows for a better distinction from one of the two profiles of the organizational configuration (the decentralized one).

A score (high, moderate, low) was assigned to each operational constituent of each case, allowing for a detailed evaluation of each dimension, whose implementation level depends on the scores assigned to its constituents. Then, a clear explanation has been provided for each constituent in order to get the evidence from the case study. Table 11 describes the meaning of each score for each dimension, with respect to the identified constituents, to let better understand cases analysis. The meaning of the “high” and “low” levels has been strictly defined, taking inspiration from field evidences and previous literature elaboration, in order to clearly distinguish these levels, attributing the score “moderate” to all the situations in between. Obviously, with such qualitative variables the experience of managers and the rational work of the researcher have been fundamental to assess the level of each constituent. Notwithstanding the investigation of four case studies and the direct involvement of managers in the evaluation make the scores attribution reliable.

Dimension	Level	Constituents - meaning
ACC	High	Several communications means are available to complain, every complaint is received and processed after its manifestation by the customer
		Employees provide assistance to customers in complaining with direct contact (in person, email, phone)
	Low	No visible communication channels are offered
		Customers have to find the way to complain by themselves
COM	High	A comprehensive list of possible suitable recoveries exists and is daily used
		Failures are recurrent and stable, everything is known and properly codified
		A large variety of different recoveries is provided to fit the specific situation
	Low	Recoveries are hypothesized as the failure is communicated
		There is no way to exploit previous failures knowledge to deliver recovery
		The variety of recovery interventions is extremely limited
EMP	High	Frontline personnel has the power to implement decisions and run recovery actions
		Frontline personnel has the power to make all necessary recovery decisions
	Low	Frontline personnel is not allowed to perform any recovery activities
		Frontline personnel should always be authorized by managers to recover
FOR	High	Employees must just do all what is written in official procedures
		Compliance with procedures is regularly controlled
		Procedures are periodically reviewed and employees are formally updated
	Low	There are no written indications, any directive – if present – is verbal
		There are no appraisals or audit activities about procedures' respect
		Changes in procedures depend on subjective adaptation and are not codified
HRI	High	A clear set of "domain specific competences" is required and nurtured
		Continuous firm training is provided, scheduled and checked
		Personnel is highly specialized and proficient in particular recovery segments
	Low	No "domain specific competences" are expected for recovery employees
		No recovery firm training is offered and possible updates are voluntary
		Personnel is interchangeable and homogeneously roughly prepared
INF	High	The process may be totally tailored on customer needs
		The recovery compensation is customized depending on the situation
		Exceeding customer expectations is deemed a virtuous practice and it is

		pursued
	Low	The process is absolutely inflexible
		No customization is allowed
		Nothing more than the due/compulsory recovery is offered
SYI	High	Structured learning mechanisms are implemented starting from collected data
		Complete detailed databases and advanced reporting tools support decisions
		There is a periodical accurate measure and evaluation of performances
	Low	Just voluntary learning by experience is present
		Decisions are made on a perceptive base without any data
		Performances are not measured

Table 11 – Explanation of "high" and "low" levels of operational constituents

As far as the "competences" constituent of human intensity dimension is concerned, evidences collection was driven by a specialized thesaurus, called DISCO, which is presented in detail in the Appendix. DISCO, the European Dictionary of Skills and Competences, provides a large range of competences that are univocally identified and defined in several language of the European Union, assuring the exact meaning of each of them, without overlaps or inconsistencies. Managerial personnel was asked to indicate and choose freely from the dictionary those competences that were deemed more suitable and desired for recovery employees, allowing the researcher to get deep insights about the required profiles. In fact, DISCO competences are divided in two big categories, "domain specific" and "non domain specific" competences, that refer to technical sectorial specific skills or general ones, and help the researcher investigate what the appropriate recovery profiles look like depending on the sector.

The author scored also the nineteen constituent variables to allow for cross case comparison, on the basis of his subjective understanding of the intensity level of the relative item for each case, in collaboration with companies' key informants that helped validate findings. Any evidence, such as anecdotes told by the respondents, was used to assess the level of items, and scores were validated after managers' approval. In the within case analysis, the scoring uses 3 ordinal level scale (low, moderate, high), that assesses the intensity with which each item is implemented (according to the evaluation by the researcher and the informants). The score "high" means that the item is strongly implemented with respect to the classification in table 11, while "low" has an opposite meaning. It's important to underline that when high or low scores could not be attributed to an item, a "moderate" score was assigned to describe an intermediate level, adequately justified.

2.5 - Reliability and Validity

In order to assure the reliability and validity criteria for qualitative research, the author followed main literature guidelines (Yin, 2009; Voss et al., 2002), which are summarized in table 12.

Type of test	Case study tactic	Research approach for the test
Construct validity	Use multiple sources of evidence	Direct observation, managers interview, employee feedbacks, consultants/interns' contributions
	Differentiate each construct	Item refinement was executed in order to obtain clear distinct categories
	Seek triangulation to strengthen validity	Official firms data, strategic vision, operatives point of view and field analysis were triangulated
Internal validity	Do pattern matching or explanation building	Each item score is explained by operative implementation and linked to context specificity
	Connect findings with literature and causes	Research findings are linked with existing knowledge about recovery operations
External validity	Use replication logic	Cases selection design was inspired by literal and theoretical replication logic
	Declare explicitly rationales of selection	Cases are selected of a rigorous basis and should respect specific requirements drawn from literature
Reliability	Use study protocol	Interviews addressed specific investigation points but were semi-structured to deal with particular issues
	Develop cases database	A database of coding items and refinement was implemented as the research advanced

Table 12 – Elements of research design that enhance validity and reliability

As this research has an exploratory nature, that aims at deeply analysing recovery operations in order to point out relevant research propositions for further testing, there is no ambition to be exhaustive in terms of codified variables or identified influences. Despite this, the in-depth case study approach with a mix of quantitative data and qualitative evaluations, gathered through semi-structured interviews, has allowed for a profound understanding of recovery operations. In the end, the use of the same methodology in all the cases together with the refinement phase has led to the possibility of full comparison between firms. Furthermore, reliability and validity attention has inspired a meaningful case selection that is pivotal to permit significant findings achievement.

As far as replication logic is concerned, the research design was inspired both by literal and theoretical replication logic. In particular, despite no indications are present in literature for

predicting research results, it is expected that BNL and Intesa Sanpaolo share some commonalities about the implementation level of some dimensions, due to the belonging to the same specific business sector. More specifically, formality and human intensity are expected to be influenced by the specific banking regulation, which requires specialist training and rigorous procedures. The same is valid for Fiamm and Conergy that, sharing a servitized manufacturing environment, are expected to be less obliged to comply with official norms, and are supposed to train human resources to cope both with technical product aspects and commercial details. Similarly, different results are expected to emerge from firms of different sectors, mainly due to the role of regulation and physical product presence that connote the investigated business contexts. On the other hand, organizational configuration is meant to play an analogous contingent role, and in particular empowerment dimension is expected to be similar in firms with the same organizational configuration, and different across centralized and decentralized ones, since the empowerment of frontline personnel seems to have a tight connection with the locus of responsibility and controlling activities (Belasco and Stayer, 1994). These expectations and hypothesis are formulated just on a rational base, but provide a logical guideline to assess the results that are achieved through field research.

Furthermore, good-performing organizations, specifically with regard to recovery practices, were selected to enable conclusions drawing according to contingency theory. Put differently, high performing organizations were selected, with very different characteristics in terms of organizational configuration and business sector, to observe how proficient recovery outcomes are achieved by implementing different choices to fit specific contexts. Regarding banks, Italian regulation sets maximum time spans for recovery processing, 30 days for banking failures (ATM, loans, payments, etc.) and 90 days for investment queries. Intesa Sanpaolo has an average performance of 23 days for banking claims and 66 for investment ones, whereas BNL is able to process most of complaints under 10 (banking) and 30 (investments) days. As far as quality of recovery is concerned, a proxy of customer evaluation was found in the percentage of complaints that escalate (due to unsatisfactory answers by providers) to a further stage of judgement (Ombdusman extra-tribunal entities). This indicator is very low for both the banks (about 2%), which actually are in the top 4 considering 14 among the largest competitors banks in Italy. These quantitative indicators, accompanied with good survey results about customer satisfaction (embracing recovery practices appraisal) aligned to top competitors, led us to consider these firms highly performing and adequate for the purpose of this research.

As far as manufacturers are concerned, Conergy Italia organizes every year a large survey among its customers to receive feedbacks about its performances, and a specific part is devoted to

recovery activities. It assesses several dimensions, such as speed of processing, clearness of procedures, overall satisfaction with the complaint management, satisfaction with the solution proposed, speed of solution implementation. Emerging results reflect the appreciation of customers for Conergy recovery efforts, leading to satisfactory results, which are confirmed also by the elevated customer retention among customers with particular commercial agreements (about 85%). On the other side, Fiamm S.p.a. uses a structured internal appraisal of its customer satisfaction evaluation. It is based on quantitative time indicators about recovery performance and tries to catch, through very structured interviews, all relevant facts and their outcome that have required Fiamm recovery intervention, estimating the customer evaluation from its emails, requests, and possible legal actions. Moreover, due to the fact that Fiamm applies higher prices than its far-east competitors (with comparable quality), management is confident that recovery interventions are appreciated, and actually they are considered one of the main customer retention drivers.

All in all, the four cases provide evidence that their recovery strategies are appreciated by their customer base, and this is a fundamental aspect for considering the selected companies relevant as good benchmark with respect to their recovery operations implementation. It is important to underline that the selected case studies are all leaders company in their sectors, which distinguish both for size and quality of their products and services, and this is supposed to be an important characteristic in order to gather relevant findings.

Having defined research methodology and protocol, the next chapters develop within case and cross case analysis.

Chapter 3 – Within case analysis

Chapter 3 addresses the within case investigation and presents the score attribution and the associated explanation for each case. In particular, each firm is presented starting from strategic mission, in order to link its characteristics to the case selection criteria, to specific recovery processes and macro design decisions, to catch its peculiarities in dealing with recovery practice. This way firms' mission and general traits are depicted, then a process mapping chart of service recovery is presented with a detailed explanation of the process for each case as it has been ascertained by the author (checked with middle managers). Besides, a detailed table is provided to summarize the score of each variable (operational constituent) and its full description; finally explanatory comments are provided to rationalize the evidences gathered and enrich constituents evaluation with interviews and observation findings that add useful details for a deep understanding of recovery implementation choices and features, representing the within case discussion. This chapter develops the within case analysis that aims at pointing out the meaning of the operational constituents of service recovery dimensions in each case, deepening at the same time the influences of the business sector on their implementation, nonetheless some interesting differences will emerge due to polar organizational configurations.

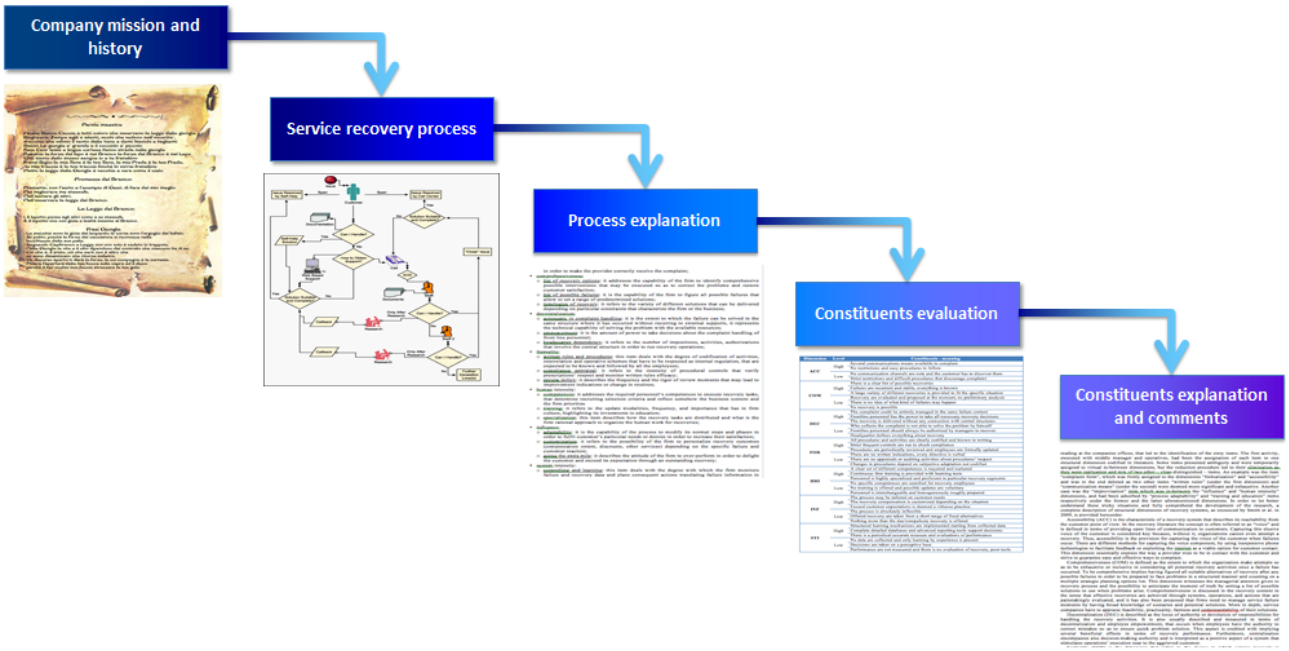

Figure 17 – Main steps of within case analysis replicated in each company

Figure 17 represents the scheme of illustration used for each case, so as to enhance a structured form of reading and analysis that enables the comparison phase. The cases are presented in the

following order, which is deemed more appropriate to enhance a full comprehension of constituents implementation, and lets the reader autonomously mature the cross-case comparison:

- Fiamm S.p.a. – Horns Division;
- Conergy Italia S.p.a.;
- Intesa Sanpaolo S.p.a.;
- Banca Nazionale del Lavoro S.p.a..

3.1 – Fiamm S.p.a. Horns Division

3.1.1 – Company description

Fiamm S.p.a. is an Italian industrial group with headquarters in Montecchio Maggiore (province of Vicenza) and productive plants all around the world. The company operates mainly in the automotive sector and manufactures starting batteries, industrial batteries, horns and antennas. Fiamm was born in 1942 in tut its story began even earlier, when young engineer Giulio Dolcetta collaborated on the grand civil works of the Twenties and the electrification projects of the Thirties, experiences that allowed him to foresee the potential of Elettra, which was bought and transformed into FIAMM. The name of "Fabbrica Italiana Accumulatori Motocarri Montecchio" (Italian Manufacturer Motorvehicle Batteries Montecchio) is testimony to the origins of its founders, just as the main offices location in Montecchio. The group is really rooted and linked to its native territory, promoting many initiatives meant to repay the local community for giving the company expertise and human resources. Despite this, Fiamm during decades has continued to innovate and has accepted challenges of globalization and international competition, developing business outside Italy and keeping its leading position over the years. In 2000, a new industrial plan of great expansion results in the opening of new subsidiaries in the USA, the acquisition of numerous battery distributors throughout Europe and important investments in technology. In 2007, the share structure was consolidated to two family groups with Stefano Dolcetta (Managing Director) and Alessandro Dolcetta (Vice-President). It heralds a return to ideals of continuity, development and innovation, while dedicating a great deal of attention to motivated youth, who learned their trade within the company. Nowadays the group is present in 60 countries with about 3.300 employees worldwide and about 950 in Italy. The 2011 turnover amounted to a value of 540 million euro, and about 70% of it was realized abroad from Italy. In order to be near the requirements of its clients, it boasted 14 production establishments in such strategic markets as Italy, USA, Czech Republic, Brazil, India and China. The commercial distribution and marketing of its products is entrusted to about 20 sales and technical branches – in Germany, United Kingdom, Czech Republic, Poland, Slovakia, Austria, France, USA, Spain, Brazil, Japan, Singapore, China and India – and a network

of important distributors. Over the 69% of Fiamm's proceeds come from automotive components, starter batteries, acoustic signals and antennas, whereas about the 31% comes from industrial batteries. Its acoustic signals are present in 80% of vehicles produced worldwide, while in the industrial batteries sector, Fiamm is one of only three global producers and the third producer in Europe.

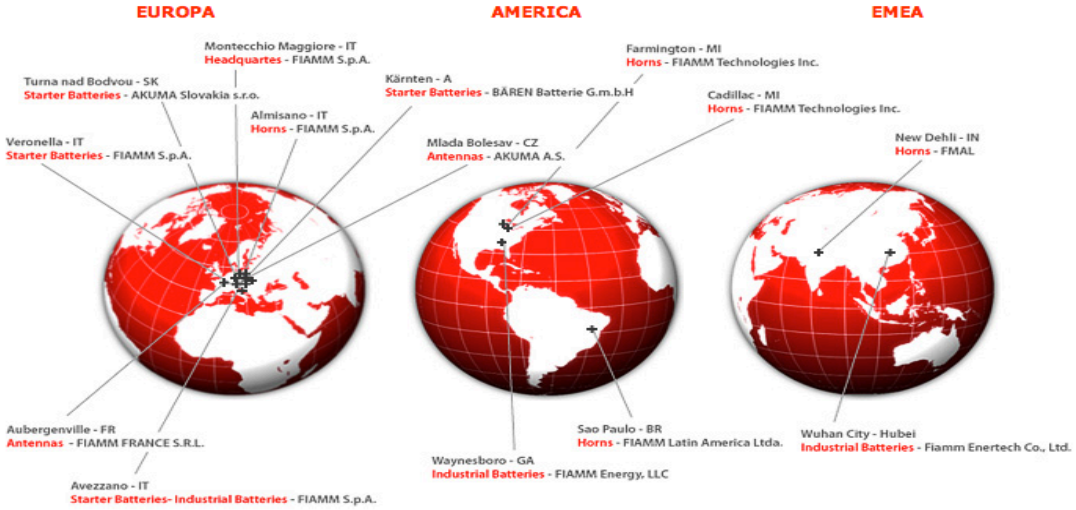

Figure 18 – Fiamm Group worldwide presence (Fiamm website, 2012)

Figure 18 represents the distribution of production plants all over the world, highlighting all the firms of the group. Fiamm philosophy is declared on its web site where it is affirmed that "our objective is to satisfy and anticipate, in a sustainable way, the needs of the market with regards to clean energy materials, safety and communication for the mobility of people, goods and information at a global level. [..] We want to do it with excellence: in the planning, realization and distribution of products and services to our satisfaction and that of our clients" (Fiamm, 2013). The concept of service is clearly mentioned also in the official philosophy statement of the company, and witnesses how its visions embraces also immaterial aspects that go beyond the technical expertise embedded in products. Servitization aspects are deepened in the following, where the analysed division is presented.

The horns division is the business unit of the group that manufactures and distributes acoustic devices for automotive application, passengers cars, commercial vehicles, light and heavy trucks, marine, public transportation, emergency and military vehicles. Figure 19 represents a sample of products realized by the horns division for different types of installation. It is important to underline the vision of this business unit that, despite being part of the Fiamm well-defined stand-alone division with specific objectives, resources and responsibilities.

Figure 19 – Examples of products manufactured by horns division (Fiamm website – 2012)

As far as the organogram is concerned, it has its devoted General Director, Commercial Manager, Quality Manager, Production Manager, and its specific production plants that are independent from other business units sites. The horns division has more than 600 hundreds employees and a quite stable turnover about 120 million euros, with 5 production plants the largest of which is in Italy (Almisano), very close to the headquarter offices. These plants belong to 4 different legal entities, each of which refers to the Fiamm Group; they are: Fiamm S.p.a. (Almisano site), Fiamm Technologies Inc. (Cadillac and Farmington sites - USA), Fiamm Latin America Ltda (San Paulo site - Brasil), FMAIL (New Delhi site - India). As far as recovery practices are concerned, a centralized approach is used, and subsidiaries performances and main decisions are governed by the headquarter, as deeply explained in the following.

Fiamm is a world's leading supplier of horns, and is at the forefront of the research and development of technological innovations for multi-functional sound systems. Quoting from the website page about horn division it is possible to catch the main success factors of this business unit: "the constant search to improve the quality of the product, the level of service offered the client from planning to installation, the constant investment in new technologies and a commercial, technical and global industry have allowed Fiamm to become the privileged supplier to the most important automobile makers" (Fiamm, 2013).

These elements witness again and confirm the presence of service components in Fiamm offering, which is determinant for its competitiveness. Fiamm customers are usually cars tracks or special vehicle manufacturers o suppliers that may be directly owned by the retailer brand or may be their first tier suppliers (B2B operator). Automotive sector is particularly tensioned in terms of quality and margins, and customers expect to be assisted and *served* with really high standards. Indeed the supply is not just about the production and realization of technically perfect physical products, but it encompasses a sort of supply performance that is strictly defined and detailed in contracts (Primo et al., 2007). A mere manufacturing product-based philosophy would imply that defective horns are treated with product-recovery techniques (Thierry et al., 1995), they can be returned and replaced, or repaired, and the value of defective parts is just subtracted to the due amount to the supplier (if there is no repairing or replacing but just waste). On the contrary, Fiamm

can't just receive returns and apply discounts or refund defective parts, because the commercial relationship is based on a service level agreement which embraces different aspects of the supply, and the respect of these service level conditions is vital for Fiamm capability to preserve future orders, as it is one of its distinctive competences that allows for differentiation from far-east operators. The main service aspects of the relationship between Fiamm and its customers concern:

- technical adequacy of horns that allow for the respect of customer's production timetables and installation needs;
- logistic punctuality of the supply that has to meet customer's plans;
- packaging aspects of shipments that should be tailored depending on customers' processes;
- service recovery interventions to protect customer's profitability, efficiency and quality standard assurance;
- innovating and consulting skills in developing applications and solutions for new models necessary for customers' products.

As far as the first point is concerned, it is important to notice that customers don't just buy functioning parts but they expect a certain service level of supply, that is a specific rate of defective horns that should be under a specific threshold. Indeed, discovering a problem with a horn during the installation in the production line creates many costs for the customer, much higher than the mere cost of the part (less than five euro in most of the cases), which is charged on the provider. These costs – up to 100 times the mere product price - come from the stop of the line, the workforce time to uninstall the part and replace it from the inventory, the office time to process the problem and notify it to the provider, loss of efficiency. All thing considered a single problem may create reimburse requests for several hundreds euro, as it is not the sheer technical failure that is contested but the service failure in assuring installation continuity. The same happens for logistics problems, lines run out of materials and have to stop, or in case of packaging problems (missing information, wrong labelling, etc.) that may affect customers' processes. These phenomena are common for all the customers (with different targets), and make recovery processes absolutely fundamental. In fact recovery performance are clearly ruled within contractual details. The service nature of these relationships is confirmed also by the internal quality system that has changed from a product-centric perspective to a more service-oriented one. Actually quality measurements are made through internal evaluation of Fiamm performances, and during recent years have radically changed from considering pure technical aspects to taking into account multifaceted relational dimensions, such as the capability to adequate to non-scheduled orders, speed in dealing with complaints, adaptability in meeting customer requests of improvement, ability to manage critical incidents.

Before entering the case study analysis it is necessary to analyse table 13, that matches selection criteria to the evidences of this specific case is provided.

CASE STUDY SELECTION CRITERIA	EVIDENCES OF THIS CASE
Be a servitized manufacturer that still maintains focus to products but also offers services as a strategic driver to success	The firm sells only self-manufactured products and is appreciated for the service level it's able to guaratee
Be a business to business operator	Customers are car manufacturers or suppliers
Present a formalized complaints management division with its own responsibilities and tasks, a clearly-identified head and explicit declaration for customers	There is a complaint management division supervized by the customer-quality and customer-service manager
Be a medium-large company in order to have relevant datasets and structured managerial culture	120 million revenues, 600 employees, more than a thousand complaints per year
Have a clear commitment in serving the customer and deem recovery actions critical as well as fundamental for mission deployment	High service levels have to be assured, as stated in contracts, to maintain the future supplies, and recovery is pivotal for this
Be part of a group of companies (in order to study organizational configuration role)	This division belongs to the headquarter and coordinates 4 other plants of 3 different legal entities of the group, with a centralized recovery organization

Table 13 – Evidences from Fiamm horn division case study to match selection criteria

The next paragraph delves into the recovery process so as to deeply describe product-service failures and recovery activities.

3.1.2 – Fiamm recovery process

It is important to start by explaining what the most relevant product-service failures are and how they should be treated according to customer policy that is directly reflected in company's procedures. Complaints can be divided into two large categories, named zero-km (or plant) returns and warranty returns. The first category deals with all those problems that are identified before the vehicle exits the plant of the customer (this way the car hasn't run any kilometres yet, that's the reason why it is called zero-km defects), and can be product problems o logistic problems. Under the first group there are defects such as irregular installation components, damaged parts, wrong

calibration, presence of extraneous parts, presence of sand/water, electric elements unconformity and so forth; while in the second group there are complaints about documents errors (dates, codes, etc.), processes/packaging mistakes (missing booking of the picking, twisted labelling), wrong accessories, missing documents, wrong quantity or models of horns, missing/delayed deliveries. Each error and complaint may generate charges for the provider of hundreds of euros. Since it is possible to reach globally (logistics and product problems together) one thousand zero-km complaints per year (one complaint may involve more problems), it is really important to follow strict recovery procedures, as errors may threaten future supplies and mine current profitability. Indeed, costs related to failures may rise several hundreds of thousands euro per year, that make this division work quite under pressure. Besides, warranty returns (the second big category) refer to those problems of horns that manifest after the vehicle has been sold to the end-user (the final customer) and the car producer's warranty coverage has started. The two processes are represented in figures 20 and 21, and explained in detail in the following.

The zero-km complaint management process starts with the problem communicated by the customer to Fiamm complaints management division. This communication is usually web-based (through the use of a devoted web portal created ad hoc for customer relationships management) but may also use other means such as telephone and emails. Automotive customers are really exigent and usually want to have a devoted prepared person to contact in case of complaint (mastering the customer language), this way phone calls are always accepted in order to demonstrate Fiamm commitment in taking care of the failure. A direct contact between customer's side employees and Fiamm operators is necessary to enhance a complete failure data collection. This leads to the filling of a particular file, whose records are the complaints received and acts as working tool in managing the recovery process. After failure communication and notification of imminent shipment, the customer proceeds to send the defective parts to Fiamm plants. It is important to consider that Fiamm strategy is to offer high service level to its customers also through physical (relative) proximity, that means that plants' location tries to replicate customers' ones, in order to assure quick response and recovery. Despite this, there are no decentralized dealers spread over the territory that can be addressed by the customer, and clients have to complain to one of the production plants. This way some operative recovery activities are executed at the plant level, that means that each customer refers to the specific plant that manufactured the horns, but all five Fiamm plants are strictly organized following headquarter processes' instructions, and the central site oversees all recovery steps and guides negotiations, reimbursement authorizations and sometimes even the technical analysis, with a rather centralized approach.

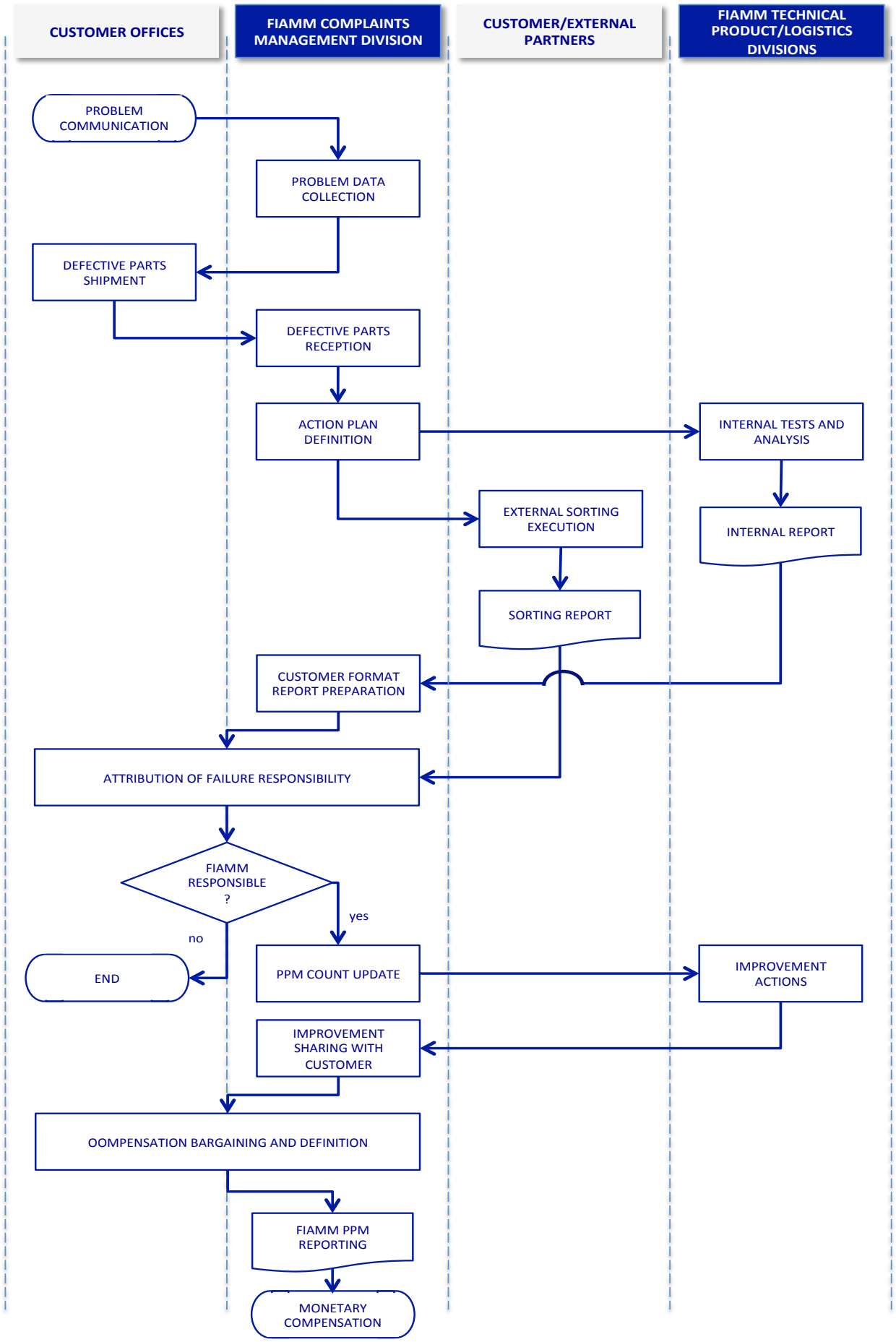

Figure 20 – The Fiamm zero-returns recovery process

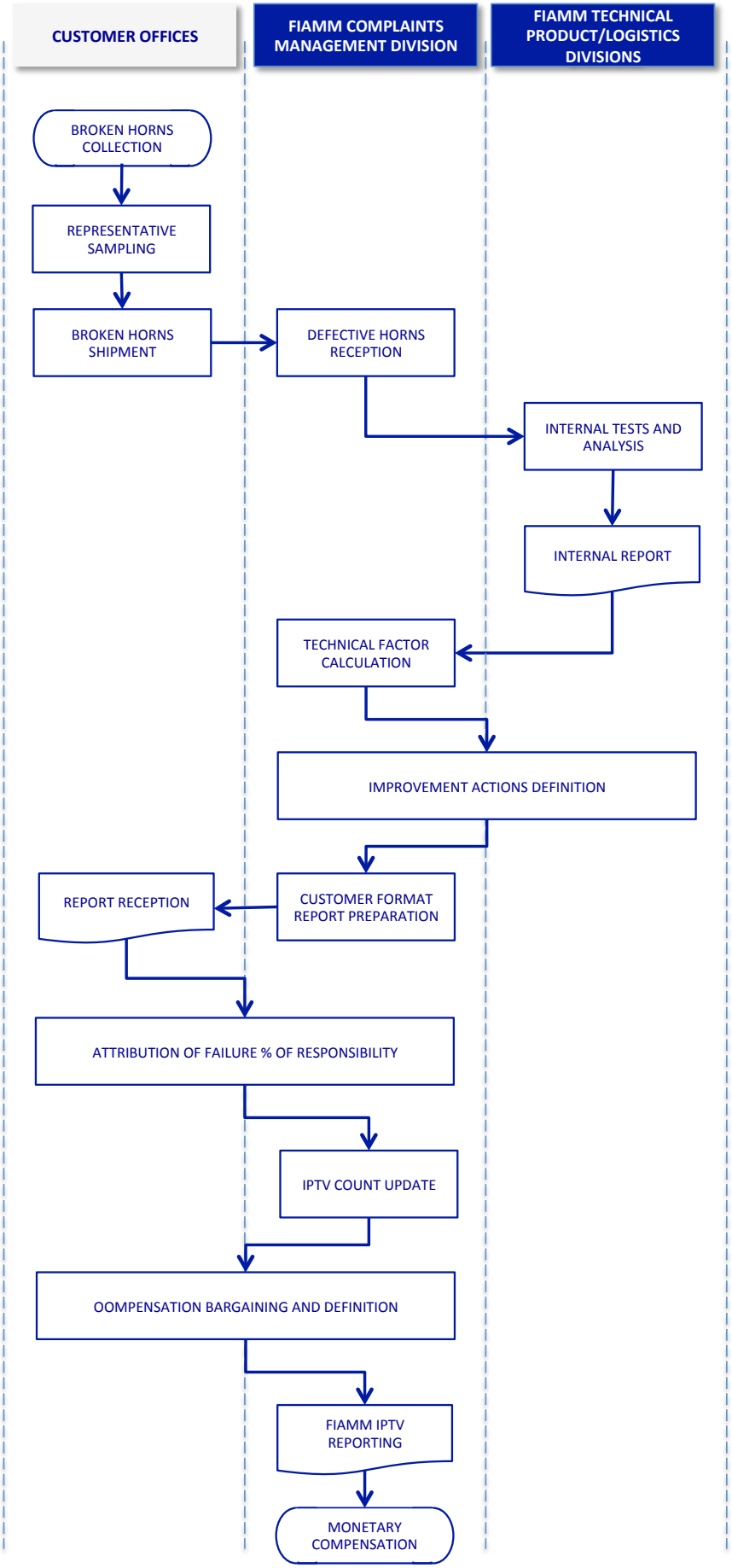

Figure 21 – The Fiamm warranty recovery process

This way defective parts are received by the specific plant that produced them, and according to complaint information and requests a specific action plan is prepared, that consists of managing sorting activities and testing the defective parts of the lot. Sorting activities are usually run by external devoted companies, and consist of controlling and testing each horn of the delivered lot and sometimes also of lots that have been realized for future shipment. This activity is very labour-intensive and expensive, because it is executed by external specialized companies which carry out accurate controls, leading each sorting to cost sometimes more than a thousand euro. Sorting is a very important recovery activity as it lets the customer be protected from future possible failures and productive losses, and it is often accompanied by a general audit of quality standards that put Fiamm under stressing pressure, as the customer has full visibility of provider's operations and makes consequent evaluations also for future supplies. Internal tests are vital to understand the specific cause of the detected problems and they are the technical basis for improvement actions and analytic considerations that may protect Fiamm from opportunistic behaviours. They are executed by the technical product division (or the logistic division for logistic problems), that is continuously in contact with complaint management division. In fact sorting activities and internal tests result in specific reports that are used by Fiamm to prepare the customer complaint report (a comprehensive report realized in the customer format), a fundamental document that is used:

- to reassure the customer about future supplies and about provider competences in deeply managing emergencies and mastering technical issues;
- to demonstrate full availability in assisting the customers and solving the specific problem;
- as input for the bargaining process that results in responsibility attribution;
- as basis for the PPM (defective Parts Per Million supply) calculation, that leads to monetary charges, overall evaluation of the supply and future consideration about re-patronage;
- to draw improvement indications that have to be carried out by Fiamm.

Actually this report opens the phase of attribution of responsibilities, which has a considerable influence on supply profitability and the customer relationship, too. If no Fiamm's fault is found the process ends, otherwise a detailed improvement action plan has to be shared with the customer to provide full assurance about future supplies and provider's helpfulness in meeting customers' expectations. The plan implementation is pivotal to regain customer trust and again involves technical product and logistics divisions. The following phase is the compensation evaluation, that is a complex bargaining stage between Fiamm and its customers in defining the monetary reimbursement that is not just the mere equivalent of defective horns value, but it comprehends also external sorting activities costs, the loss of efficiency of customer lines, the time spent for complaint management, the cost of the operators to remove and ship the defective parts. The conclusion and

definition of the monetary evaluation (that implies money transfer or discounts) and other recovery interventions, such as improvement projects or customization of logistics processes, enables the redaction of the reporting package, which is very important for continuous improvement and interventions to best fit customers needs and reduce failures. The PPM reporting is also pivotal in determining the customer perceived quality of the service level of the supply, which is determinant in preparing future commercial bargains, and that entails heavy penalties in case of excess of predetermined thresholds. The process ends with the final reimbursement and closure of the claim.

The warranty claims process is slightly different. It starts with the collection, by car producers, of several defective horns that have been replaced by car manufacturers' dealers. This collection has a predetermined frequency that is customer specific, happening usually monthly three-monthly or six-monthly, and it is different from zero-km claims that are manifested as failures happen. This collection encompasses only a certain number of replaced horns and not the totality, since the number would be about several thousands, and in light of the trust between the customer and Fiamm this sampling is deemed representative of the entire population. This is a very important hypothesis since there is usually no information about the sampling methodology. After the customer has shipped the horns to Fiamm, the complaints management division works with the technical laboratory in order to test the products and find the cause of the problem. This phase is crucial, because the report of the product analysts is used by the complaints management division to calculate the technical factor, which represents the percentage of total replaced parts that fall under Fiamm warranty coverage. For instance if the customer declares and demonstrates to have performed 1.000 replacements, ships to Fiamm 50 horns and the laboratory in collaboration with the complaints office finds 20 defective horns due to Fiamm responsibility, the resultant technical factor is 20/50=40%. This number has to be validated through a negotiation with the customer and a detailed report is provided to the customer with all defects analysis and the undertaken improvement actions. When the attribution of the % of responsibility is concluded it is necessary to calculate the IPTV index, which represents the calculated service level and may determine some penalties and compromise future supplies. The IPTV (incidents per thousand vehicles) is a service-product performance that is contractually established and, as the PPM count, is determinant in customer evaluation of the overall relationship with Fiamm. After having defined the number of horns covered by Fiamm warranty the monetary compensation negotiation begins. It is important to remind that the customers charge Fiamm not just the cost of the horn but also the cost of workforce and other general costs of the spare parts management. This way the calculation and approval of the technical factor is once again fundamental to preserve supply profitability and prevent potential

losses. When the monetary compensation is defined the warranty reporting is updated and the reimbursement is authorized, closing the claim and the complaint processing.

3.1.3 – The operational constituents evaluation

Process description underpins the real contribution of this research, which is the full comprehension of the operational constituents of recovery processes, in order to catch specific insights into managerial choices. The following table 14 analyses the nineteen constituents found through the coding procedure, and shows the shared evaluations about each constituent that emerged from several interviews with managers and operatives.

Dimension	Constituents	Score	Comments
ACC	Communication channels	High	Web portal claims, phone calls, mails and written documents are admitted
	Provide assistance	High	Customers find always support in complaining
COM	List of recovery options	High	Possible recoveries and customer requests are well known and stable over time
	List of possible failures	High	Failures are almost totally codified
	Variety of recovery	Moderate	Several techniques are adopted but there are few innovation opportunities
EMP	Empower FLEs to implement decisions	Low	FLEs just do operative tasks, negotiations are run by managers and all the analysis are executed by laboratories
	Empower FLEs to make decisions	Low	FLEs can't make decisions independently
FOR	Written rules and procedures	Moderate	Some processes are documented
	Appraise compliance	Low	No controls are executed
	Maintain procedures updated	Low	Policies are rarely checked
HRI	Competences	Moderate	Just language competences are checked, technical competences are matured on the field
	Training	Moderate	Some general training sessions are delivered

	Specialization	Low	Operators are interchangeable with logistics and product recovery areas
INF	Adaptability	High	The process is modifiable
	Customization	Moderate	It is seen as a threaten for process efficiency but it's actually implemented
	Going the extra mile	High	It is one of purposes of service recovery division
SYI	Improvement actions	High	Each complaint entails improvement actions and knowledge sharing
	Databases and reporting	Moderate	Tools and instruments exist but are not integrated in the ERP
	Control performances	High	Specific performances are measured and evaluated periodically

Table 14 – Scoring summary of operational constituents of Fiamm horns division recovery system

Accessibility obtains an high score due to the large variety of communications means that are available to the customer and the readiness of Fiamm in receiving and processing (collection, storage, elaboration, etc.) every form of complaint, from phone calls to emails, from web signals to written letters. Customers have no rules determined by Fiamm to respect in terms of complaining process, even though they usually try to be efficient using the same communication routines, enabling quick responses and minimizing errors. Notwithstanding each customer has a particular – almost unique – favourite communication modality and Fiamm has to manage this variety by assuring prompt simple and effective access to complaint management division. In other words, the provider tries to be really open to customer needs, as it is necessary to demonstrate full availability to such exigent clients. Furthermore, since contracts define specific service levels, it is absolutely essential to manage problems and claims as fast as possible and accessibility becomes a fundamental driver to customer satisfaction and proper complaint management. This is a managerial choice that depends on customer expectations and sacrifices Fiamm efficiency (several channels to manage, multiple sources used by customers, possible inconsistencies between different signals, etc.), so as to offer maximum flexibility in receiving complaints. In addition, customers always find assistance in complaining, since the quality of the complaint enables further stages and is useful to enhance accuracy of processing. Accessibility is a fundamental element for overall relationship and underpins good recovery outcomes in terms of time and quality, taking into account all possible contact points with customers and providing assistance.

Comprehensiveness is quite high too, a list of possible failures and recoveries exists since possible product defects, logistics errors, and service failures have been deeply studied during years and have been clearly codified. It is possible to find new types of failure that arise from new products, but technological expertise lets the provider identify most of the causes of complaints and activate responsive improvement action plans. As far as logistics problems are concerned, Fiamm realized a specific "errors catalogue" that is a useful input to observe problems trends and define coherent recoveries. In fact, available recoveries are sufficient to provide adequate answers to customer complaints and are basically known and codified, they are: monetary compensation (almost always present), correction (quick additional supply, new packaging labels), replacement, specific analysis and customized reports, ad hoc technical improvements. Most of recoveries are really tangible and no particular apology or empathy behaviours are required. Fiamm customers know that failures may happen and know also the majority of their typologies. This way apologies are not as important as an effective distributive (referring to justice theory) recovery could be, as it actually aims at maintaining customer profitability. Obviously customers don't appreciate that the same failures re-occur, but they know that technology limits, complex variety of demands, and required high service levels entail the impossibility of a zero-defects service-product offering. This way, some defection rates are tolerated, but stressing pressure is exercised on Fiamm in order to reduce them. All in all the comprehensiveness is high, operators usually know what kind of failure has happened and how to recover, due to an organized experience and repetitive semi-standards problems, whose deep knowledge is rooted in a well-known technological platform which is reflected in products. Notwithstanding the recovery process is really complicated, as further analysis and negotiations are necessary to protect future supplies and current Fiamm profitability.

Empowerment is low, the complaint management division frontline personnel is not able to completely process the complaint, as it needs the technical support of the laboratory and product/logistics divisions. Frontline employees that usually interacts with customers' side operators have to collect information, assure data integrity and completeness, maintain the contact and coordinate analysis tasks and indexes calculation, but need laboratories help to execute analysis and have no power to autonomously bargain the recovery. This activity, which represents the core of the process, is strictly under managers' control, as it is vital for future expectations and current firm performance. This way empowerment in making decisions is low. Observing the holding complaint management division allowed the researcher to ask about other sites coordination, and it was discovered that the central headquarter defines all procedures and oversees all relevant negotiations, sometimes being physically present with the quality manager. This is a sort of delegation without empowerment (Belasco and Stayer, 1994), employees are stimulated to do

things right, but can't decide what the right things are. This way empowerment is really low and large efforts are made by the central office to monitor and coordinate all plant activities. Frontline employees can't take the initiative and even on implementation side are not empowered. On the other hand this kind of control is essential to maintain a global alignment between subsidiaries and protect the competitive position over different markets, nonetheless strict control stops opportunistic local behaviours that may threaten company's world standing and credibility. Indeed, most of customers are active in several markets and are served by different plants/companies of Fiamm group, the homogeneity and quality of the service/supply is a pillar of the group mission and no differences have to be found. In the end, as a result of global coordination's needs and quality standards and profitability protection, FLEs empowerment is low and a central control is maintained over the key phases of the recovery process.

Formality is quite low in this complaint management division: there are some written guidelines that try to explicate the recovery process and to provide operators with clear universal instructions, but the majority of employees have to run recovery operations depending on the specific situation, the failure severity, the customer priority and the contingent available resources. This way the formalized guidelines are rarely followed and there are no controls of their respect, because managers know that it's very difficult to establish universal procedures that allow contextually rigor efficiency and customer satisfaction. Actually there are no frequent official policies' reviews or internal auditing that monitor operational adherence to compliance documented prescriptions, and the main focus is on assuring adequate assistance and solutions to customers' problems instead on respecting written procedures. Hindrances, particular requests and urgencies don't let operators follow the manual of intervention, but they concentrate on result-oriented recovery execution, which seems to be rooted in a practical solution approach of real concrete problems. On the other side, there's no regulation to comply with, leaving Fiamm the freedom to act as it best think to match customer expectations.

As far as human resources intensity is concerned a low score is assigned. It is due to the low specialization of operators, basically interchangeable, that don't need to have specific academic or professional preparation, and don't follow frequent recovery training sessions. In fact, there are no specific "external" technical competences that are necessary, whereas internal experience both on commercial details, product specifications and customer understanding and management are vital to assure congruous recoveries. In other words, recovery capabilities and competences are matured through working in a learning-by-doing perspective, which is not stimulated through structured interventions but that results in productive operators trained by experience. No specific high-level competences are required in complaint management office but, referring to the DISCO thesaurus,

some “non domain specific competences” emerged, such as “communication in foreign languages”, “effective questioning”, “competence in professional communication”, “negotiation skills”, “coordination of people and resources”. In particular it is important to notice that even if technical laboratory is external to the complaint management division, employees should develop some technical competences in order to provide guidelines for the analysis and effectively interacts with product experts and customers’ (sometimes technical) personnel. Indeed some “general technical skills” such as “analyse technical data, designs and preliminary specifications” or “determine installation, service, or repair needed” or “monitor production equipment operation” are mentioned as necessary competences. Even though “what to do” is mostly defined by managers, it is fundamental for employees to master technical knowledge so as to achieve better results during communication with customer, showing off appropriate competences. All things considered human intensity is deemed low because specific investments in training are scarce and there is no structured tasks assignation and specialization. This score doesn’t mean that employees can’t do their job proficiently, but just measures the characteristic of the system that doesn’t consider specific training activities, and operators’ perception of not being involved in structured initiatives. On the other side, human resources are characterized by a general “smartness” that compensates this lack of particular stimulations, and enhances a self-learning process rooted in experience. When questioned about the “whys”, managers and operatives agreed in answering that they prefer “training by solving” real problems once they happen, instead of organizing devoted sessions. Anyway, everybody acknowledged the need at least of extemporary focus groups, aimed at sharing evidences gathered during recovery execution. The “training” constituent of this dimension is in the end neglected, due to continuous stress imposed by an overarching workload, that witnesses again a certain superficiality in dealing with human resources management, and underlines the fundamental role of their personal competences in filling this gap.

Influence is really high, since Fiamm strives to assure the best recovery to its customers. This way, the recovery process (represented in figures 20 and 21) may vary depending on specific customers’ requests, and compensation is bargained every time with small different hues, and sometimes substantial concessions occur to meet customer expectations after severe failures. The provider policy is to assure the desired service-level by correcting all problems, and then compensate the customer according to responsibility assignation. In this vein, a high level of influence is coherent with company’s mission, which aims at fulfilling the largest amount of customers’ requests protecting at the same time its profitability. However, going the extra mile is very difficult for Fiamm without compromising its margins, this is the reason why this constituent has a moderate level. The only chances for exceeding customer expectations consist of managing

non-planned orders or proposing useful innovations, elements that are well-considered by Fiamm, but which are aside recovery interventions.

System intensity is really high due to the systematic improvement approach that is adopted by Fiamm and somehow imposed by customers. Each complaint is actually codified under specific categories, which allow to monitor the typologies of failures occurred and provide improvement indications for managers. Fiamm recovery operations are really oriented to eliminating problems' causes at the roots, since this prevents further failures and guarantee appropriate care to customer needs. Indeed, customers expect to notice tangible improvements in Fiamm service level after a failure has been signalled. Thus, every claim results in a specific analysis report which is extremely useful to build a database of problems and possible interventions. This is extensively used by the company, and enriches also comprehensiveness dimension. Thus, many problems exert a "beneficial" effect on the capability to improve and are important drivers for product-service innovation, thanks to the provider attitude to transform each failure into a source of suggestions. This is possible thanks to a complete really detailed database which allows many significant reporting statistics and analysis. These are presently executed by managers and haven't been integrated in the official ERP yet. Indeed, the very complex and various work of recovery people, that have to maintain customer relationship in a positive state despite failures, coordinate technical analysis, compute exact failure rates, receive managers indications to run the negotiation, doesn't match the rigidity of data entry of the ERP system, and no large investments are sustainable at the moment. As a consequence database and reporting constituent received a "moderate" score, due to the absence of specific devoted software solutions to assist operators. Notwithstanding the system intensity is high due to the very effective learning processes and the proficient monitoring of performances. Recovery practices are really vital for customers' retention and must respect specific targets that are contractually defined. The most important ones concern time and quality performance, which are the speed of the recovery and its outcome. As far as the first performance is concerned, customers expect Fiamm to take charge of the claim in a few days after its communication, to provide a detailed analysis report and to arrange sorting interventions in a definite time span (from 5 to 90 days depending on the customer), and to definitively close the claim in another specific time span. Time spans are strictly ruled by specific service level recovery agreements, that explicitly treat maximum duration of the phases and require this way strict monitoring. Time performance is internally measured through comparing target spans with the duration of recovery phases, which are calculated from dates inserted into the database by the employees. On the other side, quality dimension of service recovery is really difficult to catch as it represents the customer satisfaction with recovery activities, and it is measured through qualitative

evaluations of managers and operatives that try to interpret customer perceptions of Fiamm recovery. Indeed, it is assumed that once the customer accepts the agreed compensation, he should be satisfied. Despite this, it is also important to catch his thought and expectations in order to have a more accurate proxy of quality performance. This qualitative difficult evaluation is supported by a more objective one, that observes the number of positively solved complaints resulting in problem solution. These quality and time dimensions have been selected as they are the most important for the customer and also represent the strengths of Fiamm offering. Cost performance is monitored by the controlling function in order to maintain company's profitability, but is not as relevant as the others for customers, and actually it is considered it just an order qualifier once responsibilities have been assigned.

This paragraph has analysed the 19 operational constituents of service recovery in Fiamm, highlighting the reasons why particular decisions have been made and how recovery practices have been operationally implemented. This case has pointed out the fundamental role played by the context, that seems to affect human intensity, formality and comprehensiveness constituents. Further comparative and explicative considerations are drawn in the cross case discussion chapter, while the next chapter presents the second manufacturing case study.

3.2 – Conergy Italia S.p.a.

3.2.1 – Company description

Conergy Italia is the Italian subsidiary of the multinational group led by Conergy AG, the German head of the group. Conergy (referring to the entire group) operates in the photovoltaic sector and supplies complete solar energy solutions from a single source. It defines itself as leading photovoltaic solution and service provider, offering its customers tailor made, worry-free, high-performance packages – be it for private or commercial roofs or for multi-megawatt installations (Conergy AG website, 2013). Conergy is listed on the Frankfurt Stock Exchange and currently employs around 1.200 staff. Since its foundation in 1998, the company has produced and sold more than 2,2 gigawatts of clean solar energy and planned and constructed solar power plants with a capacity of over 420 megawatts. This means that in 2012 Conergy solar plants all over the world has generated more electricity than one nuclear plant. Conergy business definition encompasses both products solutions and services that are expressly declared also in its mission. Quoting from its website (the company portrait area) it is possible to notice how "along with supplying the hardware – all the necessary components for a solar plant – Conergy's complete solutions also include a full range of related solar services from architectural planning to yield insurance providing total peace of mind". Once again it is important to notice that the customer is really interested in product

performance rather than in its physical features per se. Indeed the panel is an object that is usually bought for its capability of producing photovoltaic energy, that means that customers expect it to produce a certain amount of energy and money as well, and that its possession aims at taking advantage of its functioning as a cash generator. That's the reason why many services arose around this product, since it is just a means to deliver a production performance that can be fostered through other services. During projects' design and development phase, Conergy's experts manage planning and financing. After the plant has been constructed and commissioned they take care of monitoring, maintenance, technical management and insurance. Conergy's service portfolio is one of the most comprehensive in the industry and is backed by a more than 14 years' expert experience. This has enabled Conergy to satisfy more than 10.000 customers worldwide. For its turnkey solar plants all around the world, Conergy applies its high level standards, supported by a continuous quality assurance process, which far exceeds the usual market requirements and whose quality has been certified and confirmed by TÜV Rheinland. Once again the value proposition is strongly based on the mix of physical high quality components and professional tailored services, that are the result of many years of experience and customers' need analysis in this sector. Conergy always underlines its total devotion to high product quality standards, which underpin its capability to offer profitable insurance and maintenance services. Conergy is active in over 40 countries across 5 continents, and with subsidiaries in 15 countries, Conergy's sales, engineering and service teams bring solar system solutions directly to the customer. Due to its strong international footprint and global sales presence, Conergy customers are never far from a Conergy expert to work with them on the best solution for their circumstances. Since the European solar markets are mature, the photovoltaic commercial proposition as service provider calls upon an unrivalled network of premium quality installers, integrators, solar specialists and wholesalers to gain access to the rooftops and thus support homeowners, private investors and professional businesses in their efforts to "go solar". In the emerging photovoltaic markets, the solar experts are focusing on large-scale solar plants, collaborating with international and local investors to help them develop and deliver their construction and investment projects. As a result, around three-quarters of the group's sales came from international markets in 2012, a trend which appears to continue as Conergy consolidates its leading position in the global market (Conergy website, 2011). Conergy is thus characterized by two main aspects: the international dimension and the service inspiration that stems from the need to differentiate its offering through services, in a business where product competition is extreme all around the globe. As far as products are concerned, figure 22 presents some on the most popular items that are manufactured by Conergy AG and are offered all over the world: solar modules (the core of the photovoltaic energy production), mounting systems (necessary

to make the panels fit the specific installation), inverters (a component that enables the energy transfer to the electrical network), system monitoring devices (useful for remote control and production monitoring), accessories (cables and other materials that complete the installation package).

Figure 22 – The most popular products manufactured and distributed by Conergy

Group sales were in 2010 over 900 million euro but the context suffered an overwhelming change during the last two years. Figure 23 is drawn from the annual financial report of Conergy group and it shows how the firm had to face a tremendous reduction in revenues, that in 2012 have plummeted down to about half the 2010 income. This fall is not rooted in enormous customer losses or in a large contraction of the market, but it's rather due to the extreme fall of photovoltaic panels prices that was mainly caused by new low-cost competitors coming from the far east.

This is also confirmed by the analysis of the amount of megawatts installed, that had just a small contraction over the last two years due to market saturation. The incredible shock of market prices resulted in a profound affection to the group turnover, but thanks to the prompt intervention of cost-cutting and restructuring the firm was able to survive and actually to maintain its leading position throughout the markets. Meanwhile, lots of photovoltaic operators have failed and even several far east young operators bankrupted. Due to the asperity and the competitiveness of the present market, Conergy had to acknowledge the need to elaborate a new strategy that wasn't just based on the product superiority but that tried to catch all possible opportunities to protect its profitability and above all its customer base.

Conergy Italia S.p.a. - located in Vicenza - is the subsidiary of the group that has best interpreted this need to change the business perspective and explore new commercial solutions aside the mere product selling. Italy is the most important market for Conergy after Germany, and it counts for the 16% of revenues, as represented in figure 24. The Italian subsidiary has strict connections with the German headquarter as far as products logistics is concerned, since production plants are located near Hamburg. On the other hand, the Italian subsidiary is actually considered the lead innovator in

services of the group, as it has been the first unit that has tried to move from traditional push logic of manufacturing to a more customer-service oriented philosophy, believing in its retention power and differentiating benefits (Mathieu, 2001). This subsidiary is particularly autonomous in terms of commercial decisions and management, except for product topics that have to be discussed with the headquarter.

Key Group Data

The Conergy Group data in an overview according to IFRS

		2012	2011	2010
Sales	EUR million	**473,5**	754,1	913,5
Germany	EUR million	**130,2**	199,0	416,6
Abraod	EUR million	**343,3**	555,1	496,9

Figure 23 – The sharp fall of revenues of Conergy group

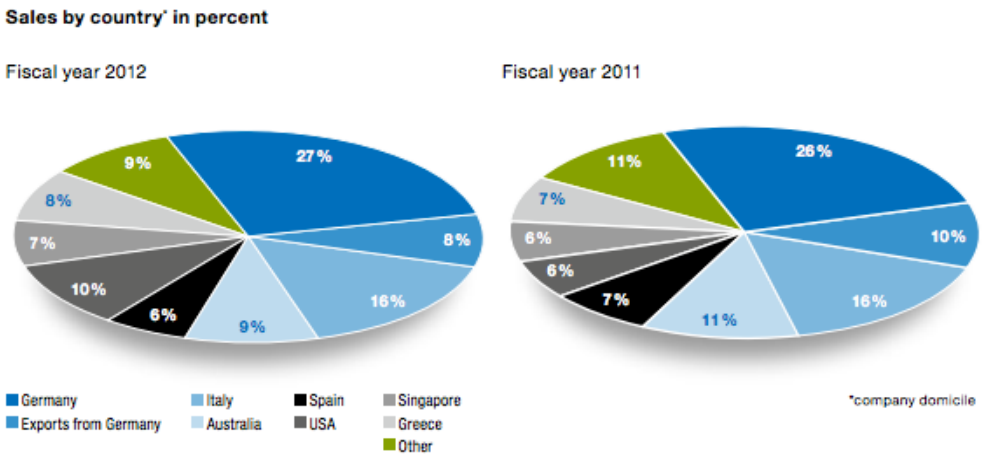

Figure 24 – Conergy group sales split by country

Furthermore it is quite logical that local subsidiaries maintain great autonomy, as this sector is particularly dependent on public incentives and law peculiarities that have to be deeply known by operators in order to support their customers. Coherently, recovery operations, performance control and responsibilities are in charge of the local subsidiaries, with a decentralized organization. It is important to underline that Conergy products have been historically assembled in Europe with high quality standards that didn't allow any further price reduction: competing on the price dimension means compromising margins and the capability of the firm to generate economical results. This way, the group strategy moved to service development, and Conergy Italia was together with the German holding, the main explorer and implementer of service offering. Figure 25 represents the conceptual map of the differentiating reasoning that led Conergy to invest on the service side.

Basically, the triangle stands for the three main differentiating strategies that have been explored by Conergy and its competitors through benchmarking: the final decision to pursue a servitization strategy was made in light of the impossibility to implement further price reductions, and the small opportunities given by product innovation, which is quickly reaching its matureness and would require large investments in a moment of great uncertainty.

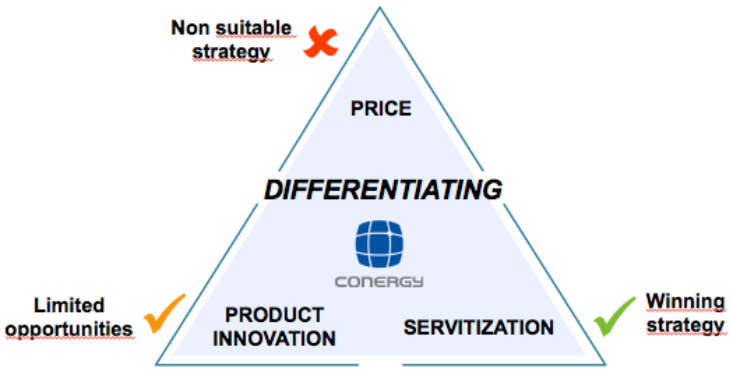

Figure 25 – A conceptual map summarizing servitization foundations for Conergy

It is also important to remark that, according to Conergy managers, the most profound reasons that underpin the purchase of a solar panel are essentially linked to financial convenience. Indeed, despite the enormous reduction in prices and moderate improvement in the technology performance, the fall of public incentives made the product less attractive. This witnesses how people basically invested in solar panels since they were much more profitable than other alternatives with analogous risk such as sovereign bonds, and panels were extensively considere similar to financial investments. All in all the servitization strategy was declared by activating a devoted project that was named “customer at the centre”, in order to stress the pivotal importance that the firm assigned to this project. The firm started by building focus groups and questionnaires that could help Conergy uncover customers’ desires and unsatisfied needs, and went on analysing product-service failures that may suggest particular offerings coming from problems manifestation. As a consequence, a large list of services was created, and a first part of them has been implemented and communicated through a devoted catalogue and a connected event called “make it easy”. This is a program that aims at providing Conergy’s customers with exclusive services. Conergy’s customer base is very various and it is mainly composed by photovoltaic installers, operating in the business to business segment, that are served also trough specialized salespeople all over the territory. Installers may have really different sizes and may be structured small enterprises or large investors, they act as distributors and present many different needs, due to their disparate competences and specific end users targets. As a consequence, the service catalogue has to address

quite different customers, that's the reason why most of services were created with different options to match various customers' segments. The list of services comprehends:

- sales support during important negotiations;
- training courses at the Conergy Academy;
- Conergizer: a web based application to quote and design solar installations;
- financial services to support the purchase;
- leasing services;
- flash reports shipment, in order to provide full support during the installation;
- preliminary, definitive and executive design;
- plant installation and commissioning;
- insurance services;
- administrative support in getting authorizations and public incentives;
- energetic audit and consulting;
- remote monitoring and planned maintenance.

Service segmentation consists of different discounts depending on the belonging segment or the possibility to access particular customized services. The large amounts of services offered Conergy Italia generates some recovery needs, that are formalized through customer service complaints. These have to be summed up to product claims in order to have the total number of product-service complaints. Is it important again to remark that even product failures (such as an inverter crash o a photovoltaic panel failure) entail severe service recovery needs, in fact the final customer doesn't accepts just the replacement of the broken part, but expects also a compensation and the full reimbursement of the lost production. Positioning as "made in Germany" creates high expectations in customers, that believe that the product is almost infallible and that the guarantee covers every kind of significant losses. In such a competitive tensioned sector it is thus fundamental to provide satisfying recovery in order to retain customers and assure future supplies (and respect contractual engagements). Consequently, Conergy Italia (just "Conergy" henceforth) decided to create a devoted complaints management division to deal with product and service failures, guided by the aftersales manager (who directly relates to the CEO), which was deemed the most appropriate area operating mostly on situations triggered by a complaint. The recovery process is thus presented in the following paragraph, before that the usual summary (table 15) is provided to match case selection requirements and firm characteristics.

CASE STUDY SELECTION CRITERIA	EVIDENCES OF THIS CASE
Be a servitized manufacturer that still maintains	The firm sells mainly Conergy products and has

focus to products but also offers services as a strategic driver to success	started a servitization process so as to complete its offering
Be a business to business operator	Customers are installers and distributors
Present a formalized complaints management division with its own responsibilities and tasks, a clearly-identified head and explicit declaration for customers	There is specific complaint management division which is under the supervision of the head of aftersales function
Be a medium-large company in order to have relevant datasets and structured managerial culture	Italian turnover was about 80 million in 2012 with about 70 employees, group sales are about 370 million. Italian 2012 complaints amounted to 904 product claims and 441 service claims
Have a clear commitment in serving the customer and deem recovery actions critical as well as fundamental for mission deployment	The firm undertook a servitization process starting from collecting complaints in order to provide full assistance to aggrieved customers and undertake actions to retain them
Be part of a group of companies (in order to study organizational configuration role)	Conergy Italia is the Italian subsidiary of the multinational German group Conergy AG, with decentralized recovery organization

Table 15 – Evidences from Conergy Italia case study to match selection criteria

3.2.2 – Conergy recovery process

Before analysing the service recovery process it is necessary to deepen what the main possible product-service failures are. Product failures concern mainly inverters crashes (the large majority), broken solar modules, wrong installation packages, breakages of the monitoring systems. As most of products are guaranteed for many years it is frequent that Conergy has to replace the broken part, after having analysed the problem and having ascertained that it falls under its responsibility. Customers usually expect also a kind of compensation, in terms of discounts for future supplies, or application of favourable commercial conditions (such as deferred payments deadlines). Indeed, their incomes suffer some losses when something during the installations fails as the energy production stops, since revenues from selling energy do the same. On the other side service failures are much more various and under this category most of non-product complaints are classified, even if they're not strictly referred to a service in the catalogue. Actually many complaints are labelled as "flash", meaning that they are just a signal and not really a complaint, anyway they stand for a kind of inconvenience feeling by the customer and deserve to be registered. Service complaints concern:

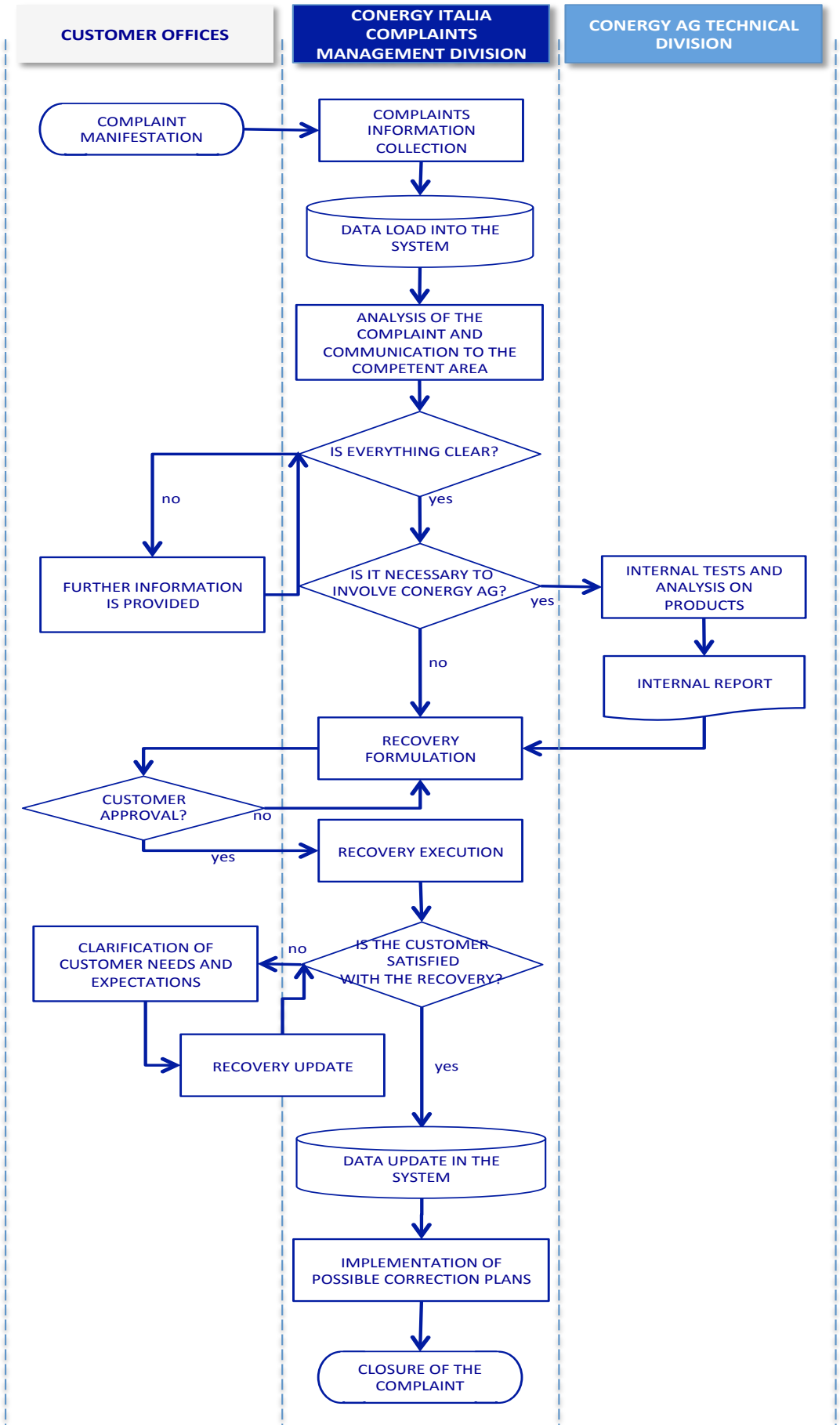

Figure 26 – The Conergy recovery process

- delays and problems (technical equipment) in transportation and logistics;
- lacking of information about shipments or installations;
- delays or missing prompt replacements of defective parts (the replacement is intended as a service and its delay entails service recovery needs);
- missing or wrong (promised) recovery interventions;
- unavailability or absence of aftersales personnel.

Figure 26 represents the recovery process, which is explained in the following. This process is valid both for product and service complaints, with the unique difference that product failures usually require also the involvement of the headquarter. Anyway, the totality of product failures entails much more than mere product recovery such as repairing remanufacturing or replacement. Basically the involved actors are Conergy complaints management division, Conergy AG, and customers. This standard procedure is applied to the large majority of customers, while very important customers may follow a different process which is actually based on personal direct contact with Conergy key accounts managers. As far as the normal procedure is concerned, customers can complain and manifest their problems using three different communication means: online form available on Conergy website, phone calls and emails. Faxes and normal mail communications are discouraged since they are slower and more difficult to store, but are still available. Customers are free to contact both their trusted sales person or the customer care, and the contacted employee has to catch every useful detail of the complaint, in order to fully understand the failure and figure possible recoveries, and forward them to the customer care back-office operator. He inserts all gathered data into the system, formally opens the complaint, and forwards all necessary information to the area (logistics, aftersales, sales, engineering, marketing, administration) employees the complaint refers to. If some details of the complaint are not clear the customer is contacted in order to receive complementary explanations about the claim, and after this preliminary analysis it is possible to define whether the complaint needs involving Conergy AG or may be completely processed by the Italian subsidiary. Indeed most of products problems require a technical analysis in order to uncover if the failure responsibility is Conergy's or not (similarly to Fiamm). If so, the customer receives a mail from the customer care of Conergy Italia with all the necessary indications about how to ship defective products to German site, in order to let the central laboratory analyse them. This analysis usually results in an internal report which determines the responsibility of the failure, defines suitable Conergy recoveries and contextually indicates who (which legal entity – whether Conergy AG or Conergy Italia) will sustain the costs of the recovery. Conergy AG is involved just for some products failures (those that require replacement and analysis), whereas the totality of service complaints is entirely processed by Conergy Italia. After

having defined all details and responsibilities of the problem, a recovery proposal is formulated by the complaints management division discussing with the area that caused the problem, and sometimes even with the top management depending on failure entity and customer importance. The customer is not involved in this phase in terms of recovery definition, and he is just kept informed about the selected compensation, that has to obtain customer's approval before its execution, and some negotiations may occur in this phase. Then, once the recovery has been performed, if the customer is not satisfied with its execution there is another confrontation phase, where his specific needs/desires are deepened, and recovery may be updated and re-delivered. After that the problem may have been positively solved or partially solved, sometimes even unsolved, and the customer care operator proceeds to update data in the system and close the complaint, describing its final status (solved, partially solved, unsolved) and most relevant dates (failure date, opening date, formulation date, closing date). If the problem highlights some particular failures or criticalities in the process, it is possible that a specific team is arranged to correct the problems at the origin through process improvement interventions. For instance if a carrier service provider is always late and doesn't communicate on time its arrival, Conergy may decide to switch, on the other side if many complaints deal with absence of frontline personnel a job rotation practice is introduced in order to increase the reachability of aftersales workforce. The recovery process formally ends with its closure in the system, even if a follow up phase may exist if substantial relevant improvements have to be urgently implemented.

It's important to observe that recoveries are not preliminary defined through contractual details, and this is mainly due to the facts that customers have different needs and would be extremely chaotic to manage so many different details, and not convenient locking Conergy in guarantee obligations when not necessary. Moreover the absence of contractual engagements allows the firm to be more flexible and define each time the specific intervention, according to the contingent situation of available resources and severity of failure. The next section analyses the evaluation of operational constituents of service recovery dimensions.

3.2.3 – The operational constituents evaluation

This section is devoted to the presentation of operational constituents of service recovery dimensions, so as to uncover the operative meaning of the coded elements and understand the whys underpinning managerial decisions (table 16).

Dimension	Constituents	Score	Comments
ACC	Communication channels	Moderate	Web portal claims, phone calls and mails are accepted, personnel is sometimes absent

	Provide assistance	High	Customers receive help in complaining
COM	List of recovery options	Moderate	A specific list doesn't exist but experience enhances quite standards recoveries
	List of possible failures	High	Failures are recurrent and codified
	Variety of recovery	High	Several methodologies are used and actually requested by customers
EMP	Empower FLEs to implement decisions	Moderate	FLEs govern the process and deliver recovery, but have to resort to the headquarter for logistics and product analysis
	Empower FLEs to make decisions	High	FLEs can make decisions on their own within their assigned budget
FOR	Written rules and procedures	Moderate	Some processes are codified in written form
	Appraise compliance	Low	No control routines exist
	Maintain procedures updated	Low	Procedures are seldom updated
HRI	Competences	Moderate	Technical competences are necessary to deal with aggrieved installers and matured on the field
	Training	Moderate	Some general and specific trainings are organized
	Specialization	Low	Operators are interchangeable within service and product areas
INF	Adaptability	High	The process is modifiable
	Customization	Moderate	It is seen as a threat for process efficiency but it is actually implemented
	Going the extra mile	High	Conergy tries to exceed customer expectations if possible
SYI	Improvement actions	Moderate	Each complaint is monitored but few structured learning practices are active
	Databases and reporting	High	Tools and instruments are rather advanced
	Control performances	High	Specific performances are measured and

	evaluated periodically

Table 16 – Scoring summary of operational constituents of Conergy Italia recovery system

Accessibility maintains a primary role also in this case study, as it is the dimension that enables problems manifestation which is the antecedent of their resolution. The servitization process started by encouraging customers complaints and voicing their problems, and this dimension had to be coherently implemented by assuring flexibility of communication means and reducing annoying rules. Unfortunately, despite good intentions a serious problem of reachability endures, as many "flash complaints" confirm: customers may not find anyone to answer their phone calls, and that's quite annoying in light of the promises. The problem is rooted in normal absences for disease or vacation and depends also on the customers' calls times, since they usually call after the office work time. As a consequence, the firm has recently tried to improve by reorganizing working timetables and training other people to take the calls.

Comprehensiveness is quite high due to the standardization of product and service failures that allow for the creation of a formalized list of more likely problems. Comprehensiveness is sustained by the fact that the content of contract details are usually quite clear and simple, and contractual engagements are extremely understandable and precisely identified. This way Conergy exactly knows what has to be guaranteed as a contractual obligation, and when failures occur the firm is able to recognize what has not been respected and consequently propose coherent recovery. Furthermore, services are really clear as well, as most of times they refer to a physical product, and failure responsibilities can easily been evaluated as well as correction directions. Each failure falls under a specific category, which provides indications in future similar cases, for example delays in transportation is usually compensated with the reimbursement of a day of solar panel production. Having a 15 years' experience really helps the firm achieve a deep knowledge of frequent problems and effective corrections. As far as the variety of recoveries is concerned, Conergy is constrained only by its budget, there are no limits to recovery variety and to improvisational interventions, that may deeply foster a long-term perspective aimed at investing on customer relationship today for future possible returns.

Empowerment is rather high since most of the recovery activities are executed autonomously by Conergy Italia frontline employees, having full control of service recoveries and manage most of the product recovery process except for the analysis phase. Employees are empowered to make any decisions they deem necessary to assure customer satisfaction within their assigned budget. Actually, they are encouraged to entirely handle complaints without asking for managers' assistance, as they better know customer feeling. Managers are involved just for cases that require

higher experience of negotiation due to the amount of money on the line, in all other situations it is preferred that employees manage the complaint since they better interpret the urgency of intervening and the severity of failure with its technical details. Furthermore, since this business is strictly connected to national regulation and public incentives that determines the attractiveness of the market, no global recovery standards have to be maintained, since the large majority of Conergy customers operate just within national boundaries and there're no possibilities of damaging the brand image as a consequence of the different practices adopted by subsidiaries. On the contrary, leaving subsidiaries their own methodologies assures a better fit to customer desires, as a well as a more appropriate recovery process that can this way fit also cultural peculiarities.

Formality is quite low, since it is not deemed a characteristic that results in beneficial outcomes. More specifically, a good deal of procedures has been written but they work as guidelines rather than compulsory prescriptions. In fact, since customers must be satisfied and the contingent problem could require particular processing, having too formal detailed procedures would add useless constraints rather than help recoverers find the best way to restore customer satisfaction. As a consequence no compliance controls are executed and reviews are rarely conducted just to revamp previous ones when organizational changes are implemented. Besides, no regulation imposes particular behaviours in terms of recovery practices, and the direct contact with customers, that are treated with a personal touch in light of the service orientation of the firm, usually overcome any possible formal procedure, that would make the relation more rigid without providing substantial benefits.

As far as human resources intensity is concerned a moderate-low score is assigned, that is rooted in a substantial absence of formalized recruiting selection criteria and broad specialization. Training is delivered but it is not recovery-oriented and actually is rather general about products and services, despite this operatives are effective in their job thanks to the matured field experience. Employees are not specialized and there is just a light conceptual division between those who deal with product problems and those who care service failures, but most of them are interchangeable. High specialisation has not been pursued also in order to catch all possible product-service synergies that may emerge from complaints handling in terms of potential sales. On the other side there are no structured ideal profiles with associated competences, which describe the characteristics of the perfect operator in the complaint management division according to Conergy requirements. This is due to the large importance that the firm gives to internal growth and the spirit of belonging to a family, that stimulates people to work more willingly. This way, employees don't have particular academic titles or past technical experience but are quite young, flexible and available to learn by doing. On the other side some important personal soft-skills are expressly

desired (taken from the DISCO definition) such as “the ability to cope with pressure”, “ability to cooperate and work in a team”, “carefulness”, “empathy”, “personal initiative”, “coordination of people and resources”, that can’t be learnt at the university but are fundamental in order to face recovery challenges in a correct positive manner. People working here have to be smart, enterprising, and multi-skilled as they have to be able to manage both contractual details and technical knowledge that come from having physical products and related-services. Actually some technical competences were mentioned during interviews even if referring to the “general technical skills group”, such as “determine installation, service, or repair needed”, “follow operation instructions”, “compute installation specifications”, “carry out mistake and error proofing”, confirming the need of a mix of soft and technical skills to deal with product-service complaints. All in all human intensity is quite low because there are no structured investments in managing and optimizing human resources, in terms of specialized training and codified profiles to be translated into selection criteria for hiring adequate recovery employees. Despite this, the informal flexible and familiar atmosphere of the firm enables employees productivity, efficacy and motivation as they see their job like a mission more than an imposition, and best fit this manufacturing context where training emerge from solving each specific situation.

Influence is high thanks to the great flexibility that Conergy has in defining customized recoveries without having to discuss and obtain approvals from the headquarter, and most of times even from the local managers. Despite this it is common opinion that customization costs and has to be limited to very few cases in order to protect firm profitability. Indeed, employees are prone to fulfil every customers’ desire and since there are not specific restrictions they could easily go the extra mile. In the end the process may be quite easily adapted to specific requests, but once again these kinds of exceptions introduce variability in the normal work of employee and cause losses in efficiency that may enhance errors and delays in processing other recoveries.

Finally, the system intensity is high, even if no very structured learning procedures are active except for the monthly meeting that aims at summarizing the worst failures, and tries to draw consistent actions plan to prevent analogue failures. On the other side each complaint is controlled and customers always receive feedbacks from Conergy about the claim processing and hypothesised corrections. Every day the customer care operator controls the opened claims (using the system), observes the open ones that are over the processing deadline and send a reminder to the person responsible for the claim. Controlling is a very important activity in order to deliver the promise of being really close to the customers and take responsibility for their problems, and it is actually one of most critical activities in the service recovery process. The top managers understood this so deeply that decided to invest a lot in information systems that could assist employees in fast

information store and retrieval. In fact a high score was given to database and reporting, since they are intensively used and allow for accurate automatic analysis that are daily used by all the recovery personnel. Performance management systems are really structured, as they have to provide punctual insights about Conergy capability to meet customer expectations, which are in turn largely influenced by firm declarations. In particular, the most important performance dimensions are quality and time, which are carefully evaluated by the customers in light of the companies mission to provide timely and effective support to any kind of problem. This way time dimension is measured through a three-stage indicator that catches the entire life of the complaint, broken down into three phases: the first begins with the failure and ends with the opening of the complaint in system, the second one ends with the first recovery proposal formulation and communication to the customer, and the third ends with the ultimate closure of the complaint in the system (Miller et al., 2000). This kind of accuracy creates an extra workload of inserting intermediate cut off dates, but it is really necessary so as to have more in-depth analysis of the recovery process and detect the most critical phases that give direct improvement indications. Indeed, Conergy sets specific targets that are differentiated for customer segments, and needs deep control of time phases in order to monitor current performances and set new targets. In 2011 the company undertook an improvement project aimed at reducing time spans, encouraging immediate problem manifestation by the customer, working for a quicker coordination with the headquarter and elaborating standard solutions. Furthermore, another indicator is the number of the out-of-date complaints, which should be as low as possible and determines the processing priorities. As far as quality performance is concerned, the firm decided to set an important indicator, which is the rate of claims about recoveries (double failure scenario), that should be 0%. Unfortunately it has never been close to zero and these complaints become the most critical to monitor, as repeated failures are extremely dangerous for customer loyalty. This is a first indicator used to describe the quality of recovery and it is integrated with the results of a six-monthly survey sent to the whole customer base, whose results are really important for the top management to receive specific indications about improvement priorities and critical performances. Cost performance is monitored too, but just at the aggregated level. Monetary compensations are really important to prevent switching behaviours especially when complaints are about breakages that inhibit energy productions, or in case transportation service errors that entail extra logistic costs. A global budget is established for the year, and board directive is trying to avoid any kind of monetary expenditure by proposing alternative recoveries. Moreover, an annual analysis of most expensive failure causes is run so as to identify critical points. All in all system intensity is really high.

This section has analysed the implementation of the operational constituents of service recovery dimensions and presented the reasons why some managerial choices have been taken. Comparisons, comments, discussion and linkages with literature will follow in Chapter 4.

3.3 - Intesa Sanpaolo S.p.a.

3.3.1 – Company description

Intesa Sanpaolo S.p.a. is the one of the leading banking group in Italy, with approximately 5.200 branches in Italy and 19 million customers worldwide, and more than 250.000 Italian intermediate and corporate customers (without considering small businesses), who fulfil the B2B requirement of this research (Intesa Sanpaolo website). It is one of the largest financial groups in Italy and in Europe, holding 16 banks and 8 so-called "product companies" just in Italy. Intesa Sanpaolo adheres to the aims and indications of Borsa Italiana's Corporate Governance Code for listed companies (it is the national agency that monitor listed companies), and has adopted a governance system in line with the principles described therein in terms of sharing of responsibilities and powers and correctly balancing the functions of management and control.

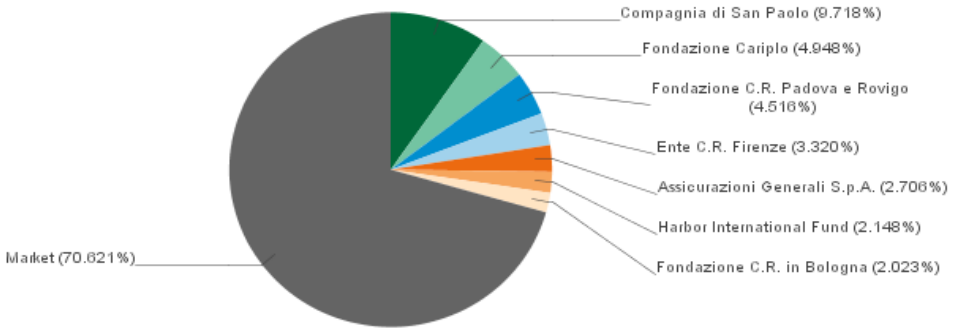

Figure 27 - Intesa Sanpaolo shareholder composition

Figure 27 represents the shareholder composition, which basically consists of other financial groups, private funds, foundations, insurance companies and the market, while figures 28 and 29 show the composition of the group and the extent of its presence over Italian territory and abroad. It is important to notice that this is a financial group which comprehends banks and also societies specialized in other services such as leasing, factoring, electronic payments, pension funds, insurance, with a strong presence outside Italy with 17 banks and 12 "product companies". As far as this thesis is concerned, the bank Intesa Sanpaolo is analysed, which also the head of the group. The 2012 net income of the group was about 1.6 billion euro, with a gross operating income of about 18 billion euro. The group employs more than 96.000 workers, 66.000 in Italy, and is rated A- by Ficth (31/12/2012).

The Intesa Sanpaolo Group: presence in Italy

Banks

INTESA SANPAOLO

BANCA CR FIRENZE · BANCA DELL'ADRIATICO · BANCA DI CREDITO SARDO · BANCA DI TRENTO E BOLZANO | BANK FÜR TRIENT UND BOZEN

Banca FIDEURAM · BANCA IMI · BANCA MONTE PARMA · BANCA PROSSIMA PER LE IMPRESE SOCIALI E LA COMUNITÀ

BANCO DI NAPOLI · CASSA DI RISPARMIO DI FORLÌ E DELLA ROMAGNA · CASSA DI RISPARMIO DEL FRIULI VENEZIA GIULIA · CASSA DI RISPARMIO DEL VENETO

CASSA DI RISPARMIO DI VENEZIA · CARISBO · INTESA SANPAOLO PRIVATE BANKING · MEDIOCREDITO ITALIANO

NORTH WEST

INTESA SANPAOLO	Subsidiaries	
Branches	Company	Branches
1,591	Intesa Sanpaolo Private Banking	58
	Banca Fideuram	38
	Banca Prossima	22
	Mediocredito Italiano	2
	Banca IMI	1
	CR del Veneto	1

CENTRE

INTESA SANPAOLO	Subsidiaries	
Branches	Company	Branches
263	Banca CR Firenze	745
	Banca dell'Adriatico	81
	Banca Fideuram	21
	Intesa Sanpaolo Private Banking	20
	Banca Prossima	8
	Banco di Napoli	3
	Mediocredito Italiano	2

NORTH EAST

INTESA SANPAOLO	Subsidiaries	
Branches	Company	Branches
19	CR del Veneto	413
	CR in Bologna	226
	CR del Friuli Venezia Giulia	133
	CR Venezia	113
	CR di Forlì e della Romagna	110
	Banca di Trento e Bolzano	85
	Banca Monte Parma	72
	Intesa Sanpaolo Private Banking	38
	Banca Fideuram	22
	Banca Prossima	13
	Mediocredito Italiano	2

SOUTH

INTESA SANPAOLO	Subsidiaries	
Branches	Company	Branches
9	Banco di Napoli	722
	Banca dell'Adriatico	111
	Intesa Sanpaolo Private Banking	20
	Banca Prossima	16
	Banca CR Firenze	12
	Banca Fideuram	11
	Mediocredito Italiano	2

ISLANDS

INTESA SANPAOLO	Subsidiaries	
Branches	Company	Branches
182	Banca di Credito Sardo	97
	Banca Prossima	7
	Banca Fideuram	5
	Intesa Sanpaolo Private Banking	5
	Mediocredito Italiano	1

Figures as at 31 December 2012

Product Companies

INTESA SANPAOLO VITA
Bancassurance

EurizonCapital
Asset Management

INTESA SANPAOLO PERSONAL FINANCE · NEOS FINANCE
Consumer Credit

LEASINT
Leasing

INTESA SANPAOLO PREVIDENZA
Pension Funds

SIREFID
Fiduciary Services

SETEFI
Electronic Payments

MEDIOFACTORING
Factoring

Figure 28 – Presence of Intesa Sanpaolo over Italian territory

The Intesa Sanpaolo Group: international presence

Banks, Branches and Representative Offices

INTESA SANPAOLO

ALEXBANK | بنك الإسكندرية
BANCA DI TRENTO E BOLZANO | BANK FÜR TRIENT UND BOZEN
Banca FIDEURAM
BANCA IMI
BANCA INTESA
BANCA INTESA Beograd
BANKA KOPER
CIB BANK
INTESA SANPAOLO BANK Albania
INTESA SANPAOLO BANK Romania
INTESA SANPAOLO BANKA Bosna i Hercegovina
INTESA SANPAOLO BANK IRELAND
INTESA SANPAOLO PRIVATE BANK SUISSE
PRAVEX-BANK
PRIVREDNA BANKA ZAGREB
Société Européenne de Banque
VÚB BANKA

AMERICA

Direct Branches	Representative Offices
George Town	Santiago
New York	São Paulo

ASIA

Direct Branches	Representative Offices
Dubai	Abu Dhabi
Hong Kong	Beijing
Shanghai	Beirut
Singapore	Ho Chi Minh City
Tokyo	Mumbai
	Seoul
	Tehran(3)

EUROPE

Direct Branches	Representative Offices
Amsterdam	Athens
Dornbirn(1)	Brussels(2)
Frankfurt	Istanbul
Innsbruck(1)	Moscow
London	Stockholm
Madrid	Warsaw
Paris	

Country	Subsidiaries	Branches
Albania	Intesa Sanpaolo Bank Albania	31
Bosnia and Herzegovina	Intesa Sanpaolo Banka Bosna i Hercegovina	54
Croatia	Privredna Banka Zagreb	211
Czech Republic	VUB Banka	1
Hungary	CIB Bank	108
Ireland	Intesa Sanpaolo Bank Ireland	1
Luxembourg	Banca Fideuram	1
	Société Européenne de Banque (SEB)	1
Romania	Intesa Sanpaolo Bank Romania	86
Russian Federation	Banca Intesa	76
Serbia	Banca Intesa Beograd	199
Slovakia	VUB Banka	241
Slovenia	Banka Koper	54
Switzerland	Intesa Sanpaolo Private Bank (Suisse)	1
Ukraine	Pravex-Bank	259
United Kingdom	Banca IMI	1

AFRICA

Representative Offices	Country	Subsidiaries	Branches
Cairo	Egypt	Bank of Alexandria	200
Casablanca			
Tunis			

Figures as at 31 December 2012
(1) Branches of Italian subsidiary Banca di Trento e Bolzano
(2) International Regulatory and Antitrust Affairs and Intesa Sanpaolo Eurodesk
(3) Suspended business

Product Companies

CONSUMER FINANCE HOLDING
INTESA SANPAOLO CARD

Consumer Credit, E-money and Payment Systems

CIB INVESTMENT FUND MANAGEMENT
EurizonCapital S.A.
FIDEURAM Asset Management (Ireland)
PBZ INVEST
VÚB ASSET MANAGEMENT

Asset Management

CIB LEASING
INTESA LEASING Beograd
PBZ LEASING
VÚB LEASING

Leasing

INTESA SANPAOLO LIFE

Insurance

Figure 29 – Presence of Intesa Sanpaolo over the world

Due to the financial tension that is dominating the European scenario customer retention and loyalty (in terms of deposits stability) have become essential for financial institutions, to protect their long-term positioning and assuring the necessary liquidity. Intesa Sanpaolo strives to do that by focusing on customer satisfaction and declaring its importance even on its social report, affirming: "to capture the customer's point of view, listen to changing needs and develop quality services and products that meet the needs of households and businesses now but with an eye on the future: this is the path we are following. For this reason, beginning with quality of service that is carefully monitored by a wide-ranging management system, the 2012 projects met the needs of the community, young people and businesses that invest in innovation. Each of these projects stems from partnerships the bank created and supported in order to activate synergies among those operating in the social and economic context, making available our services and expertise" (Intesa Sanpaolo, 2013).

This sort of mission is remarked also by the launch of the new total quality system and aims at gaining customer trust and knowing their level of satisfaction, expectations and needs. With this objective in mind, Intesa Sanpaolo launched the SEIok Programme to measure and improve the quality of branch services. SEIok stands for "Intesa Sanpaolo System of Excellence", a process management system designed to constantly improve customer service.

With regard to the complaints raised in Italy, the bank declared that the customer service and the complaints service continue strengthening the qualitative aspect of handling complaint letters, as well as working to reduce processing times, despite these proved to be clearly under the standards response times prescribed by regulation. Intesa Sanpaolo recognizes the pivotal role of service recovery in having its customers satisfyied and protecting them from competitors attractiveness, especially after a serious service failure. On the other side regulation is a very important aspect of the recovery process for financial institutions in Italy, as could be appreciated in the next paragraph. Such a giant organization has obviously a devoted complaint management division, which is presently distributed between Turin and Milan offices and deals only with complaints coming from customers over the Italian territory. This is mainly due to the national regulation that gives precise indications to financial institutions, which have consequently to maintain a local operating perimeter. The complaint management division belongs to an organizational division called "quality and compliance controlling", whose head relates to a top manager directly in contact with the CEO. The group offers every kind of financial services from insurance policies to credit cards and leasing, and has this way to cope with different kind failed services, and the same variety is also present for complainant customer typology (private, intermediate, customer) and cause of complaint. Complaints coming from the B2B are over the 15%. Even if very important customers could have

direct privileged contact with top managers and sometimes even with the CEO, the very large majority of customers, be they private or corporate, follow the same identical procedure to access recovery interventions. As far as this study in concerned, the analysis addresses specifically those complaints treated by the Intesa Sanpaolo bank regarding problems arose over the Italian national territory, with particular attention paid to operational implication of B2B complaints, even if no significant distinctions are present from private complaints. In fact, the official complaining process must be followed by all the complainants and, even in very important customers may directly contact top managers, the operational characterization of the process is due to the large majority of complaints, that are processed with the same phases. In the end, recovery organization is really centralized, and most of recovery activities are executed at the headquarter, which takes full responsibility for performances and controlling tasks. Before presenting the recovery process the adequacy of this case study relating to selection criteria is provided in table 17.

CASE STUDY SELECTION CRITERIA	EVIDENCES OF THIS CASE
Be a pure financial institution operating with business customers	Intesa Sanpaolo is one of the largest financial organizations in Europe and offers a broad range of financial services (also B2B)
Present a formalized complaints management division with its own responsibilities and tasks, a clearly-identified head and explicit declaration for customers	The company has a large complaints management division entirely devoted to handle claims and quarrels with specific responsibilities and budget
Be a medium-large company in order to have relevant datasets and structured managerial culture	The company had a 2012 net income about 1.6 billion euro and employees almost 96.000 workers all around the world
Have a clear commitment in serving the customer and deem recovery actions critical as well as fundamental for mission deployment	Recovery practices have been clearly inserted into the customer section of the company social report and have been extensively considered during recent improvement plans
Be part of a group of companies (in order to study organizational configuration role)	Intesa Sanpaolo S.p.a. is the centralized holding company of the Intesa Sanpaolo group and owns 16 banks and 8 product companies just in Italy

Table 17 – Evidences from Intesa Sanpaolo case study to match selection criteria

3.3.2 – The banking complaint management regulation

As it was mentioned above, service recovery in financial institutions must take into account the strict regulation imposed by the central bank that deals with complaints handling procedures. This way, before analysing the service recovery process, it is proper to describe the main traits of the Italian regulation (European Banking Authority prescribes similar rules to central banks of the European Union members). The following information have been gathered from case studies and checked through official documentation (Banca d'Italia, 2012; Consob, 2007; Banca d'Italia, 2009; Conciliatore Bancario Finanziario, 2009; Arbitro Bancario Finanziario, 2013). When a bank receives a formal complaint, that is the explicit manifestation of a problem by the customer and consequential request of intervention, it has to deal with it by a predetermined time span, which is set by the central bank. In Italy this time depends on the typology of the complaint that is divided into two kinds: banking complaints and investments complaints. The first category encompasses all those complaints that regard usual "banking" activities such as money transfers, cheques, credit cards, withdrawals, online banking, payments, loans, ATM and so forth, while the second category comprehends complaints about investments in bonds, stocks, options, derivatives, sovereign debt bonds, and so on. Banking claims must receive an answer within 30 days, whereas investments claims must be answered within 90 days. The relevant difference is rooted in the higher difficulty and complexity the investments complaints present in terms of information and details. It is important to underline that this deadline doesn't refer to the final solution to the problem, but just forces the company to provide an answer that explains whether the bank is rejecting or accepting the presented requests. In the former case a thorough explanation has to be provided, in the latter intervention time and modalities have to be communicated. Banks always must answer to complaints. After having received the answer from the bank, if the customer is not satisfied he can direct the ABF (for banking complaints) or the Ombdusman (for investments complaints), that are committees composed by members of the central bank and professionals (they are not official public tribunals) and whose decisions are executive for the bank. Customers usually use this kind of courts as they are cheap, quick, and don't oblige the customer to engage a lawyer. Obviously the customer can always direct the normal public justice, whose processing times and costs are much longer and higher. All in all banks must carefully consider and process complaints not just to protect their profitability but also to be compliant with cogent regulation, that forces them to provide answers and explanations and act within certain deadlines. Not respecting these prescriptions causes expensive fines, that may be issued carried out by public officers in case the found some irregularities during their periodical audit sessions. Further regulation details involve transparency policies and systems, and are addressed in the dimensions presentation. The next

paragraph presents the service recovery process, which has been designed to deal with every kind of complaints and customers.

3.3.3 – Intesa Sanpaolo recovery process

Intesa Sanpaolo has to face very different typologies of complaints that are presented in the annual report. In 2011 the bank had to cope with more than twelve thousands complaints directed to the holding bank, distributed in the areas "accounts and deposits", "loans and funding", "investment services", "online banking, processes and other", "insurance problems", "payment systems". As far as the causes are concerned the most signalled were "execution problems", "missing information or communication documents", "frauds and losses", "inefficient/ineffective organizational aspects", "application of the contractual conditions and details". About the 85% of complaints came from private customers, around the 10% from public entities or medium large companies (limited companies), about the 5% from professionals associations and small enterprises. In spite the diversity among different customer categories the recovery process maintains its form as presented in figure 30. A peculiarity of this process is that the complaint management office of Intesa Sanpaolo deals also with claims coming from all the other banks of the group, indeed none of them has the complaint management division. Considering this, the total annual number of complaints processed by the office is between 30 and 33 thousands. The service recovery process appears in the form presented in the following, which had to take into account the complexity introduced by several organizations (banks) concentrating their complaints on the central site.

The process begins with the manifestation of the problem by the customer, who can first direct his trust person (at the local branches) order to receive suggestions and a primary feedback. Most of times this phase is useful just to provide detailed information about how to formally complain; actually the most used and indeed official procedure consists of sending a written complain directly to the central complaints management office or to the local branch that proceeds to forwarding it to the headquarter. Just written complaints are accepted: emails, normal mail, and fax communications. This phase is quite critical since many times complaints are sent to the wrong address (sometime directly to the CEO) and it is quite difficult to make the complaints arrive in a short time to the competent office. The vastness of the group offers really many (non voluntary) different points of contact, and this is a further complexity to manage, because sometimes the customer get confused and the collection process becomes inefficient. When the claim is received (immediately if emailed or even some days later if it is sent through normal mail), complaint's data are inserted in the system by employees who are completely devoted to this activity.

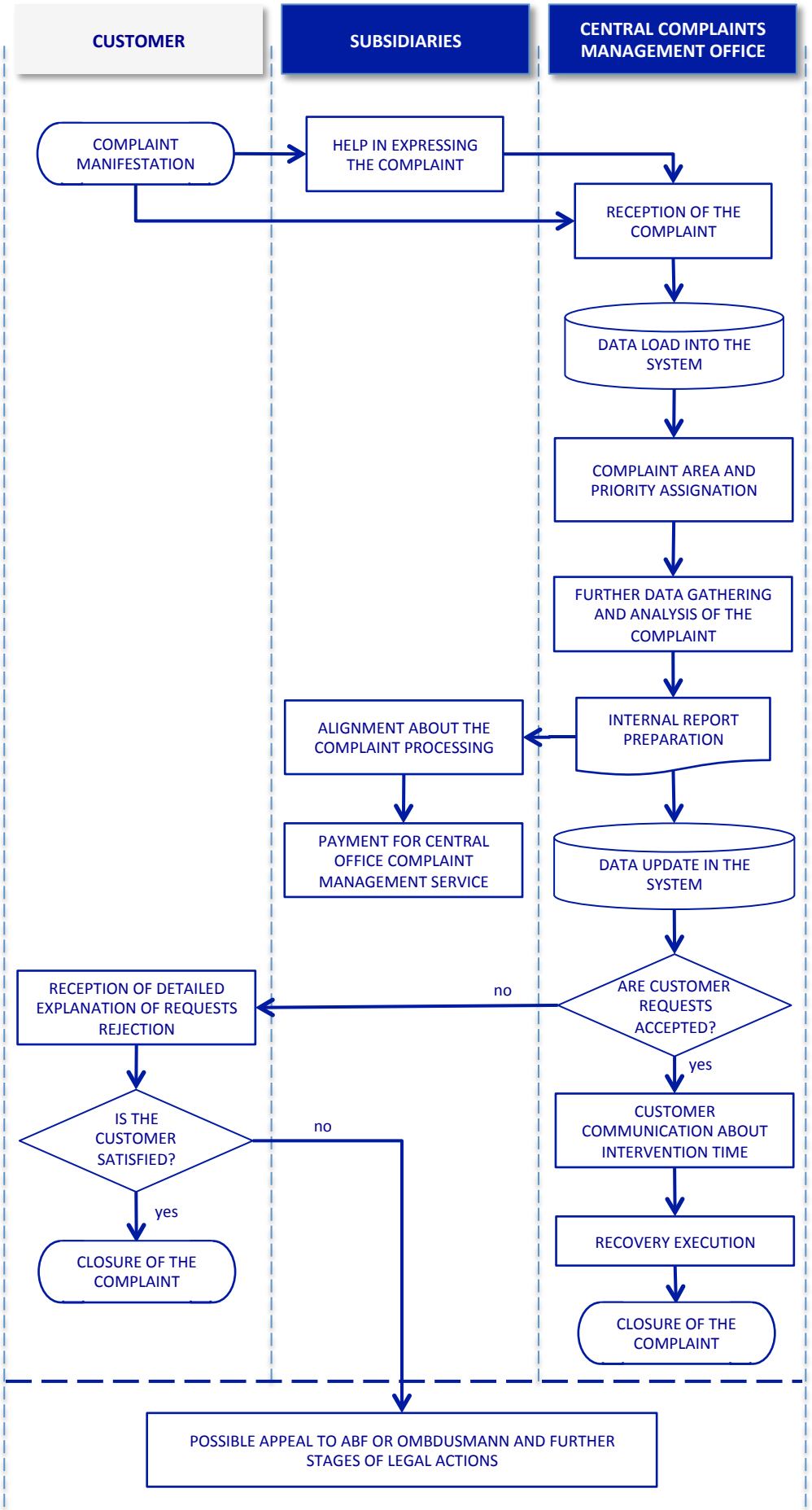

Figure 30 – The Intesa Sanpaolo service recovery process

Then, one of the supervisors defines in the system which is the competent area of each complaint and which priority it has (using a 5 scores scale). This phase is absolutely critical since it affects the capability of employees to deal with the complaint and its importance, which determines the order of processing when claims have similar deadlines. After this, one of the employees belonging to the area assigned to the complaint begins the processing. These areas are defined using product categories, such as insurance policies, corporate complex loans, factoring, ATM problems, accounts and money transfers, and so forth. The employee has to completely process the complaint, which means a written exhaustive answer has to be prepared and be validated by the supervisor. During this phase it is possible that the customer or the branch have to be contacted in order to collect useful indications about the complaint. Then the director of the local branch where the complaint was originated (usually where the customer has his account) is informed about the reply. This phase is pivotal because it is followed by the billing process, which consists of the preparation of the invoice for "complaint management services" by Intesa Sanpaolo directed to the bank of the complainant. Basically the complaint management process is considered a service with fee delivered by the headquarter to the subsidiaries, which have to contribute proportionally to their use of it. Each year a specific tariff is calculated by the headquarter and is charged to the subsidiaries for each complaint they generate. This tariff basically comprehends the costs of operative employees, supervisors, managers and indirect costs (structure, buildings, bills, etc.) and is calculated on an expected number of complaints estimated through the historical trend. This calculation led for the year 2012 to a tariff of 420 euros a complaint. After the billing process data are uploaded in the system, the answer is sent to the customer. If the customer's request has been accepted the answer contains the details of the recovery execution with schedule and modalities. In that case, it is important to specify that recovery expenses are directly sustained by the subsidiaries where the business customer has opened his account, in fact this kind of recovery expenditure affects local subsidiary performance. Recoveries may consist essentially of reimbursements, monetary compensations, applications of favourable contractual conditions. As far as Intesa Sanpaolo bank is concerned, the monetary budget for recoveries is about 18 million euros, but during the last two years the expenditure has been about half the budget. Indeed, about 40% of the complaints resulted in an outcome favourable to the customer, and this percentage is usually lower for subsidiaries banks (down to the 25%). After the recovery has been executed, under the control of the employee that processed the claim, the complaint is finally closed. Alternatively, if the customer request is rejected, a detailed explanation has to be provided to the customer. As long as the customer accepts the answer, the complaint can be considered closed, whereas if he doesn't

agree with bank's response, he can appeal to the ABF or the Ombdusman courts. Since this part is run mostly outside the firm boundaries, it is out of the scope of this work and is not deepend.

Service recovery is thus formulated by the central complaints office and executed by the subsidiaries banks, which have to follow what has been centrally determined. This process is really complex and tailored on organizational choices, since it creates a sort of distance between the context where the failure happened and the site of recovery formulation. Furthermore, the headquarter acts as an external agency with respect to the owned banks, and this is witnessed by the invoice payment. The next paragraph presents the evaluation of service recovery operational constituents.

3.3.4 – The operational constituents evaluation

This section presents the evaluation of the operational constituents in the first banking case study, introduced first in table 18. It is important to underline that the scores are attributed on the basis of the headquarter analysis but they consider also the relationships with branches and subsidiaries, as they are involved in the recovery process and may be somehow considered extension of the complaint management office during the information gathering phase.

Dimension	Constituents	Score	Comments
ACC	Communication channels	Moderate	All written forms are allowed: fax, official emails and normal mail
	Provide assistance	Moderate	Customers receive just procedural indications to complain
COM	List of recovery options	Low	It doesn't exist as it expressly depends on the costumer's requests
	List of possible failures	Low	The complaint variety is enormous and only experience is helpful in creating standard paths
	Variety of recovery	Moderate	Recoveries are mainly monetary and few different solutions are available
EMP	Empower FLEs to implement decisions	Low	Every complaint is processed by the headquarter complaint management office
	Empower FLEs to make decisions	Low	FLE can't decide anything in the branches and also in the central office there has to be supervisor approval

FOR	Written rules and procedures	High	Everything is accurately defined through written procedures, even characters format
	Appraise compliance	High	Compliance controls are executed on a monthly base
	Maintain procedures updated	High	Procedures have to be constantly aligned to national regulation update
HRI	Competences	High	Specific "domain specific" competences and knowledge are required to work in this division
	Training	High	Specific training sessions are periodically scheduled to keep personnel updated
	Specialization	High	Employees belong to specific service recovery areas
INF	Adaptability	Low	The process is not modifiable
	Customization	Moderate	Recoveries may be tailored on the specific case but just to match acceptable request
	Going the extra mile	Low	There is generally no will to go beyond customer rights and requests
SYI	Improvement actions	High	Each complaint is monitored and improvement actions are compulsory
	Databases and reporting	High	Tools and instruments are advanced and daily used
	Control performances	High	Specific performances are measured and evaluated periodically

Table 18 – Scoring summary of operational constituents of Intesa Sanpaolo recovery system

Accessibility received a moderate score due to the compulsory process that forces the customer to complain in a written form. Different means are available in terms of support, indeed emails normal mails and fax communications are accepted, but they have to be sent to the central office and must be complete. Some errors or missing information could render the complaint useless and impossible to process. A frequent problem is the absence of a customer code or a fiscal code in the letter, such large organizations may have tens of people with the same name and surname, and without further information it's impossible to discover who the complainant customer is. On the other hand if customers feels allowed to send the complaint somewhere different from the central

office, this engenders many difficulties to retrieve it, and extend processing times. This happens because customers are not adequately stimulated to go first to their branch and try to get suggestions about how to solve the complaint. Besides, even if very important customers may directly call key account managers, this kind of endorsement may well affect the answer outcome but the official complaint has to be sent and processed in the same manner. Due to restraints in terms of written form and some inefficiencies acknowledged b managers, a moderate score has been assigned, owing also to the modest assistance provided just as procedural instructions.

Comprehensiveness very is limited in this organization, actually it seems really difficult to fully standardize a complete list of failures and recoveries. In reality some common cases (e.g. wrong documentation, defective cards, unfair commissions charged) are maybe quite easy to solve and also to approach in a structured manner, but in B2B relationships there are also really many complex and unusual cases (e.g. heritages, bad investments, false guarantees, loans) that require a lot of time for processing and can't be standardized in any way. A list of possible failures or recoveries is not present since it is deemed useless for employees, whose primary task is to ascertain whether customer request makes sense and it may be accepted or not. Having a catalogue of possible or suitable recoveries wouldn't help them, as employees have to start from customer's expressed requests. In other words, the huge variety of details to be checked during recovery process, and the quick pace of introduction of new services and rules, make any effort to stabilize a list of failures and recoveries purposeless. This way, operative personnel has just to know who address for asking authorization for monetary answer details, depending on the amount of the customer's request. Furthermore, as far as variety of recovery is concerned, the most used recovery is monetary compensation, and this is both due to money-oriented request from customers, and to the distance of the complaint management office from the complainant, that doesn't enable other counter-proposals.

Empowerment of FLEs is extremely low in this case study. Both the constituents received a very poor evaluation and this is due fundamentally to the structure of the group. Employees (those in the branches) that may be addressed by aggrieved customers and receive their verbal complaints are basically not allowed to offer any kind of recovery. On the other side headquarter operators need always further details from the branches or the subsidiary banks, and finally have to consult with supervisors before sending the final answer. That's the reason why empowerment is really low, front line employees can't decide anything. Headquarter office defines whether a complaint may be accepted or not and what the Intesa Sanpaolo or its subsidiary banks have to do in case they have to execute recovery. This centralized structure doesn't let peripheral offices do anything except for an initial phase that is aimed at avoiding incomplete complaints or errors in shipments that make

retrieval more complicated. The deep reasons underpinning the adoption of such a centralized structure are rooted in the control need that headquarter has with respect to recovery process. Indeed, the majority of the banks have been integrated in the group during the last 15 years, and came from very different routines and processes. Since complaints management and recovery is one of the most visible processes which is determinant for customer retention or loss, the holding company should be sure that the same recovery level is offered to customers. With such a young group of diverse banks, the risk to have not aligned behaviours between subsidiaries is extremely high, due to local management with long previous specific background, habits, firm culture. Furthermore, since the banks belonging to the network act with their own name but under the holding symbol and customers may enter services all over the network, a straight monitoring of this practice has deemed crucial for protecting brand quality.

Formality is really high, on all the three constituents. The national regulation is for sure one of the key reasons that make Intesa Sanpaolo opt for having all procedures in a written form as internal official documents that must be respected. In addition, Intesa Sanpaolo seems particularly careful to have a formal document for every kind of activity, and this is partially due also to the need to give clear mandatory instructions to all the member of the group. The view of service recovery as a process that should be flawless and fully compliant, under the "quality and compliance division", is absolutely coherent with this implementation. In light of this, compliance controls are run every month and serve as moments of alignment between the official policy and possible deviations. Review of procedures are also rather frequent, to be update with national and European norms that present continuous changes in this sector.

Human resources intensity is elevated, thanks to specific investments in selection training and resources allocation. The complaint management team consists of about 120 workers, including the head, supervisors, data-entry people, processing employees. These employees are divided into homogeneous groups that deeply specialise on a particular range of services and problems, such as loans, or ATM and cards, or stocks and bonds. This specialisation is deemed an important aspect of this division, since with such high volumes, more than thirty thousands complaints per year, it is necessary to count on specialists that can process complaints both quickly and effectively. Regarding competences, the scenario is really well defined: only employees with brilliant knowledge, experience (that implies also a certain banking background and biological age) in banking offering, and remarkable concentration and analysis capabilities may be considered for this division. Referring to the usual DISCO classifications, several general skills are mentioned as key and preferred, such as: "ability to concentrate", "analytical thinking", "application of laws, regulation and guidelines", "punctuality". Despite this, mainly "domain specific skills and

competences" are required, such as: "regulatory reporting" (under the category bank management), "ebanking", "financial futures", "retail banking", "dealing with insurance claims", "cash payments handling department", "foreign trade financing", "financial analysis", "portfolio management", "saving deposits", "leasing", "securities business", "fund management", "investment banking", "stocks exchange trading", "counter duty", "underwriting business", "corporate banking", and many others that witness the need to select proficiently prepared people to deal with failures and recoveries. In addition, training is delivered in a very structured manner, with scheduled periodical sessions that aim at educating operative and managerial personnel about changes in internal procedures or updated/new official regulation. Formal training is deemed fundamental in order to achieve high level of performance, mainly in terms of compliance respect. The only aspect that is a bit under-considered is the customer-oriented attitude of employees, but it is justified by the fact that actually they deal with quite anonymous complaints, coming from people that they will never meet. On the other hand this aspect ensure a more aseptic impartial processing.

Influence is rather low, indeed the process is rigid and not modifiable, since there are strict directives about compliance respect. Besides, the bank doesn't show any will or intention to go for the extra mile trying to exceed customer expectations. Actually the fact that complaints are processed by "stand-alone" offices, that don't have any connection with the daily customer base, make them see the complaint just as a task to go through rather as a decisive moment of truth where the customer retention may be enhanced by a delightful recovery. Once again the distance between the failure context and the recovery formulation site is coherent with the decision of not involving the customer in the recovery process. As far as customization is concerned, a moderate score has been assigned, since each complaint has to receive its specific answer and this way it's quite frequent to prepare tailored replies. On the other hand, this characteristic is not fostered by the company but it's more customer-driven, and the bank just has to adapt to the contingent requests following prescriptions of regulation and maintaining its focus on productivity and efficiency in providing answers. In addition, the overall low score of this dimension is also coherent with the view of recovery as a mandatory task to cope with, in which customers represent counterparts that have to be fairly and professionally treated, without conceding exceptional benefits.

Finally, system intensity is high. Each complaint is accurately monitored in order to be sure that the customer receives a flawless reply (technically speaking). This means that the supervisors usually oversee the final outcome of the complaint handling and try to give their contribution for answer refinement, especially when customer requests are not accepted. In addition, mechanisms to transform failure data in improvement actions are based on a six-monthly assessment that aims at defining some major guidelines for process improvement, taking into account the complaint

summary report of the semester. This practice is strongly pushed by regulation. Databases and reporting tools are really advanced as they represent the core of management system and have in reality to fulfil many prescriptions about data security and privacy policies. It is important to notice that the 15% of the workforce is completely devoted to data entry, confirming the importance that informative systems have in supporting recovery employees and allowing for data elaboration. Data in the system have always to be updated in order to let supervisors monitor whenever they want the progress of recovery processing. With regard to recovery performances, managers are focused on quality, time and costs dimensions of the process. Quality performance is internally measured through a monthly procedure that consists of a complete re-elaboration of 100 complaints randomly sampled. Then, when some errors are found in the original work of the employees, specific and punctual improvement indications are given to enhance better responses. This activity is really time-consuming but assures a precise and constant monitoring of the quality of processing, maintaining again the perspective of the compliance respect. An index of the percentage of defective complaints is kept in order to monitor the performance of the office. As far as time performance is concerned, it is important to remind that regulation sets specific maximum time targets for the reply that are 30 days for "banking complaints" and 90 days for "investments complaints", the average length of a complaint process was in 2011 about 22,9 days for the former and 66,4 for the latter, largely respecting normative thresholds. This performance is easily monitored using the system, which provides all the details of the complaint history, with evidence of out-of-date complaints, number of days to go for each complaint, and average life of delayed claims. Finally, cost performance is important but it is not evaluated with a complaint detail, the main control is observing that the global expenditure is coherent with the proportioned budget of the year (total year-to-date expenditure in march has to be lower than 3/12 of the annual budget). In addition, an important monitoring activity is run to control the invoices to the other banks of the group, observing whether particular criticalities emerge over the network. All in all system intensity is high due to intense attention to controlling each complaint both on the quality and time side, fully exploiting the informative systems potential.

This section has presented and commented the implementation of the operational constituents in one of the largest financial institutions in Italy, and primary roles of regulation and organizational structure seem to emerge. Further insights are provided in the cross case analysis in chapter 4.

3.4 – Banca Nazionale del Lavoro S.p.a.

3.4.1 – Company description

Banca Nazionale del Lavoro S.p.a. (BNL in the following) is the Italian subsidiary of the French BNP Paribas financial group. It is the sixth largest Italian bank in terms of volumes and loans, with more than 2,5 million customers, more than 200.000 of which are business operators (respecting B2B requirements for this thesis), and more than 14.000 employees in Italy. It is part of the BNP Paribas group, which has subsidiaries all over the world (more than 80 countries), more than 200.000 employees, and is one of the largest financial groups in Europe. Its 2012 net income was about 6.6 billion euro, and it can count on a solid long term rating (A+ according to Ficth evaluation). More specifically, BNL is part of the retail banking of BNP, which consists also of other retail banks in France, Luxembourg, Belgium, and non European countries (Turkey, African countries, USA, etc.). The bank was founded in 1913 and is just a hundred years old at the moment this thesis is written. Few small entities stemmed from BNL and offer specific financial services, but they are not retail banks (as in the case of the 16 different entities referring to Intesa Sanpaolo) and are outside the scope of this study: Artigiancassa S.p.a., specialized in public funding administration to support with loans small entrepreneurs and craftsmen (it refers also in the official logo to the French group BNP Paribas), BNL Positivity S.r.l. (electronic - POS - payment services), BNL Finance S.p.a. (specialized in loans for military people, retirees, public administration employees by anticipating 20% of their pension). BNL offers all kinds of financial activities such as investments services, payment services, loans and funding, leasing, factoring, bank accounts, credit cards, insurance policies, saving solutions, private wealth management, public administration funding and treasury management, asset management and so forth.

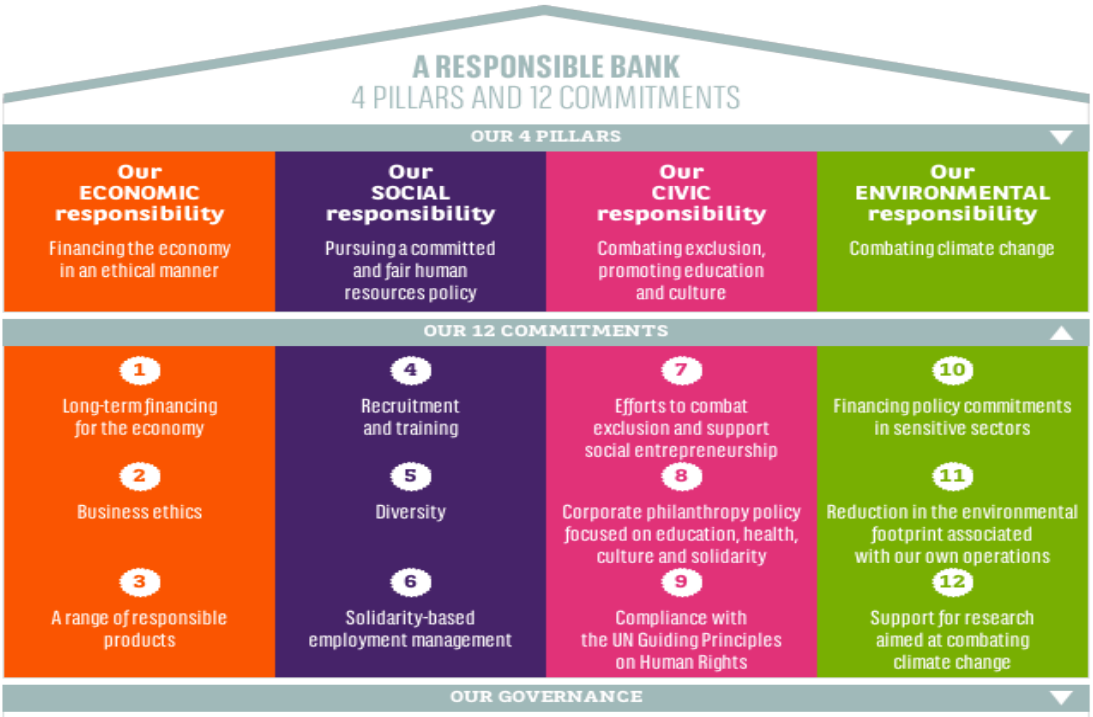

Figure 31 – Representation of the cardinal principles that inspire BNL mission (BNL, 2013)

The bank strongly declares that its activity is inspired to cardinal ethical principles such as respect of the environment, social role in supporting cultural educational and charity initiatives, honesty and transparency in dealing with its own employees fairly relating with labour unions, responsibility in fostering economic development far away from speculations and sustaining real value-added business, as represented in figure 31.

The bank has never presented losses during the last two years, despite the huge financial tensions in Europe, witnessing a quite prudent and proficient management of credits and investments. Many problems faced by other institutions during last years, and accumulated over decades of non prudent assets evaluation, have been avoided by BNL, thanks to the fair value approach in considering its assets. The customer satisfaction is one of the primary goals of the bank, and it is one of the key performance indicators used to incentive local territory branches, enhancing the customer perceived quality. All local managers over the Italian territory have to deeply care about customer satisfaction, and particularly they have to support improvement actions in order to match customers' expectations and to proficiently deal with problems and queries. Customer satisfaction is such important that every trimester a large survey with about 160.000 retail customers (individuals, private, business, small companies) is executed to catch their evaluations and suggestions, specific sections are devoted to complaints management and recovery evaluation. The corporate segment (associations, public administration, medium/large companies) is evaluated too with the same aim, and both the surveys revealed satisfactorily results, basically aligned to the top competitors performance. Furthermore, in the 2006 a continuous improvement project was undertaken in order to become closer to the customer through new branches opening, continuous multi-channel accessibility, and new online services to make customers more comfortable in managing their accounts and living a better relationship. All things considered the social attitude of BNL is confirmed also by its great presence in public events sponsoring, that are useful to manifest the corporate social responsibility to potential customers. Moreover the bank stresses in its social report that one of the most important strategies to foster customer relationship is investing in all the possible means to stay in touch with the customer, such as multifunctional ATM, call centres, web, message box, SMS, mobile applications, and their integration in reaching an effective balance. As far as service recovery practices are concerned, they are deemed a pillar of the customer relationship and high attention is paid to encourage the customer to complain as well as the personnel to strive and take responsibility of his final satisfaction. Interviewing the dean of the complaint management division, he explained that the philosophy which underpins the recovery process can be summarized as: "working hard today to have a pleased satisfied (profitable) customer tomorrow", witnessing the strategic vision of this activity as conducive to competitive

advantage. Besides, the same organizational position witnesses the strong customer orientation of this division, actually it is directly under the customer satisfaction division, which refers to the head of the retail division. In order to let the reader understand the position of the retail division, an organogram of the top management is provided in figure 32.

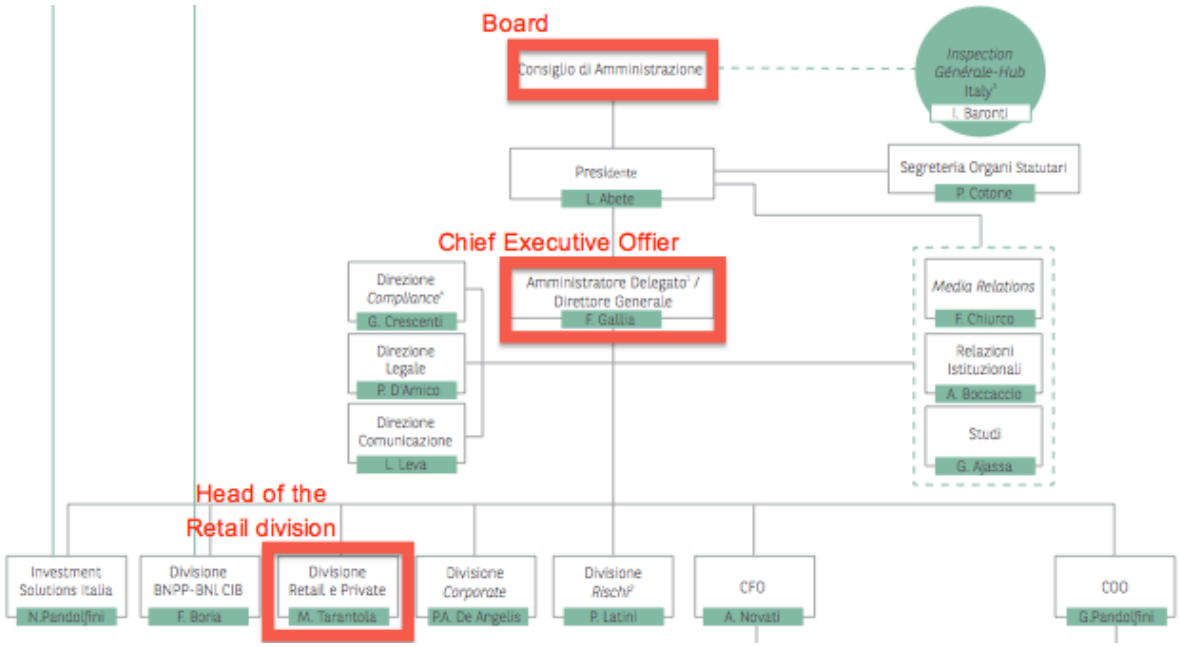

Figure 32 – The top management organogram of BNL

The focus on customers is reflected also in BNL attitude to find customized solutions and offering based on a specific segmentation used throughout company processes and in the complaint management division as well. This way, it is important to present the customer classification as it is quite relevant for the recovery process. Customers are classified as:

- individuals, physical people with deposit under 100.000 euros;
- premium, physical people with deposit between 100.000 and 500.000 euros;
- private, physical people with deposit over 500.000 euros;
- small business, professionals and small companies with revenues up to 750.000 euros;
- companies, with revenues up to 5.000.000 euros;
- mid-corporate, with revenues between 5 and 250 million euros;
- corporate, with revenues between 250 and 500 million euros;
- CIB-customer, with larger size and multinational characterization or public administration.

This research will focus particularly to service recovery involving B2B dynamics, involving customers belonging to small business or larger. This bank is a direct competitor of Intesa Sanpaolo for many services, even if it has a different geographical concentration with respect to the former,

which is homogeneously distributed all over the national territory with its branches. This way, the main regulation considerations imposed by the European central bank and the Italian central bank are still valid and important as well. What really differs from the other financial group is the organization of recovery division, which is really decentralized and pursues almost self-organized local teams fully responsible of their budget and their performances. These aspects will be deepened in the dimensions' evaluation paragraph.

Before entering in the middle of the recovery process the usual linkage to case studies selection criteria is presented in table 19 to check the coherence between theoretical requirements and contingent selection.

CASE STUDY SELECTION CRITERIA	EVIDENCES OF THIS CASE
Be a pure financial institution	Banca Nazionale del Lavoro is the sixth largest financial organization in Italy and offers a broad range of financial services (also B2B)
Present a formalized complaints management division with its own responsibilities and tasks, a clearly-identified head and explicit declaration for customers	The company has a large complaints management division entirely devoted to handle claims and quarrels with specific responsibilities and budget
Be a medium-large company in order to have relevant datasets and structured managerial culture	The company had a 2012 net interest margin about 1.9 billion euros and employs almost 14.000 workers in Italy
Have a clear commitment in serving the customer and deem recovery actions critical as well as fundamental for mission deployment	Recovery practices are considered one of the key dimensions of customer satisfaction and are strongly addressed as a pivotal contact point with the customer base
Be part of a group of companies (in order to study organizational configuration role)	Banca Nazionale del Lavoro S.p.a. is the Italian subsidiary of the huge French financial group BNP Paribas, with a decentralized organization

Table 19 – Evidences from Banca Nazionale del Lavoro case study to match selection criteria

3.4.2 – BNL recovery process

This paragraph presents the service recovery process in BNL. As far as the number of complaints is concerned, the bank has received in 2012 a total amount of 6.700 complaints, distributed over the offered services as follows: 56% regards accounts problems such as wrong commissions, problems with passwords, undue charges and so on; 18% concerns loans and funding problems; 10% is about

electronic payments and devices, lost/stolen cards, frauds; 9% regards financial investment intermediations and life insurance policies; the last 8% comprehends all the rest of complaints about organizational aspects, relationships with personnel, particular bureaucratic stuff and so forth. Also in this case study the large majority of complaints (more than the 70%) were raised by customer belonging to individuals premium and private segments, whereas the rest was equally distributed between intermediate customers (small business and companies) and corporate customers. It is also interesting to focus on the causes of the complaints, that are mainly rooted in operational execution (56%), lacking information and defective communication to customers (13%), application of contractual conditions (10%), interests calculation (3%), personnel behaviour (2%), and the rest (23%) is distributed over really various and specific motivations. These distributions, in addition, are similarly present also in Intesa Sanpaolo, and protect the research from possible bias due to very different typology of failures, complainants, or affected products.

BNL service recovery process is really linear and quite lean, as it can be observed in figure 33. The recovery process starts when the customer needs to manifest his dissatisfaction with the bank, whatever the reason is, and contacts his trusted person. Indeed the bank strongly recommends customers to direct first their referring person in the bank before proceeding to a formal complaint. The customer, in light of the spirit of full accessibility, may use all possible means to contact frontline personnel of specialized call centre employees. If the problem is immediately solvable because causes and responsibilities are clear, and there is agreement about how to intervene, service failure will be recovered directly by frontline employees, and it could not even be signalled to central offices. On the other side, if it is not possible to handle the complaint at the agency, due to disagreement about whether and how to intervene, the customer is invited to formally complain by sending his written request to the closest BNL structure. This means that basically customers are used to having a trusted reference person inside BNL to be addressed for any kind of requests, and this person, or the agency he works for, is the first contact for complaining customers. Usually individuals, premium, private and small business customers address local branches, whereas corporate customers and very important customers as well direct to they trusted territorial manager or central head. As the complaint is received, there is always a data entry phase, which is necessary to share with the network the state of the official complaints, and it allows the central headquarter to suggest synergies between territorial experts to work together for complex cases. Besides, data entry allow for a formal and appropriate processing, by protecting customer privacy and assuring an adequate accurate process. Then, a negotiation phase starts between the customer and bank personnel (local branches or central depending on whom the customer directed the complaint to), in order to deepen the specific problem and find out a reasonable accepted shared resolution.

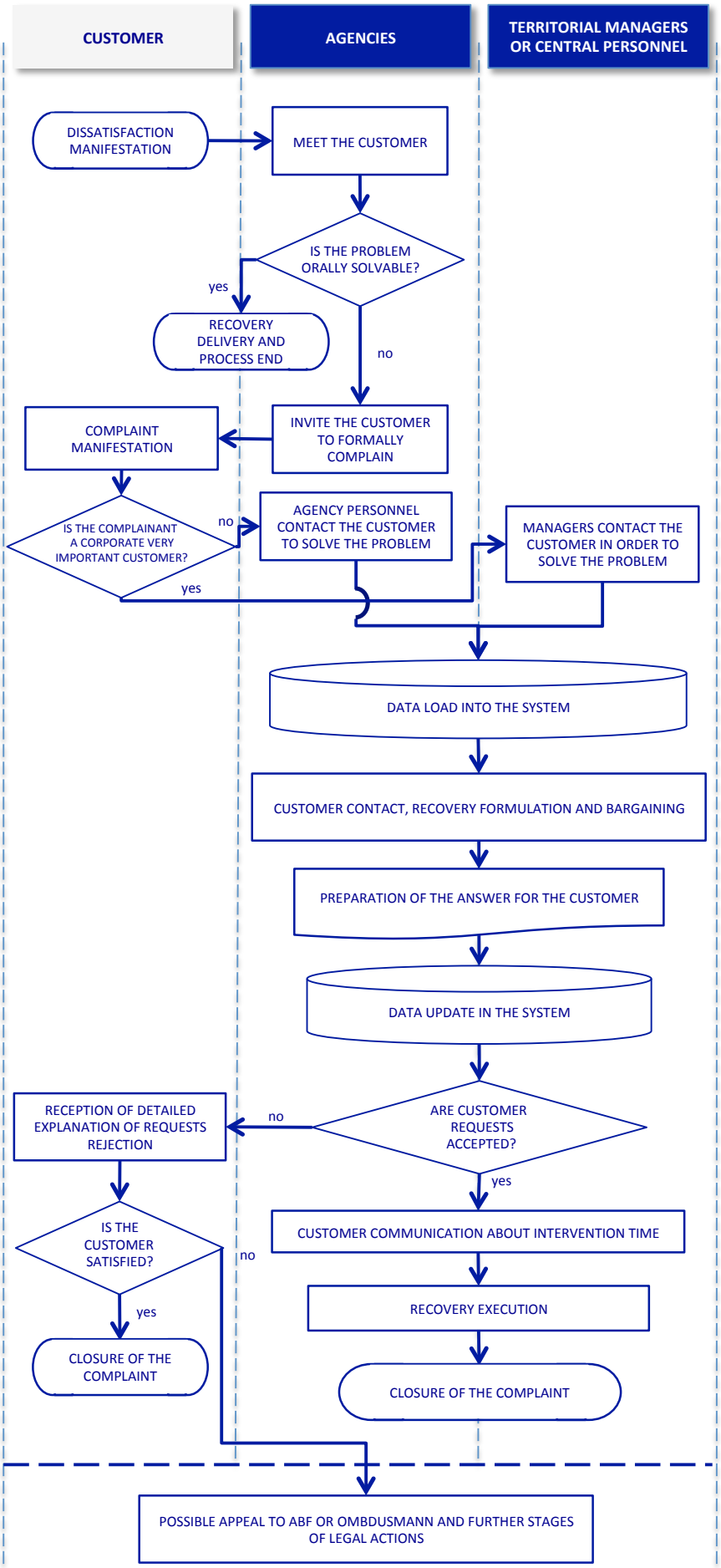

Figure 33 – The BNL service recovery process

It is also possible that customers direct to local branches personnel too complex or expensive requests, and in this case the procedure is forwarded to higher level personnel, that manages larger budget and has more specialized knowledge about the recovery topic. During the bargaining some points of contact are searched, in order to enhance reasonable compromises aimed at fostering customer satisfaction and loyalty. BNL mission is firstly trying to minimize failures that raise to official complaints, and secondly to meet customer recovery expectations avoiding escalations to ordinary justice or other institutes such as the ABF and the Ombdusmann, because they entail an evident contraposition between customers and the bank that take different sides, and this is deemed extremely dangerous for a profitable lasting relationship. This is also the reason why sometimes, even if the bank is sure to be right and doesn't owe anything to the customer, the recovery process turns in favour to the complainant due to the strategic importance that his satisfaction may have. This way, recovery are deeply perceived and an investment tool that the bank may use as a marketing weapon. When the final response has been elaborated an official reply to the customer is prepared and sent to the complainant, which is usually accompanied by a phone call that aims at maintaining a direct personal relationship to integrate a quite aseptic anonymous written reply. After that, the complaint's data are updated in the system to memorize all useful information about the recovery process. The last part of the process is quite standard, since it encompasses the acceptation of rejection of customer's requests, with consequent communication either of the time and modalities of recovery execution or of the detailed reasons why the complaint analysis has not lead to customer requests' acceptation. If the customer is satisfied, the recovery process ends with the definitive closure of the claim, whereas in case of dissatisfaction with the bank's reply another phase with official appeals to the ABF or the Ombdusmann may begin. All in all this process is quite interesting because it presents a preliminary conciliation phase that wants to stop the rise of an injustice feeling in the customer, that is to be unfairly treated by the bank.

The next paragraph discusses the operational constituents of this service recovery process. In particular, specific scores and motivations for their attribution are provided.

3.4.3 – The operational constituents evaluation

This paragraph concludes the within case analysis, providing further insights into the operational constituents of structural dimensions of service recovery systems implemented in the second banking case study. Table 20 presents the score attributed to the operational constituents, with short comments that are developed in the following.

Dimension	Constituents	Score	Comments

ACC	Communication channels	High	Many means are available and the firm helps people in complaining
	Provide assistance	High	The bank helps the customer in complaining beyond regulation prescriptions
COM	List of recovery options	Low	It doesn't exist as recovery depends on the specific failure analysis and customer relationship
	List of possible failures	Low	The complaint variety is enormous and only experience is helpful in dealing with them
	Variety of recovery	Moderate	Recoveries may vary with particular requests but are usually monetary based
EMP	Empower FLEs to implement decisions	High	First contact personnel is able to solve the problem sometimes avoiding official complaints
	Empower FLEs to make decisions	High	FLEs are encouraged to make decisions about how to recover due to their customer proximity, respecting their budget
FOR	Written rules and procedures	High	Most of procedures and responsibilities are codified in a written form in order to provide clear guidelines and respect norms
	Appraise compliance	Moderate	Compliance controls are performed per each complaint without specific audit sessions
	Maintain procedures updated	High	Procedures have to be constantly aligned to national regulation update
HRI	Competences	High	A balanced mix of banking experience and soft skills is desired
	Training	High	Specific training sessions are periodically scheduled to keep personnel updated
	Specialization	Moderate	Employees are mainly promiscuous and not specialized but there are some experienced "product experts" that provide support
INF	Adaptability	Moderate	The process may be adapted to prevent the formulation of official complaints

	Customization	High	Recoveries may be tailored on the specific case and strongly consider the customer importance for the bank
	Going the extra mile	High	The bank strives to deliver delightful recoveries to as to reinforce customer loyalty and satisfaction
SYI	Improvement actions	High	Each complaint is monitored and improvement actions are compulsory
	Databases and reporting	High	Tools and instruments are rather advanced to monitor the performance of all the network
	Control performances	High	Specific performances are measured and evaluated periodically

Table 20 – Scoring summary of operational constituents of BNL recovery system

Accessibility is really high since it is one of the "must" of this bank, which wants to be able to continuously stay in contact with the customer by offering easy and open means of communication. That's true also for the recovery process, which actually may start through an informal email, a written request, a phone call to a trusted employee, a call centre inquiry, or a text message to the devoted service. The rationale behind this choice is that the bank doesn't want that the customer perceive to be against the service provider, and using these informal means and above all through the availability of personnel a collaboration perspective is built. Indeed many times the customer dissatisfaction doesn't escalate to an official written complaint that requires a written reply, because BNL is capable to intercept even weak signals of dissatisfaction and provide full listening and support to turn them into positive perceptions. Accessibility is really high also because the bank provides accurate indications about how to manifest disappointment and signal problems, and the website itself provide a standard form to fill, in order to let the complaint be processed efficiently. Moreover, despite regulation prescribes to complain in a written form, BNL is available to register phone calls and transcribe them for the customer, so as to create a written complaint according to his expressed requests. This way, there're really few restrictions to respect and the customer is really facilitated and assisted in manifesting his problems, supporting BNL's philosophy to take the customers side instead of contrasting one against the other.

Comprehensiveness is low and actually a failure and recovery list is not available. Failures' classification is usually provided by the central bank or other authorities for consumers' protection,

but they are not managerially useful in assisting the recovery process. Indeed, the reported percentages provide just an indication of what the main failure categories are, but operationally speaking this doesn't entail any particular advantages. Actually if repeated failures occur due to the same reason, middle managers will intervene by setting an improvement action plan, but during daily work employees can't use specific tables saying "if this, do that". This is due to the huge variety of complaints, and it has been deemed more useful to set some budget limitations and consequent authorization thresholds (the higher a compensation request is, the higher level manager can authorize it) than preparing standardized tables to apply during the recovery. Two other reasons were provided to justify this choice: tables like these would be really long and difficult to manage and they should be continuously updated, since regulation and contractual details of bank products vary day by day, on the other hand the risk to enhance impersonal behaviours and automatic quicker solutions wanted to be avoided, since such instruments could have changed the personal customized touch that is really appreciated. Besides, all possible recovery types are allowed (no limits to chances to satisfy the customer) but most of times they consist of monetary compensation or favourable conditions applications, depending basically on customer requests.

Empowerment gets a really high score for BNL. Indeed the bank, despite belonging to the BNP Paribas financial group, is entitled to define its own philosophy as far as service recovery is concerned. This is due to the fact that BNL is the only bank of the group operating over the national territory and this way there are no possible conflicting differences that may arise comparing to other subsidiaries. In other words the holding institution has no other retail banks in Italy, and there are no risks of affecting the global brand image due to relevant differences among subsidiaries. In addition, since the regulation has national peculiarities, it is important to let BNL interpret autonomously recovery practices over the Italian territory. This country-based structure allows BNL to organize recovery processes in a very decentralized way. Coherently with the mission to be as close to the customer as possible and provide full accessibility, BNL pursues a strategy to maintain the recovery process near to the failure context. Following this philosophy, all local branches may manage autonomously the complaints received and some differences are allowed and actually encouraged it they're rooted in the need to satisfy different customers' needs. Even if relevant recoveries have to be authorized by territorial managers (and sometimes corporate managers for very important customers) most of times local branches are capable to entirely process the complaint and the headquarter (in Rome) involvement is minimum just to keep it informed. All in all empowerment is really high and delegation is a really stimulated practice together with responsibility and controlling activity attribution. The network is coordinated mainly through trust, and clear common strategic directives are spread and implemented by territorial managers. The fact

that the bank have been operating for 100 years over the Italian territory has also fostered a progressive refinement and alignment of recovery behaviours, through experience and continuous monitoring, that in turn have led to a really reliable and consistent peripheral system.

Formality is high due to the relevant number of written documents that rule internal procedures and compliance respect. Indeed, the fact that the bank tries to behave informally with its customers and offer a personal touch doesn't imply a minor attention to rigor and accuracy in processing data and observing European and national regulation. This way procedures, documents formatting, authorization steps, form to complain are all well codified and represent an important characteristic of the system, that enables processing precision and data security. In fact, if the first informal conciliation phase, which is undertaken by the reference person of the customer, doesn't result in a satisfactory outcome, it becomes pivotal to strictly respect procedure compliances. They represent a necessary condition to adequately carry out the complaint management process and deliver appropriate recovery. With regard to compliance controls, there are no devoted specific moments of audit but there is instead a continuous latent monitoring activity by supervisors and the corporate managers over the network work; whereas frequent reviews of procedures (even for small changes) are mandatory to catch all prescriptions of banking regulation.

Human intensity is high and it is one of the most important aspects for BNL. Indeed, periodical training sessions are organized to update employees about changes in regulation and consequently in internal procedures, and also to present innovations in services and banking products that are offered to the customers. Having a profound "banking product" knowledge is pivotal to work in the complaint management division. Despite this, when questioned about the necessary competences, managers indicated a mix of both technical and soft-skills as a fundamental success factor to deal well with the recovery requests. In particular, referring to the DISCO thesaurus, some "domain specific skills and competences" were mentioned, such as: "regulatory reporting" (under the category bank management), "dealing with insurance claims", "corporate banking", "security analysis", "payment transactions", that confirm the importance of having really technically-skilled people able to manage in-depth contractual details. On the other side some "non domain specific skills" are pointed out, such as "client support", "listening comprehension", "establishing contacts", "customer orientation", "tolerance of emotional stress", and this is due to the frontline role that recovery personnel has to play when listening to and bargaining with the customer. The mix of "domain" and "not-domain" specific" skills varies with the distance of the employee from the customer, indeed there are 15 workers at the central headquarter and about 50 distributed all over the territory, as well as frontline (non devoted) employees in the branches: the rate of soft skills increases as the employee is closer to the customer and the rate of technical skills has an inverse

trend (corporate workers are more technically prepared). As far as specialisation is concerned, there are no specific "product-areas" which employees belong to, but there are some experienced - clearly know by all employees - experts particularly skilled in specific service lines that act as reference to support colleagues in case of specific problems. All things considered the human intensity is really high since the bank is very careful in selecting and training recovery employees and developing recovery profiles adequate to the particular position over the network. People selection is really pivotal, so much that just "brilliant" retail employees are considered for this division, and working in recovery division is deemed a sort of privilege by the organization, due to the critical importance of the tasks executed.

Influence is high thanks to the maximum care for customers' needs that usually results in high level of customization. The process, especially in the first part before an official complaint is formulated, may be relatively adapted depending on the specific situation, for instance whereas individual and premium customers mainly address local branches' personnel, private and small business customers may contact directly medium level territorial managers, while corporate customers are allowed to interact with specific key account managers. Furthermore, the total devotion of BNL to customer satisfaction sometimes compromise current profitability because customers requests are accepted even if they are wrong and the bank could proceed rejecting them. This is due to the strong commitment in pursuing customers' satisfaction even if it is necessary to invest on them, in light of possible future returns. Being so close to the customer is pivotal to prepare ad hoc solutions, and sometimes the negotiation turn out favourably to BNL leading to relevant savings in time and avoiding further fastidious legal actions. In other words influence is high as it is considered a useful instrument to deliver the mission, with beneficial effects in the medium-long term.

System intensity is high too, since BNL invested a lot in information technology systems that support a flexible and accurate monitoring of complaints all over the network. Indeed instruments and devoted software tools are largely used and allow for automatic reporting, which is fundamental to execute appropriate controlling over the official complaint. Actually a relevant number of official complaints is processed, and BNL has to guarantee adequate responses in order to avoid further steps of litigation. This means that each complaint has to be carefully elaborated in order to assure flawless processing, enhance a positive extra judicial resolution and maintain a profitable respectful relationship with the customer. In order to do that, recovery performances have to be strictly controlled and fostered, and BNL paid painstakingly attention to time and quality dimensions, and secondarily to the cost one. Time performances are ruled by normative terms and require absolute respect in order not to risk further escalations, but BNL wants to offer the customer the fastest

possible recovery and this way internal targets are set at 10 days for banking complaints (against a normative deadline of 30 days) and 30 days for investments complaints (against a normative deadline of 90 days), and the majority of complaints are actually managed respecting these internal targets. Furthermore, reporting tools provide several views, highlighting the delayed complaints. In case of critical situations, the head of the division stimulates territorial managers to prioritize some quarrels, according to local urgencies. As far as the quality of recovery is concerned, BNL tries to get immediate continuous feedback from the customer during the negotiation phase, and large surveys are three-monthly executed to monitor customer satisfaction, also with service recovery practices. Finally, costs are monitored and compared with the budget, which is set for each territorial group of branches at the 0,05% of the local intermediation margin. However, each situation is evaluated apart, in light of the mission to maximize customer satisfaction, even sacrificing current profitability. Overall system intensity is thus high, thanks to the specific monitoring activities and investments in reliable and flexible systems, whereas improvement mechanisms are implemented without formal kaizen meetings but acting with continuity on recurrent failures' causes removal (with a monthly check).

The within case analysis has provided deep insights into the operational implementation of service recovery systems dimensions, presenting the specific reasons that lead to the assignation of each score. This part is the base for the cross-case analysis, which addresses the differences and similarities between cases and provides fundamental conceptual analysis to discuss findings and present the answer to the research questions (in the last chapter).

Chapter 4 – Cross case analysis

This chapter presents the cross case analysis, which aims at pointing out the main differences and similarities among cases. Having four cases distributed over four differed theoretical profiles, many alternatives of comparisons are possible, six different couples of single cases are available. Despite this, comparisons are chosen on a theoretical base to be meaningful with respect to the research aim. This way, just two couples of single cases are considered, neglecting the crosses between cases from different sectors. In addition, comparisons between groups of cases belonging to the same sector, and between groups of cases with the same organizational configuration are introduced. The single cases comparisons have been run within the same sector (and not within the same organizational configuration), since after the within case analysis more commonalities emerged in cases belonging to the same sector, than in those having similar organizational structure. This was expected since the literature review, which highlighted the pivotal role of business sector on service recovery practices. Notwithstanding, taking into consideration all relevant commonalities and differences, and building second level comparisons with cases grouped by analysis dimension (sector and organization), no significant information is missing. Furthermore, a preliminary analysis of the similarities patterns across the four cases has been run in order to choose the cross case analysis strategy. In particular, two kinds of comparisons are proposed: the former is the comparison between cases that belong to the same business sector, while the latter is the comparison between aggregation of cases in the manufacturing and aggregation of cases in banking, and the comparison between the centralized headquarters and the decentralized subsidiaries. The last two comparisons will deal just with those dimensions that have been identified as most suitable to discriminate the impact of the business sector and the organizational configuration. The first type of comparison is useful to catch similarities that emerge from cases that respect the same selection criteria except for the organizational configuration. Then, after having evidenced and commented the comparisons, a conceptual summary is given to infer the main findings that arose from the specific sector. This means that two conceptual entities are built, that are the summary of the cases belonging to the same industry, and represent main findings emerged from banking sector and manufacturing sector analysis. The evidences elaborated from the within-sector cross case analysis are thus the input from further cross-sector analysis, where relevant differences are expected to emerge. The same is done for the other dimension, highlighting the role of organizational configuration in distinguishing firms within the same sector (one is a centralized headquarter and the other a decentralized subsidiary), and then contrasting groups of two firms from different

sectors but with similar organizational configuration, to catch the impacts of this factor. This tactic is supported by several researches, that confirm how selecting pairs of cases and analysing their similarities and differences along the research dimensions could be useful to get deeper understanding and draw meaningful findings (Eisenhardt, 1989). Voss et al. suggested in 2002 that one powerful suitable method is selecting pairs of cases and look for analogies and differences, with data possibly organized into arrays with the possibility to compare two-by-two cells. The cross case analysis follows the framework illustrated in figure 34, in fact the next four paragraphs will deal with the within-sector cross case analysis (manufacturing cross case and banking cross case), and with the aggregate cross case analysis (cross-sector and cross-organization) comparison, anticipating some preliminary emerging findings as well.

In order to do this, the comparisons between cases are based on the evaluations of the specific dimensions, through the analysis of each single constituent, discussing in depth the reasons of their similarities and differences. In fact, the same level of a dimension implementation is not sufficient to affirm that there are similarities between cases, it necessary to find out that the reasons of analogous scores are similar and related to similar causes associated to the contingencies factors. The evidences gathered by within-case and cross-case analysis are then compared with literature in the last chapter. This chapter points out also relevant observations that are useful to predict the final propositions, which represent the answers to the research questions.

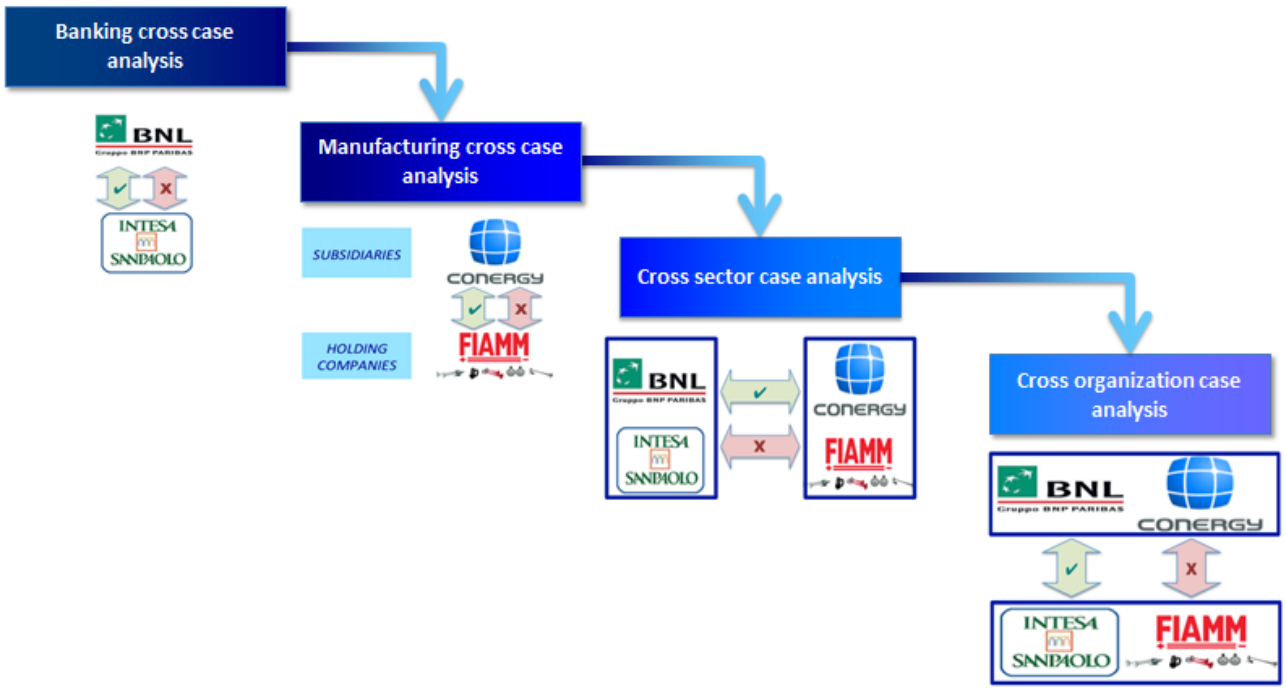

Figure 34 – A representation of the cross case analysis

4.1 – Within sector cross case analysis

Before entering the cross sector analysis, it is important to present a preliminary overall study of the evaluations of the seven dimension across the cases, that led to the definition to the cross case strategy. Table 21 shows the aggregated scores of the 7 dimensions for the four case studies. Fiamm and Conergy belong to the manufacturing sector, whereas Intesa Sanpaolo and BNL are financial operators (highlighted with different colours), Conergy and BNL are decentralized subsidiaries (in *italics*) whereas Intesa Sanpaolo e Fiamm are centralized headquarters.

Dimension	Fiamm	*Conergy*	*BNL*	Intesa Sanpaolo
ACC	High	High	High	Moderate
COM	High	High	Low	Low
EMP	Low	*High*	*High*	Low
FOR	Low	Low	High	High
HRI	Moderate	Moderate	High	High
INF	High	High	High	Low
SYI	High	High	High	High

Table 21 – A summary of seven dimensions' evaluations across the four case studies

The table highlights the main commonalities between the cases, showing that some clear patterns are identifiable for some dimensions (comprehensiveness, empowerment, formality, human intensity), highlighted with different colours. Since the sector seems to be relevant for 3 of them, the first level of cross case analysis will deal with couple of companies within the same sector, that is Fiamm-Conergy and BNL-Intesa Sanpaolo.

4.1.1 – Manufacturing cross case analysis

Manufacturing cross case analysis deals with the comparison between Fiamm and Conergy implementation features of service recovery dimensions. The methodology introduced here is applied also to banking cross case: it consists of a punctual comparison and evaluation of differences or similarities among constituents, in order to understand what the possible affecting factors of dimensions' implementation are and how they work. Under the dimension short name (for example ACC for accessibility dimension) a particular symbol is put to classify the operational constituents' evaluation comparison, highlighting strong similarities (V), weak similarities (v), weak differences (x), strong differences (X). The evaluation of "weak" and "strong" emerged from the careful examination of within case analysis, and has been assigned after having observed all the four cases in order to have overall perception of phenomena. Despite its qualitative nature, the

evaluation has been executed also by another researcher on the same data and analysis, and strong agreement was found. Nonetheless, within case analysis' depth is really supportive in detecting similarities quite clearly. Table 22 presents the manufacturing cross case comparisons assessing the scores of operational constituents implementation.

Dimension	Constituents	Conergy	Fiamm	Comments
ACC **(V)**	Communication channels	Moderate	High	Accessibility is high, due to the common will to assure and enable complaints collections, prompt intervention and assistance to the customer
	Provide assistance	High	High	
COM **(V)**	List of recovery options	Moderate	High	Comprehensiveness is high thanks to the deep knowledge of possible product-service failures and the possibility to propose a wide range of recoveries
	List of possible failures	High	High	
	Variety of recovery	High	Moderate	
EMP **(x)**	Empower FLEs to implement decisions	Moderate	Low	Empowerment is quite different due to the different control needs and structure that headquarters have to maintain over subsidiaries and recovery performance
	Empower FLEs to make decisions	High	Low	
FOR **(V)**	Written rules and procedures	Moderate	Moderate	Formality is quite low and just useful clear written guidelines are provided with no kind of stressing controls of their respect
	Appraise compliance	Low	Low	
	Maintain procedures updated	Low	Low	
HRI **(V)**	Competences	Moderate	Moderate	Human intensity is not moderately low, formalized training sessions are rare, no specialization is present and no specific previous experience and qualifications are requested
	Training	Moderate	Moderate	
	Specialization	Low	Low	

INF (V)	Adaptability	High	High	Influence is high due to the declared will to assist customers and provide tailored solutions that demonstrate superior responsiveness and act as a distinctive competence
	Customization	Moderate	Moderate	
	Going the extra mile	High	High	
SYI (v)	Improvement actions	Moderate	High	System intensity in high but in a case is largely due to improvement practices whereas in the other is rooted in an intense use of instruments and control of recovery data
	Databases and reporting	High	Moderate	
	Control performances	High	High	

Table 22 – Manufacturing cross case constituents' evaluation comparisons

Accessibility is quite similar in these cases, since many means of communications are used and no particular restrictions in complaining exist. In addition customers are really well-trained about how to complain, and both the firms provide them with clear indications about how to contact customer-service personnel (even the mansions are labelled in the same way). This high level of accessibility is rooted in firms' strategy and communication to customers: both Conergy and Fiamm decided to undertake a servitization process in order to be nearer to the customer and offer quicker and prompt assistance as a distinctive capability to protect loyalty and customer trust, attaining it through listening to them. In light of such a value proposition and marketing declaration, it was necessary to coherently design highly accessible systems, which are indeed extensively used and appreciated. Providing assistance appears a necessary coherent characteristic.

Comprehensiveness too is quite high in both the cases, thanks to the relative stability of failures and problems. Indeed, both product services and stand-alone services that require recovery interventions are well known and their typologies are quite stable over time, and have been codified. This is due to the fact that the variety of the offering is rather narrow if compared to a pure service provider, and service and product-service failures have been largely experienced and also customer reactions are basically well known. Furthermore, product-service's standards are quite clear and formalized in contracts, and it's quite easy to recognize whether the delivery has fulfilled expectations or not, resulting in a clear codification of failures (PPM excessive rate, delays in delivery, remote control breakage, etc.). These firms are traditional manufacturers that have enlarged their offering adding services to their products, and developing new contractual forms that move the focus from the physical design attention to a more customer operations-oriented

perspective. This makes service recovery practices a distinctive capability and an order-winner factor, able to protect from low-cost competitors, as well as a fundamental driver to business success. Besides, there is no strict regulation that prescribes ad hoc behaviours, as it happens in banking where each single request deserves specific answer. All these characteristics let companies propose appropriate recoveries without the hassle of being compliant with sectorial norms, and they are able to capitalize previous knowledge. In other words, manufacturers have developed a service recovery offering so as to be more commercially appealing, and were able to implement their strategy considering frequent problems, customer desires and available resources. All in all, comprehensiveness is high thanks to the capability to design recoveries based on past failures and exploiting the advantages of physical products that enhance recovery paths (if the inverter crashes you'll have production loss reimbursement, if the horns supply is late you'll have a discount, if the PPM is over the threshold by 10% ad hoc innovation will be implemented) and preparation of quite standard recovery scenarios. Put differently, companies are capable of exploiting product platforms to codify recurrent failures, and may freely create appropriate preconfigured recovery options to address customer expectations. This is very different from banking scenario, where regulation obliges to evaluate each single request of the complaint, and the variety and particular history of the complainant inhibits the preparation of valuable suitable solutions.

Empowerment is quite different between the two cases. In fact, while Conergy presents a quite high score on this dimension, Fiamm gets a lower score. This is due to the different approaches pursued by the two groups, partially due also to their specific organizations. In particular, Conergy promotes a high degree of FLEs' empowerment in dealing with complaints and discussing with the customer, encouraging decisions making and implementation for his satisfaction. The only dependency from headquarter is about product logistics and analysis, that require laboratory involvement. On the other side, Fiamm adopted a recovery approach where important decisions are shared with the Italian headquarter, and negotiation details are defined and sometimes discussed by managers. An explanation that emerged from the case study analysis deals with the different role of firms within their group: whereas Fiamm is the headquarter of a group that grew over the world serving often the same customers in different countries, Conergy Italia is a national subsidiary that deals just with Italian customers operating over a specific territory, where the Italian regulation determines incentives for photovoltaic production. Put differently, Fiamm needs to maintain a strict control over the global network in order both to avoid inconsistencies and severe failures, supporting a strict alignment among all its subsidiaries. Indeed, different recovery behaviours would be seen as a lacking in proficiency, and would pave the way for opportunistic behaviours and contestations of applying different policies to the same customers. All things considered

empowerment is different because of the very polar organizational configurations, that entail a more centralized approach in Fiamm, where the headquarter has to maintain full control of the network over the world to sustain brand image and protect profitability, and a more decentralized approach in Conergy, where empowerment is high in dealing with aggrieved customers since they are basically engaged with the local subsidiary and not with the group. Being a centralized head of the group or a local subsidiary of a decentralized group seems to affect the empowerment dimension.

Formality is quite similar and actually low in both the cases. Some written rules and guidelines are provided in order to have a clear idea of how the recovery process should flow, but most of the activities and procedures are not codified. Basically written documents are process flow-charts that represent the ideal processing of each complaint in terms of macro phases. This has been deemed useful in order to let employees work efficiently avoiding misunderstandings about internal responsibilities and role attributions. On the other hand, the control of compliance respect is really loose and basically it doesn't happen. No one in these firms assesses the respect of the prescriptions, but essentially deviations from the main rule are detected a posteriori, and each time improvement indications are provided. The same is for rules' review, they are seldom modified or updated. This low degree of formality has been justified by managers asserting that providing employees with many detailed procedures would have been useless, and devoting resources to control their respect the same. Indeed, there is no regulation that prescribes how to recover and customer satisfaction with service recovery depends on the capability of the firm to meet his expectations, not to respect imposed standards. Furthermore most of customers expect immediate recovery, and urgent interventions are frequent and many times the process is customized, making the formal rules application impossible. Moreover, both the cases raised a cultural motivation: these companies have based their competitive success both on product quality and service level guaranteed by responsive employees and managers capable to sort out each failure trough experience and adaptation-improvisation capabilities, written rules would have been seen as unnecessary constraints coming from bureaucracy.

Human intensity is similar too, and obtained scores between moderate and low. Some training sessions are delivered about product and services but they are not recovery-oriented and most of time they involve all firms' personnel to provide updates about the offering. On the other side, no specialization is present and recovery employees are really interchangeable and actually work as a whole team. Besides, no "domain specific" competences neither official qualifications are required to work in this division. Recovery employees in these companies are hired quite young, since junior profiles are expected to be more flexible and innovative in dealing with problems, and they can learn all what is necessary to know through field experience, without compromising their efficacy.

Human intensity is overall moderately low, since no specific selection criteria or devoted training sessions exist, but recovery performance is high since employees' capabilities seem to be adequate to the specific context. In other words, soft skills, such as problem solving, negotiation, listening to the customer, provide accurate indications, understand technical manuals, coordinating resources are really recommended for this division, and a positive team climate is built in order to let personnel work willingly. The product presence requires a certain capability of dealing both with technical issues, without neglecting interactions with customers. Indeed recovery employees in this firms act as intermediary between the customer, the technical division and the commercial division. They are collectors of information and leader of small task-force teams, whose mission is to restore customer satisfaction without compromising firm profitability. They have to listen to the customer and manage firm resources and information, this way training is interpreted as a field experience and no specific technical competences are required as prerequisites. In such a variegate context with services and products offered together, human intensity is low because multi-competences profiles and flexibility needs have deemed much more important and effective than structured deep training and focused competences.

Influence and system intensity are high for both the cases. Influence is elevated due to the high level of customer involvement during the recovery process and the consequent availability of firms to adapt both process and outcomes depending on the specific situation.

System intensity is high thanks to the attention paid to data elaboration and storage and improvement practices, that are based on the collected failure data. Monitoring practices are advanced and provide useful support in decision-making about specific improvements to implement, and are enhanced by informative instruments and tools that have been ad-hoc designed (Conergy), and rich detailed databases (Fiamm). Furthermore, the same principal performances are measured, time and quality (with a minor focus on costs), with precise indicators that are helpful in providing punctual indications about improvement directions.

All in all, almost all dimensions seem to be similar in terms of extent and modalities of implementation. However, a major difference emerged on the empowerment dimension, mainly due to the very different organizational configurations of the two cases. Indeed, Fiamm has to coordinate different plants all over the world that work with the same customers, and has to maintain a strict control to avoid inconsistencies and protect brand image and profitability mined by opportunistic behaviours of customers; on the other hand Conergy is able to delegate and empower frontline employees (also salespersons all over Italy) since it has full control over the Italian territory and customers address their territorial reference person who is in contact with the Italian site. Despite this, some commonalities appear to be context dependent, such as formality (no

regulation forces specific procedures or codifications, and actions are driven by tangible urgencies), comprehensiveness (product-service failures are known and recoveries come from contractual agreement or firm experience, with clearly-known recovery scenarios), human intensity (non domain specific competences are required, soft and coordination skills are necessary, learned through field experience and not in recovery specific training sessions). Other dimensions such as accessibility influence and system intensity seem to be related to the companies' recovery strategy and willingness to invest in customer involvement (both in complaining phase and recovery formulation) and process improvement (through strict data monitoring and learning practices). Due to the evidences gathered, with respect to those dimensions that appear to be affected mostly by the sector, the manufacturing case study is connoted by:

- high comprehensiveness
- low formality
- low human intensity.

These dimensions will be compared with the banking case studies in order to contrast different business sectors' implementation and draw coherent propositions. In the end, the organizational configuration seems to affect the empowerment dimension, with the headquarter (adopting a centralized organization) having a low level and the subsidiary (of a group with a decentralized organization) having a high degree of empowerment.

4.1.2 – Banking cross case analysis

This paragraph presents the cross case analysis of the two financial institutions, highlighting what the main differences and commonalities are. The same symbols "V", "v", "x", "X" are used in each dimension to indicate respectively "strong similarity", "weak similarity", "weak difference", "strong difference" in terms of implementation. Table 23 presents the cross case analysis.

Dimension	Constituents	BNL	Intesa Sanpaolo	Comments
ACC	Communication channels	High	Moderate	Some communication means must be available due to regulation, but their variety and associated practices vary according to will to specific needs
(x)	Provide assistance	High	Moderate	
COM	List of recovery options	Low	Low	Comprehensiveness is low due to the difficulty in setting standard recoveries, the huge variety of single cases and the regulation who obliges
(V)	List of possible failures	Low	Low	

	Variety of recovery	Moderate	Moderate	to consider specific requests
EMP **(X)**	Empower FLEs to implement decisions	High	Low	Empowerment is very different due to diverse control needs, culture and organizational structure that led to polar choices
	Empower FLEs to make decisions	High	Low	
FOR **(V)**	Written rules and procedures	High	High	Formality is high due to a prescriptive strict regulation that specifies privacy compliance, transparency details, storage requirements
	Appraise compliance	Moderate	High	
	Maintain procedures updated	High	High	
HRI **(V)**	Competences	High	High	Human intensity is high due to formal selection processes and training, that have different focuses due to specific approaches to personnel role and responsibilities
	Training	High	High	
	Specialization	Moderate	High	
INF **(X)**	Adaptability	Moderate	Low	Influence is very different since polar view of the recovery role underpin the implementation of the system: deliver the promise on one side and delight the customer on the other one
	Customization	High	Moderate	
	Going the extra mile	High	Low	
SYI **(V)**	Improvement actions	High	High	System intensity in high due to advanced informative systems that allow for performance monitoring and data collection/elaboration, with consequent enhancing of learning practices
	Databases and reporting	High	High	
	Control performances	High	High	

Table 23 – Banking cross case constituents' evaluation comparisons

Accessibility is quite different in the two cases, with one bank gaining higher scores than the other. In particular, BNL offers to its customers all the possible means of communication, in order

to make them feel comfortable with complaining, without particular standards or prescriptions. Even the "written form" prescribed by the norm is by-passed through a transcription process of phone calls or chats validated by the customer. Furthermore complaints in the very early stage may be formulated through text messages, phone calls, personal encounters with a trusted employee, in addition to other usual means such as faxes, letters, emails. In summary, the customer is provided with all the possible means to communicate his problem, since the will of the firm is to meet every possible customer's preference. On the other side, Intesa Sanpaolo offers the customer just "written forms" to complain officially to headquarter. The reason is rooted in a more efficiency-oriented view of the process that has to flow quickly assuring the maximum simplicity to the customer, anyway fully respecting the national prescriptions. In other words, few standardized options are proposed, that allow the customer to complain just in the official manner, creating some obligations to the bank in terms of official reply. Complaints may also be collected from the branches (rarely happens), but have to be promptly forwarded to the central site. In short, differences in the degree of opening to the customer are identified accordingly to firms' propensity to focus on efficiency and simplicity rather than variety of alternatives and attention to customer preferences, still maintaining open lines of communication to let the provider deal with failures (and respecting Italian regulation that prescribes at least the possibility to complain in a written form).

Comprehensiveness is really similar in the two cases, with low scores. The possibility of firms to prepare a comprehensive list of failures and recoveries to offer accordingly to the specific problem is really limited, owing to the huge variety of different services offered, the process itself and the regulation. More specifically, it is really difficult for banks to be comprehensive, since the ratio of specific cases – almost unique – is enormous, especially for business services, where solutions are rather customized and expectations the same. High volumes of specific cases, that require deep analysis and history reconstructing, force providers to evaluate each single complaint differently. Mover very fast continuous introduction and modification of offered services and regulation details make things even more complex. Then, Italian regulation obliges organizations to answer to the specific request of the customer, and this way the range of possible alternatives is quite limited, since most of times it consists of monetary compensation or application of favourable conditions, that are the core elements of transactions in banking. Furthermore, building suitable scenarios of possible effective recoveries was deemed useless due to the large variety of problems and similar typology of requests, that make wide range of recovery options and identification of failure profiles purposeless. This way, peculiarities of banking sector in terms of regulation, high volumes and variety, monetary base compensation seem to affect the comprehensiveness dimension making it low.

Empowerment is very different, with high level in BNL and low level in Intesa Sanpaolo. This dimension is primarily related to personnel, and in particular to the possibility of frontline employees to make quick decisions about how to recover, manage sufficient resources and competences to handle the complaint, and complete the service recovery without recurring to central offices, that is having the power to implement decisions. As illustrated in the within case analysis, the two banks adopted very different solutions. Intesa Sanpaolo centralizes all the process at headquarter, with strict supervision of team leaders and no empowerment of frontline employees. Conversely, BNL promotes branches-centred recovery and territorial experts that are empowered to cope with complaints in proximity to the customer. These very different configurations are rooted in several reasons. First of all Intesa Sanpaolo is the head of a large group that has been built during the last 15 years with continuous acquisitions and mergers over the national territory. Many acquisitions involved local territorial banks with peculiar culture, history, operations, with very huge differences among them. Leaving autonomy would have meant accepting dangerous differences in dealing with service failures, both in terms of process and outcomes, making control of performances extremely difficult and compromising the global homogeneity of brand image. Moreover, some costs would have been duplicated in terms of experts over the territory and the best solution, to get savings and protect uniformity of brand image and standard policies, was identified in a centralized organization. On the opposite BNL has a solid history of 100 years (in the 2013) and had the opportunity to build homogeneous company culture, philosophy towards customers, approach to complaints, which is rather aligned all over the network. BNL is the Italian subsidiary of the group BNP Paribas and Italian customers have a unique interlocutor over the national territory, so no inconsistencies may arise thanks to the training efforts during the past years and the contribution of territorial devoted employees. All in all empowerment is very different due to the polar organizational configuration and partially to the strategic approach that led to the actual structure.

Formality is really similar in the two cases, and is actually rather high. In fact, extensive use of written procedures, formal guidelines and official documentation is deemed necessary by both the organizations. Similarly, some compliance controls are executed to check that official policies are respected and the same prescriptions are periodically updated with consequent formal communication to all the employees. The main reason for this level of formality is regulation, indeed the European and Italian laws and norms prescribe strict procedures for financial institutions, due to the delicateness of their sector in dealing with money. In particular, privacy and transparency regulation defines a set of compliances in terms of clearness of documents, completeness of data, fairness of processing, safety of data, reliability of storage, availability of

retrieval of past information that entail a formal approach to service recovery. Formality in this context is mandatory and useful as well, in order to get a standardized error-proof method in the manner complaints are processed. Nevertheless, the number and speed of changes in regulation that have to be adopted is deemed a bit frustrating and demanding to respect, without adding any value to the final customer. Although some regulation appears slightly bureaucratic, formality is also necessary to be able to cope with thousands of different complaints in an effective way, limiting the risk of escalations due to missing details or superficial processing. In other words, the peculiarities of the business sector, primarily in terms of regulation and secondarily in terms of high volumes variety and delicateness of information, entail a high level of formality.

Human intensity is really high in both the organizations, thanks to the high level of structured training provided, the careful evaluation of employees' work and the accurate study of human resources organization. Furthermore, employees' selection criteria are explicitly formalized and candidates have to match specific profiles to be hired in this division. In particular, some "domain specific" competences are required for workers, which mainly deal with corporate and retail banking financial products and knowledge of national regulation and law. Working in the complaints management division of a bank requires specific competences, because of the respect of a strict regulation and a complex offering rich of contractual details and norms references, that have to be constantly trained and reviewed through periodical specific sessions. This way, training, selection and rewarding practices are really enhanced in these companies, and contribute to a high score in human intensity. Despite these analogies, some differences are present in terms of employees' profiles and organization. More in depth, Intesa Sanpaolo organized workers in specialized teams that are led by a supervisor and are located at the headquarter site, each employee is specialized on a particular typology of complaint depending on the team he belongs to, and is characterized by high levels of knowledge and competences in dealing with specific complaints. On the other hand, BNL employees are spread all over the national territory, are less specialized, and have to deal directly with customers, differently from the former case. A limited group of more specialized employees (not divided in areas by failure problem) at headquarter is present as well, but the objective is to deal with the largest possible number of problems in proximity to the customer. This difference seems to be coherent with the empowerment dimension. All things considered human intensity is really high thanks to business sector peculiarities of strict regulation and specific required training.

Influence is very different, while Intesa Sanpaolo gets low scores, BNL obtains high evaluations. Indeed the former bank is characterized by certain rigidity in processing the complaints and executing recovery, enhanced by the distance from the customer and the office that deals with the

failure. In this case no modifications of the process are admitted, and there is no customer input in the recovery formulation, except for possible necessary clarifications or missing data. On the opposite, the latter bank searches close customer contact when failures happen, and is prone to adapt the process depending on the specific situation, trying to fit contingent requirements. This difference is quite dependent on the recovery concept and proposition of the two companies, whereas Intesa Sanpaolo thinks of it in terms of assuring a proficient error-proof process that guarantees customer rights, BNL addresses a more customer relationship-oriented view, where recovery is the occasion to reinforce loyalty exceeding where possible complainant expectations. Firm strategy and recovery positioning seem to be pivotal in determining the influence level, coherently with organizational choices and customer orientation.

As far as system intensity is concerned, both the banks got a high score, due to their attitude to collect, store and elaborate complaint data in order to draw improvement directions and measure performances. Regulation plays a stimulating role in adopting intense systems since it prescribes to adequately store complaints data and be able to retrieve them but it doesn't seem to be the most relevant factor. Indeed, banks want to deliver recoveries quickly and at a high quality level, without incurring in further escalations. To achieve this, advanced tools and instruments and learning practices that take advantage of the richness of data are fundamental to get satisfactorily results in an efficient way. As a result, system intensity is very similar both in terms of level and implementation details, indeed the same time and quality performances are monitored with very similar indicators that deal with the average length of complaints, the number of out-of-date ones, the average life on them, the number of escalations.

All things considered, some commonalities and differences emerge, and suitable explanations as well. Starting from the differences, influence seems to be strategy dependent, indeed the will to involve the customer and tailor the process on his needs vary according to companies recovery concept, maintaining coherence with the organizational structure with a reciprocal linkage. In fact the distance or proximity to the customer may be a relevant factor in enhancing the capability and attitude to be flexible to the complainant needs. Besides, a relevant difference is identified in empowerment dimension. Specifically it deals mainly with contact employees' empowerment and is strongly dependent on the organizational configuration feature of the group, the centralized headquarter with several subsidiaries and branches operating over the same market has to hold a full control of the network, inhibiting inconsistencies and thus removing power from the periphery moving it to the central site. On the other side the decentralized subsidiary with homogeneous history could build harmony and alignment among its branches' practices and culture and is able to delegate and be closer to the customer. Accessibility is a bit different too, even if banks offer

several means of communication to the customer, BNL enabled many ways of communication to let the customer choose the favourite one, while Intesa Sanpaolo preferred to offer few writing methods to enhance simplicity and clearness. The possibility to complain to FLEs is much more relevant for BNL than for Intesa Sanpaolo, accordingly to their empowerment and organizational different configuration.

As far as commonalities are concerned, system intensity seems to be rooted in the importance that these organization give to learning and monitoring practices to offer better services to customers, and is also stimulated by regulation. Other strong similarities emerged about formality, human intensity, and comprehensiveness. Indeed, the presence of complex and strict regulation, in a setting characterized by high volumes, high variety of services and contractual details, entailed the need to set lots of official written procedures, to have highly trained and accurately organized employees, and the impossibility to prepare standard scenarios and comprehensive recoveries to choose depending on the failure profile. In short, it is possible to identify common characteristics of the banking cases that appear to be rooted in the particular business sector, they are:

- low comprehensiveness
- high formality
- high human intensity.

The next paragraph contrasts the evidences from banking and manufacturing cross case analysis, and the centralized and decentralized organizations, highlighting what the main commonalities and differences are, and how they relate to the proposed contingencies of organizational configuration and business sector.

4.2 – Overall cross case analysis

This paragraph aims at pointing out findings from the comparisons between the different typologies of case studies, in terms of business sector and organizational configuration. This way its objective is to present the main aspects that characterize a particular profile of case by contrasting the polar couples of cases that share the same sector or the same organizational configuration. To do this, two sub-paragraphs follow: the former regards the cross sector analysis, contrasting the main commonalities investigated in the within-sector cross case analysis, and points out the main differences that emerge from the distinct business sectors; the latter investigates the main differences between two groups of cases with the same (within the group) organizational configuration (each group has a manufacturer and a bank). As specified before, in executing these comparisons just some dimensions are considered, that are those identified in the within-sector cross case analysis for having intense commonalities (literal replication) due to the same business

sector or having great differences due to the opposite organizational configurations (theoretical replication). In particular, for cross sector analysis the considered dimensions are formality, comprehensiveness and human intensity, whereas for the cross organization analysis the focus is on empowerment, staying at the indications of manufacturing and banking cross case analysis.
Indeed, staying at the field evidences, influence accessibility and system intensity deserve to be treated apart from the contingency factors analysis since there are not strong indications that led to consider them dependent on the business sector or the organizational configuration.

4.2.1 – Cross sector analysis

The cross sector analysis deals with those dimensions that appear to be very similar in companies in the same sector and very different in companies of distinct sectors, for analogous reasons. This means that not only the similarity or difference have been taken into consideration, but also the fact that they exist for similar reasons. In other words, these dimensions have been identified as those that mostly are affected by the business sector and consequently present strong commonalities for companies in the same industry and evident differences for companies belonging to diverse ones. These dimensions are comprehensiveness, formality and human intensity. It is important to remind that a low level of a dimension doesn't mean low performances, indeed all four cases have been selected in light of their remarkable recovery performance and good results. It's rather a matter of understand what configurations are adopted to succeed depending of some contingencies, in particular the organizational configuration and the business sector proposed in this study.

As far as comprehensiveness is concerned, it is possible to notice how it has received low scores in the banking case studies, whereas high scorers were assigned to manufacturing ones. This dimension refers to the possibility to dispose of a complete range of solutions and scenarios that allow personnel to simplify complex situations, having a broad menu of recovery options from which to choose in order to match the particular situation requirements. In other words, it represents the extent to which a firm is able to elaborate planned strategic recovery options to respond to each possible failure, after having gathered all useful information. Furthermore, concepts of variety of feasible solutions and possibility to have standardized failures to process were associated to this dimension by managers. It received a low score in banking, where it is impossible to prepare standard solutions to offer to customers, in particular when the complaint arrives in a written form. This is due both to the regulation, that prescribes to consider the specific requests of the aggrieved customers and to give him a clear motivated answers of acceptance or refuse, and to the peculiarity of the sector that is characterized by continuous changes and innovation in services (also due to norms), that make elaborating standard scenarios useless, since they wouldn't be used. Indeed

managers, when asked about why they didn't try to design a menu of suitable solutions, explained that every complaint is quite different and a long process of reconstruction of premises and conditions is necessary before preparing the answer, and in no way a scenario analysis would help employees to be faster or more accurate. Proper investigation in compulsory by regulation, but this doesn't lead to failures codification and doesn't result in a enhanced capability to implement predetermined comprehensive solutions. Furthermore, requests are always about money or favourable conditions, and really few possibilities exist to explore different recoveries. In short, the system understands whether it is able to adequately recover from each failure just in the moment employees deeply study its associated complaint and try to find a solution. In fact, a low percentage of complaints are solved accepting the customer requests (less than the 40% against almost the totality in manufacturing cases), demonstrating that some customers are not trained in formulating appropriate complaints or anyway the systems is not able to be comprehensive. On the other hand, manufacturing case studies are comprehensive, and are able to create failure profiles and set a range of suitable recovery options to propose depending on the specific situation. This is due to the fact that service recovery has been offered as an additional element of the value proposition and this way it could be defined by firms, without having to comply with any regulation. Besides, the fact that most of services are somehow connected with products, and complaints the same, allows to exploit the deep knowledge of the product and past experience in defining all probable failures and effective suitable recoveries. Put differently, the absence of specific regulation, the freedom in defining the recovery proposition without normative constraints and the possibility to exploit a relative stable experience of service failures enhances high level of comprehensiveness, permitting the formalization of a stable range of preconfigured solutions.

Formality as well seems to be context dependent, and still regulation plays an important role. Actually, European and Italian regulation set a series of norms that have to been accepted and implemented by all banks. These norms regulate also the recovery activities, with particular attention paid to the privacy, safety of customer data and transparency in bank communication. They even prescribe to identify an internal auditor to monitor service recovery practices and obliges banks to use procedures to consider Ombdusman tribunal decisions when they recover. As a result, these organizations have to adequate to be compliant using a relevant amount of written rules, official procedures, formal guidelines to process the complaint and deliver recovery, that indicate even the size of the characters used in written communications with customers. Respecting these norms is vital in order to avoid escalation for having neglected some of them, which can turn out in costs (fines, reimbursements, etc.). This way, other activities of compliance monitoring and periodical update are necessary. This high level of imposed formality is somehow deemed useful to

process large amounts of complaints respecting customer rights and provide proficient service recovery, notwithstanding many frequent updates are usually seen as useless bureaucracy to cope with. On the other hand, manufacturing firms have low levels of formality, with some written guidelines that have been prepared just to explicit how the process works and avoid banal misunderstandings. In addition, some commercial documents are present to enhance the comprehensiveness of the system, providing indications about the boundaries of possible recoveries. All the operative activities are delegated to the personnel, who is expected to follow correctly the unwritten company philosophy, and that's all. No particular controls are executed and all in all a low level of formality is present, as no regulation imposes it and the expressed will is to leave employees focus on finding the most appropriate solution to delight the customer, instead of focusing on rules respect, that would be seen and useless paper stuff.

Human intensity, which refers to the amount of resources devoted to personnel rewarding, selection and specific training in dealing with complaints, is really different across the two sectors. This dimension has been enriched also with the concepts of organizational attention devoted to personnel competences and its specialization. In light of this, manufacturing cases got low scores, due to a bland attention in training about how to recover, the absolute absence of specialization, and the weak codification of desired competences and qualifications. More in depth, human resources in manufacturing seem to be characterized by flexibility, improvisation capabilities, problem solution attitude, and they are given general training about products and services, since they are basically coordinators of specialized resources that may be salespeople, logistics operators, or laboratory analysts. This is mainly due to the fact that recovery management people are not those who deliver the solution, but they manage the complaint and firms resources in order to let it be delivered appropriately. As a result, no particular qualifications are required, since it is believed that the experience obtainable by working in the division is the best way to learn, and mainly "non domain specific" competences are searched, both on the personal and technical side (they have to be familiar with product issues), and rather young workers are inserted in this division. On the opposite, banking profiles have to be particularly skilled in dealing with financial services problems, and are rather experienced people with consolidated expertise maturated by working in the branches. Indeed, complaints are quite complicated in terms of regulation and details (that changed really quickly), and specific training is delivered in order to make employees prepared to dealing appropriately with failures and provide adequate recovery. The level of specialization is different between two banks, but both of them invest relevant resources in training and stimulation of employees, that are accurately selected to match specific codified profiles with "domain specific" competences. Once again the characteristic of the business sector in terms of regulation details that

have to be known, complexity in reconstructing the specific history of the service failure (compared with an easier evaluation of product-service failure) and the information-intensity of banking require highly trained experienced profiles.

No other dimensions were found significantly different in the two sectors. This way, cross sector analysis has highlighted the determinant role of some sector-based contingencies in affecting appropriate implementation of structural dimensions of service recovery systems. In particular, the role of regulation and the presence of product-related services or information-intensive services seem to affect comprehensiveness, formality and human intensity levels. These evidences will be analysed in the discussion chapter.

4.2.2 – Cross organization analysis

This is the last paragraph of the cross case analysis chapter, which aims at evidencing and formalizing the main differences emerged in cases with different organizational configuration. More specifically, this paragraph deals with those dimensions that presented significant differences in the couple of cases treated in the within-sector cross case analysis (banking and manufacturing) due to diverse organizational configurations. In other words, since cases in the same sector differ mainly for the diverse organization, in this chapter will be analysed the only dimension that appeared to be affected by this difference for similar motivations in the two couples: empowerment. Despite the name of this dimension may be interpreted in a very broad sense with many meanings, in this thesis, due to literature review and coding procedure carried out with managers, it refers mainly to the degree of power given to frontline personnel to manage – decide and act – failures autonomously. It is important to specify the exact meaning of this dimension to distinguish it from the organizational configuration factor, that has been operationalized in this study through two polar categories of centralized headquarters and decentralized subsidiaries. Indeed, it refers both to the ownership configuration of the firms (in terms of equity shares – holding company or controlled company) and the amount of resources and responsibilities allocated to subsidiaries and peripheral units. What emerged from the within cases analysis, as it could be expected, is that empowerment dimension is really different in the centralized holding companies with respect to the decentralized subsidiaries. In fact, Fiamm and Intesa Sanpaolo obtain a low evaluation, since the most important decisions about service recovery are made at the central sites, which define everything for the subsidiaries, and no real empowerment is present. This configuration is chosen to avoid in both the cases possible damages to the corporate brand image due to inconsistencies or differences between subsidiaries, to protect group profitability from possible local different policies too favourable to the customer, to prevent opportunistic behaviours of customers that may interact with different

subsidiaries finding the most accommodating one. On the other hand, decentralized organizations, BNL and Conergy Italia, present high levels of empowerment in dealing with complaints and provide recovery. In these cases there are no possible conflicts with other subsidiaries of the same group for serving the same customer, and this is really important to enhance their autonomy in handling the entire recovery process. Furthermore, they are authorized to propose innovations and implement them, since they are the official unique representative of the brand for certain customers over a specific market. That's really different from the cases of centralized headquarters, which need to run careful monitoring activities to oversee the entire network. Basically, organizations that allocate resources and responsibilities to periphery, empower frontline personnel to manage the recovery process near to the customer, whereas centralized firms remove power from the network and place decisions making activities and resources at the headquarter.

All in all empowerment seems to be really affected by organizational configuration, and actually some conceptual connections exist. The role of this contingent factor on the empowerment dimension is further discussed in the next chapter.

It is important to underline that other dimensions seemed to be slightly affected by the organizational configurations in the banking case study, in particular human intensity and accessibility that, despite having similar evaluations in terms of the level of their implementation, present quite different configurations, and this may be explained also by the polar recovery strategy (compliance with rules and control over the network against proximity to customer and tailored solutions) that necessarily affects the operational decision and is coherently reflected also in the organizational configuration.

In the end, some dimensions seem to be quite similar in the analysed cases and two of them in particular are implemented at a high level, and this appears necessary in order to achieve good results. They are accessibility, fundamental to give voice to customers and let them express their concerns, and system intensity, pivotal to sustain process improvement and provide customer with better service. Influence, on the other side, seems to be strategy dependent, since it deals with the propensity of the firm to let the recovery process be affected by customer input, leading to customized solutions. All these ideas are discussed in the next chapter.

Chapter 5 – Discussion and conclusions

The last chapter of this thesis discusses the evidences gathered through the within case and cross case analysis and presents the research conclusions that provide answer to the research questions, and drawn some research propositions to be input for further research. This chapter is organized in two main parts: the former part starts from the emerged findings and discusses them in relation with literature knowledge, in order to provide full understanding and explanations of the detected phenomena, whereas the second part formalizes research findings and definitive research propositions that represent the ultimate outcome of this research. This part concludes also this thesis presenting managerial implications and pointing out its limitations. Further research directions are provided as well. Since findings arose in response to the research questions, both the parts are divided in many sub-thematic paragraphs, which deal with specific propositions. Moreover, each paragraph in the first part - discussion - is labelled with "RQ1" or "RQ2" (a or b) in order to clearly connect its content to the research question mainly addressed by the findings presented.

5.1 – Discussion

This section is organized in paragraphs that contextually enounce the main findings of the research and discuss them, in order to refine results that are presented in the second part of this chapter. The first two paragraphs concern evidences regarding the first research question, whereas the next ones deal with the second research question, more specifically addressing the role of contingencies.

5.1.1 – Extension of the meaning of the structural dimensions (RQ1)

One of the main contributions of this work is the full understanding and enrichment of the meaning of the structural dimensions of service recovery systems. Indeed, the work by Smith et al. (2009) elaborated and validated them proposing a survey that retained some items, and supported their proposal about pointing out suitable operationalization of these dimensions. In light of that, their methodology doesn't exclude that other possible meanings could be associated and be relevant for operations managers, and actually one of the purposes of this thesis is to understand how practitioners refer, while making daily decisions, to those dimensions in order to get deep insights about their meaning, and define operational constituents for case evaluations and comparisons. Some additional hues have been found for each dimension, and are presented in the following.

Accessibility was found very similar to the description by Smith et al., just a particular focus was put on the assistance given to customers in complaining. The spontaneous help given to

complainant is actually a proxy of the ease that is given them to raise their claim and manifest the problem, and give a practical tangible idea of what can be perceived in terms of accessibility in at the operative level.

Comprehensiveness was enriched by concrete meanings that demonstrate whether the firm is able to build a broad range of suitable solutions that fit every possible scenario. Actually the use of a list of failures and recoveries, not directly expressed by the original authors, emerged as an important operational point to describe this characteristic of the system.

The original decentralization dimension has maintained the principal meaning of empowerment (even changing name in this thesis), and was also associated to the power to implement decisions, that is different from making decisions and catches the possibility to use available resources without recurring to central authorization.

Formality was found basically aligned to the former definition and items, but an interesting constituent about controlling activities emerged to describe that in the operational execution formal guidelines require maintenance and monitoring to assure that they are respected.

As far as human resources intensity is concerned, training and rewarding practices were confirmed (with a minor importance of the second ones), but the concepts of job organization and the definition of typologies of competences required were codified as well, since they were deemed determinant in describing firm choices and implementation of human resources' decisions for recovery activities, and these points were fundamental also in detecting differences among companies strategies.

Influence confirmed the importance of customer involvement and consequent possibility to adapt the process and customize solutions, in addition the capability to exceed customer expectations and the will to do that – go the extra mile – was mentioned as a critical point to discriminate the extent of firm propensity to be influenced by the customer.

Finally, system intensity presented some of the items elaborated by literature, with significant additions such as the use of advanced automatic tools and reporting instruments, that once again catches the operational need to exploit efficiently data gathered, and learning practices adoption, that refer to the possibility to link complaint management to profit (Johnston, 2001).

The identified components complete the description of the structural dimensions executed by Smith et al. in 2009, and provide further deepening in catching operational constituents that could arise just from the field observation (Voss et al., 2002). Indeed, case studies are particularly adequate as a follow-up to survey based research in order to examine more deeply and validate previous empirical results (Meredith and Vineyard, 1993; Hyer and Brown 1999). Furthermore, the found elements seem to be aligned to previous research and no inconsistencies are found. Moreover

scale and constructs refinement is logical and actually expected once research attention grows around specific themes, and some gaps in the original conceptualization were found also by a recent research by Santos-Vijande et al. (2013), that highlighted scarce attention to learning practices. To end with, the same Smith et al. auspicated further testing and validation of their scales, "within and across specific industries and in additional or more tightly controlled settings" (p. 179), and recognized the limitation of their method with only one single respondent, compared to the depth obtainable by multiple informants and triangulation of data.

5.1.2 – Multi-context applicability of the structural dimensions (RQ1)

Another important outcome of this thesis is the formalization of operational constituents valid in very different business context, from pure service institutions to manufacturing firms. The original items were elaborated a multi-industry service setting, that comprehended healthcare, consumer services, leisure, business services, financial institutions, food services, transportation, but didn't consider any kind of manufacturing reality (Smith et al., 2009). Despite this, the same nature of the original items seemed not to be dependent on the business sector, and thus it appeared logical to make steps to extend it also to mixed realities when offerings are made of products and services. In fact, during interviews and focus groups, a substantial alignment between managers and employees was found in terms of what the implementation characteristics of the recovery systems are, that present specific features depending on particular contingencies, but whose meaning remains really stable across the 4 case studies. Indeed, the operational constituents represent fundamental issues that provide a decisional check-list to deal with, in order not to neglect any important aspect during the operations design and execution phase.

The same anecdotal papers, which prescribed useful behaviours for recovering, set their episodes and success stories strictly in the service sector, but in no way they used the peculiarities of service arena to develop their suggestions (Hart et al. 1990; Tax and Brown, 1998). These indications sound quite general and not context specific, such as: empower employees, measure the costs, close the loop by improving the system, train employees, train customers in complaining, gather failure data, set performance standards, provide rule and guidelines, exploit technology, create and feed databases, break the silence and enhance voice behaviours, be proactive, offer multiple options. In addition these directions have very direct connection with the dimensions of recovery systems (rules - formality, failure data - system intensity, employees training – human intensity etc.). Actually their general validity and adaptability in diverse contexts is the core reason why structural dimensions of recovery systems could have been used in very different service industries (Smith and Karwan, 2010; Smith et al., 2012) and in different kinds of research. Coherently, the set of

operational constituents that has been drawn in this study not only has a notable fit with the original items of structural dimensions, but is also completely transversal across very different organizations. In other words, companies seem to implement systems in different ways according to their peculiarities, but they have to cope with similar design decisions that regard the operational constituents of structural dimensions of service recovery systems. Each firm can independently decide how to run operations, but the nature of key decisions is similar across organizations. From financial institutions to manufacturing firms, operations managers should take into account the same structural dimensions, and operational constituents, in order to design and implement their service recovery practices.

The following part present the discussion about the contingency factors roles in affecting the seven structural dimensions, composing the answers to the second research question.

5.1.3 – Comprehensiveness is contingent on the business sector (RQ2 – a)

Comprehensiveness is one of the three dimensions that emerged in the cross case analysis as mostly affected by the business sector. Indeed, manufacturing case studies obtained rather high scores whereas banking obtained low ones. This was due mainly to the different contexts – business sectors – and specifically to peculiar aspects that connote them.

In the banking cases, the elevated volume and variety of different services offered (leading to a large number of various complaints), the complexity of the contractual details, and the intrusiveness of regulation that forces to analyse each complaint ad provide specific detailed explanations about the reasons why the requests are rejected or the plan for delivering the recovery, make comprehensiveness low. Indeed, all key informants agreed about the impossibility and inappropriateness of setting standard failure scenarios and studying a specific range of possible options to propose to the customer. The effort in identifying meaningful and usable recovery paths, if possible, wouldn't be useful due to the extreme dispersion of different time-consuming and complex cases, and the continuous update of services and regulation, and consequently complains, that characterizes this sector.

On the other side, manufacturers got a high score in comprehensiveness, thanks to the possibility to exploit previous experience and study possible failures that are quite stable. Indeed, despite some new occurrences are caused by innovations in product or services, their rate is manageable and doesn't create substantial difficulties in adapting previous solutions. Indeed, having a consolidated history of products and related services helps in prefiguring possible failures and prepare adequate solutions and recoveries that, on the contrary of the banking scenario, are also really various since

no regulation is present and the provider is allowed to propose whatever it deems convenient to satisfy the customer. The role of a consolidated product base is also determinant in allowing for the creation of failure scenarios and the elaboration of a broad suitable range of recoveries, because it seems to act as a platform that enables a kind standardization (Voss and Hsuan, 2009; Meyer and DeTore, 2001) also of problems and their solution. On the other side this finding is coherent also with the study by Blose and Tankersley (2004, p. 81) who found that "given the deregulated wholesale market for electric generation that presently exists, independent electric service providers will be able to capitalize on this and other environmental concerns. Physical aspects of electric service provision [..] would seem to provide multiple options for service quality competition". Indeed, service recovery fully exploits, as far as the selected case studies let investigate, various recovery options as a distinctive competitive variable.

Furthermore, the relative poverty of possible recovery solutions offered by banks has been confirmed by other studies, that ascertained that banks should mainly fix the problem, and don't have really large opportunities for various recovery maneuvers (Duffy et al.; Lewis and Spyrakopoulos, 2001).

In the Italian context this is much more true, due to the cogent indications of regulation. Besides, referring to the original study that elaborated the recovery dimensions, Smith et al. explained that "service companies need to have knowledge of the range of solutions that are (i) possible, (ii) practical, (iii) fair, and (iv) understood by customers" (2009, p. 168): all these points are actually well implemented by manufacturers but hardly attainable by banks, and represent a relevant point of interest for the contingent effect of the business sector, in terms of regulation and product presence. In the end, Smith et al. (2012) in the first research about contingency factors on dimensions implementation proposed, trough literature analysis and theoretical development, that comprehensiveness should be contingent on the business environment, moving from a higher level for services characterized by low customer contact and low labour intensity (service factory) to a lower level in services with high values of the same factors (professional services). This perspective seems not to be fully aligned to present findings, where low comprehensiveness is found in banks (and Intesa Sanpaolo has really low customer contact), and high levels emerged in manufacturers (both with relatively high customer contact); actually Smith et al.'s results didn't support their hypothesis.

In light of all evidences gathered and theoretical elaboration and analysis, it is thus proposed that comprehensiveness is contingent on the business sector, with important roles played by product-related services and the presence/absence of recovery regulation.

5.1.4 – Formality is contingent on the business sector (RQ2 – a)

Formality dimension refers to written procedures and official guidelines that are provided to recovery personnel to set useful standards that help operative activities be effective and efficient. Regarding this dimension, case studies presented a quite clear polar scoring attribution, with considerable distance between banking case studies (high) and manufacturing case studies (low). Indeed, regulation is really determinant in promoting high level of formality, due to specific indications that, for instance, define some mandatory activities: control of internal procedures' respect, monitoring of adherence to behavioural code, identification of responsible for the complainant, preparation of official six-monthly reports to summarize the complaints situation and possible organizational problems, assessment of the customer assets while processing each failure notification (Consob, 2013; Banca d'Italia, 2009). National regulation is then reflected in internal policies and guidelines, extremely detailed for banks, up to defining even the format of documents characters.

Nothing similar happens in the manufacturing cases, where process guidelines are provided to enhance employees' productivity within a certain perimeter of reasonable rules. Indeed, rules are intended as facilitators of adequate decisions and actions, rather than be seen as coercive limits to individual agency (Adler and Borys, 1996), matching the rational that normal rules should be developed to provide constraints or limitations under which an empowered employee can act (Duffy, 2000).

The importance of providing written guidelines has been largely recognized in literature (Hart et al., 1990; Tax and Brown, 1998; Hocutt and Stone, 1998) and this study actually confirms its primary role, indeed even in manufacturing firms very simple procedures exist to support the employee in using appropriate tools and address the correct interlocutors depending on the situation. However, this is just one of the components of formality, and the extent to which these procedures affect operative activities is really low in manufacturing, since no protocols are compulsory and accurately monitored. In fact in this context a shared corporate culture is deemed more adequate to enhance employees' alignment and effectiveness in recovery. A strong organizational culture may exert huge influence on the behaviour of employees, suggesting that these informal forces could be even more relevant than formal written policies and guidelines (Boshoff and Allen, 2000). The enormous distinction between banks and manufacturers is due to the different impacts that formality creates across the organizations' mansions: whereas in banks it results in devoted resources that control the process accuracy and thoroughness, and lots of associated documentation to go through, in manufacturing firms it consists of quite stable – not monitored – procedures that mainly describe personnel's tasks. Furthermore, there are a lot of

evidences that banking sector is highly regulated both in Italy and all over the world, with large agreement about its deep impacts on operations. Impacts of banking regulation on the operational efficiency have been studied in different countries (Berg et al., 1992, Canhoto and Dermine, 2003; Leightner and Lovell, 1998), with the common belief that deregulation is beneficial for cost efficiency and operations productivity (Berger and Humphrey, 1997), also thanks to its reductive effect on internal bureaucracy of banks.

Thesis findings are coherent with the purpose of formality, that is minimizing dangerous variance of employees with respect to those behaviours that could affect profitability of brand integrity (Smith et al, 2009). Indeed, staying at the prescriptive indications of regulation, and the consistent fines or financial losses that may arise from superficial processing, it is absolutely fundamental for banks to protect themselves from possible deviations from a fair error-proof process. Consequently the main strategy is to exert a tight control on processes through the creation of official documented procedures and strict assessment of their respect. All these stimulations are completely absent in the manufacturing field, where the focus is on operational effectiveness and customer satisfaction, and there is less pressure from external institutions, leading to a degree of formality that aims exclusively at providing useful operative guidelines.

All in all, it is proposed that formality is contingent on the business sector, due to the mainly influence of strict regulation.

5.1.5 – Human intensity is contingent on the business sector (RQ2 – a)

Human resources intensity refers to the extent of training and rewarding practices and the overall attention paid to personnel role within the recovery process, mainly in terms of organizational efforts. The research added further important operational meanings to human intensity dimension, specifically in terms of definition of competences required to work as recovery employees, and organizational/specialization choices that are implemented. Great differences were found between banking and manufacturing contexts: whereas in the former employees are formally trained through specific sessions that encompass specialist knowledge of regulation, contractual details and firm policy, in the latter occasional generic sessions are offered for broadcast updates about service offering, and a learning-by-doing approach is followed. The high importance and degree of training in banks has been supported by many studies about service recovery (Yavas et al., 2003; Boshoff and Allen, 2000; de Jong and de Ruyter, 2004), but the effectiveness of learning-by-doing techniques has been acknowledged as well (Hughey and Mussnug, 1997; Jarmin, 1994). Moreover, banks showed a particular attention to resources organization, Intesa Sanpaolo decided for centralized teams of highly specialized employees, whereas BNL preferred to have a centralized

panel of more technically-skilled back-office employees and a much more extended network of technical-relational personnel over the territory. Both of them carefully evaluate human resources profiles since they have to match particular requirements of knowledge, technical "domain specific" competences, and also working experience. On the other side manufacturers choose young flexible personnel, with rather "non domain specific competences", many times without previous experience, any specialization, but demonstrating notable capabilities to interact and coordinate resources, as well as to find innovative solutions. It is certainly evident that the typology of training and competences may vary a lot across business sectors (Neal, 1995; Cingano, 2003), and findings of this research support that there are significant differences in the amount of organizational resources devoted to human component of recovery system. Furthermore, it is important to recall the role of banking regulation, which requires deep study and continuous update to allow for punctual respect of prescriptions.

Despite the common agreement about the role of recovery employees' training (Hart et al., 1990; Tax and Brown, 1998), it appears that the intensity of this practice, especially in terms of recovery-focused training, may depend on the specificity of the sector that could require different levels of preparation and update, depending also on the complexity of the offering. Indeed, the same items by Smith et al. (2009) refer to the correction of mistakes of the delivery process, that is expected to present substantial differences across various service propositions. Smith Nagy et al. in 2012 proposed that human intensity varies from a higher to a lower level moving from service factory configurations to professional services and found moderate support of their hypothesis, with respect to this, this thesis doesn't provide any confirmation or disconfirmation.

Furthermore, the cross case analysis has strongly evidenced remarkable differences that come up from the peculiarities of the specific business contexts: manufacturing profiles act as coordinators since most of times the service recovery requires the intervention of commercial experts as well as laboratory personnel, and recovery division's employees play usually a fundamental but minor part of the whole recovery delivery; on the other side banking personnel are most of times able to process entirely the complaint and the longest and most challenging part – history reconstruction and analysis of customer contracts and rights – is executed by complaint divisions' employees. Obviously, they couldn't carry out their job without receiving specific training about the content of service failures and how to process them in light contractual details. However, these differences don't result in polar recovery performances, since they are coherent with the specific contexts.

All things considered, it is proposed that human intensity is contingent on the business sector that, with its peculiar characteristics of regulation and complexity of service offering, affects the level of training, specialization, and typology of necessary competences.

5.1.6 – Good recoverers present high system intensity (RQ2)

System intensity is the dimension that describes the overall investments on the physical and informative aspects of the system, with particular respect to the collection of failure and recovery data, learning and improvement practices, performance management systems. Tracking failure data is one of the first research area in the operational arena of service recovery (Johnston, 2001; Hoffman et al., 1995; Strauss, 1993), and it has largely been affirmed that monitoring information gathered from problem manifestation and solution is fundamental to achieve useful indications from field errors. In other words, the collection of service recovery data, which leads to performance measurement, is the basis for service recovery management, since measurement precedes management (Hart et al., 1990; Tax and Brown, 1998). All the companies selected in this thesis are characterized by good performances in terms of recovery, paid back by customer loyalty. Indeed, customers want to see that the firm fixes the problem not just for the complainants, but also for future customers, in order to be assured that a possible similar failure won't happen again (Johnston and Michel, 2008). The four case studies present high system intensity, in particular all of them focus on detailed collection of data, that is most of times supported by advanced information systems, and performance management, that is pivotal to get improvement directions. In particular, despite diversity in sectors and organizational configuration, all firms centred their control on quality and time performances, that have been largely proposed in literature as fundamental for customer satisfaction (De Toni and Tonchia, 2001), whereas the cost performance is monitored to assess profitability (but it is mostly overseen by the controlling function). In fact, recovery managers pay much more attention to what is directly perceived by the customer, that is time and quality to match procedural and distributive justice expectations (Wirtz and Mattila, 2004; Johnston and Fern, 1999; Boshoff, 1997). System intensity is the pillar that allows firms to learn from their mishaps and previous mistakes, rationalising failure occurrences and exploiting the managerial content of the tracked data. In doing this, the companies of this study have invested a lot of resources to create automatic reporting systems that enhance periodical fast monitoring of data e enable consequent actions. It is true that with regard to banks regulation prescribes to keep all complaint data and to be able to retrieve them, but this is not the main reason why the extent of monitoring and learning practices is so high.

Furthermore, this dimension deals with the capability to "close the loop" (Johnston and Mehra, 2002; Hart et al., 1990; Hays and Hill, 2005), and the possibility to get all the available benefits in terms of recovery costs saving, time reduction, increased customer satisfaction, diminishing failure rate and higher flexibility and speed in reacting to problems or preventing them (Spreng et al., 1995; Brown et al., 1996). For companies with a global brand, that stress quality and innovation as

characteristics to distinguish and build market leadership, these practices are "mandatory" and actually "critical factors" in order to deliver high recovery quality. The study by Smith and Karwan (2010) confirms this perspective, indeed they grouped several firms in 3 clusters, depending on their recovery performances, and observed that the companies with poor performances were characterized by a really low level of system intensity, whereas good providers had high levels. In other words, a relevant or scant attention to system intensity is reflected on recovery performances.

In addition, quite large firms are expected to highly care about system intensity, and this is coherent with Smith and Nagy et al. findings (2012), that pointed out that size is relevant for this dimension due to the role of abundance of resources that can be used to improve systems and invest in recovery analysis practices and tools. In the end, they found that similar levels of system intensity are present among different kind of service providers, reinforcing somehow absence of a strong dependence of this dimension on specific factors.

Thus, despite the role of regulation in fostering adoptions of intense systems, staying at the evidences gathered, confirmed by indications coming from literature, this thesis finds that system intensity is mainly related to the amount and complexity of complaints that have to be processed, and to the importance that firms associate to service recovery practices as a means to reach operational improvement, as highly performing companies do. Put differently, large world class companies strongly address this dimensions since it is a main driver to recovery sustainable high performances.

5.1.7 – Good recoverers present high accessibility (RQ2)

Accessibility dimension catches the capability of the system to be easily reached by customers, and represents somehow the propensity of the firm to receive complaints. In particular, it was operationalized in this thesis as the variety of communication means that are available to the customer to complain, and the ease that it is offered in doing that, that implies the presence of assistance to complainants. This dimension obtained quite high scores in every case, except for Intesa Sanpaolo that was penalized due to the preferred written form of complaints, and a methodology of collection that doesn't encourage comfortable direct interaction. Despite this, all companies recognized the importance to offer customers easy ways to contact them, as well as the fundamental role of multiple communication means in doing that. Even Intesa Sanpaolo managers are convinced about this, and actually their decisions were not a signal of closure to the customer, but rather depended on their will to use standard simple channels aligned to regulation (written form).

Indeed, many authors recognized that accessibility is a pivotal aspect of the system, and even that customers should be trained in complaining (Hart et al., 1990; Tax and Brown, 1998). Moreover, staying at the limited number of customers that complain – 5 % to 10% of them and rest just move away without complaining (Dubé and Maute, 1996) – the significant increase in profitability achievable through retaining customers (Reicheld and Sasser, 1990), and the fact that the average customer who encounters a problem with an organization tells nine other people about the failure (Rondeau, 1994), it is fundamental for firms to incentivize customer complaints, getting this way access also to a rich and important source of information to improve the system (Johnston, 1995-b). Indeed, literature agrees in indicating accessibility as one of the most important aspects, because offering fair and comfortable means to complain is the first method to show customers that providers are prone to deal with their problems, and committed in assuring them appropriate treatment. Many scholars have underlined the importance of stimulating the "voice" behaviour (Goodwin and Ross, 1992), that is the capability to listen to customers' complaints, quarrels, lamentations, making them feel comfortable in doing that. Voice behaviours are fundamental for firms, because they are the alternative choice to "exit" behaviours, situations in which the customer abandons the service without giving any explanation, and above all without giving any chance of recovery to the provider. In fact, voice is most of times the trigger of the recovery process, and it is the necessary fundamental step that entails all consequent actions. That's the reason why it is universally considered fundamental (Boshoff, 1997). On the other hand, the concept of voice is connected to the evaluation of perceived procedural justice by customers, and it strongly affects their overall satisfaction with service recovery. As a result this issue is a central decisional aspect for recovery operations managers. In particular, they have to take into consideration the specific context, so that accessibility in a restaurant is implemented differently from a bank, with the common objective to make pre-recovery phase – time span between failure occurrence and provider detection and awareness – as short as possible (de Ruyter and Wetzels, 2000; Miller et al., 2000). Accessibility has also been linked to the use of internet and information technology to facilitate customer voice (Tax and Brown, 1998), providing multichannel open lines of communication (Colgate and Norris, 2001). In light of the primary role of this dimension, extensively recognized through over the literature, it could also be intended as "accessibility to customer complaints' thoughts" from providers, since there is an equally important two-fold interest (customers and providers) in manifesting the problem. Along this vein, Smith et al. (2010, p. 441) stated, referring to the accessibility dimension, that "it is imperative that a recovery system include a means for customers to alert firms of failures", after having facilitated them in "breaking the silence" (Hart et al., 1990). Again, Smith and Karwan (2010), found that accessibility is usually rather high, even

across different profiles of companies characterized by various level of performances. Indeed, despite the overall capability firms to recover may be really different, all of them, from "recoverers" to "laggards", demonstrate a notable attention paid to this dimension. Besides, Smith Nagy et al. (2012) found that this dimension seems to be, even if with some differences among diverse service types implementation levels, a quite universal component of recovery system structures that is always addressed.

In the end, staying at evidences emerged by this research and previous literature indications, accessibility results to be a fundamental dimension that every proficient company in recovery has to consider and implement at a high level, offering multiple communication means and clear user-friendly indications, according also to its strategic positioning and organizational configuration peculiarities (Moreno-Luzon and Peris, 1998; Smith and Karwan, 2010).

5.1.8 – Empowerment is contingent on the organizational configuration (RQ2 – b)

Empowerment dimension presented notable differences between the couple of cases with polar organizational configurations, as it was highlighted in the cross organization case analysis. It deals mainly with employees empowerment and seems to be strongly dependent on the organizational configuration feature of the group, indeed centralized headquarters with several branches operating over the same market have to hold a full control of the network, inhibiting inconsistencies and thus removing power from the periphery to move it to the central site. On the other side, decentralized subsidiaries with homogeneous history could build harmony and alignment among their branches' practices and culture (BNL) o could take full advantage of being the only representative of the group over a specific market (Conergy). This way, decentralized organizations are able to delegate and be closer to the customer. Put differently, centralized organizations, that made this decision to have an overall higher control over their subsidiaries and branches, adopt coherently centralized recovery systems, where frontline employees are basically not empowered and where the role of managers and headquarter remains fundamental to deliver recoveries. This kind of choice, anyway, doesn't necessarily lead to lower recovery performances, on the contrary it seems to be the most appropriate configuration according to firm organizational feature, in light of a coherence principle between context and operations (Sousa and Voss, 2008). This contrasts somehow with the findings by Smith and Karwan (2010) that associated highly recovery performing profiles to branches and franchises (near to customers) with respect to headquarters. This study supports instead a contingency view of the empowerment dimension (Smith Nagy et al., 2012; Fleurke and Hulst, 2006), whose level allows for high performance according to organizational configuration. However, the evidences gathered appear somehow contradictory with the previous study by Smith

Nagy et al. (2012) that suggested an appropriate fit between high empowerment and low customer contact service environments. In particular, many low-contact services are delivered by Fiamm and Intesa Sanpaolo, but their FLEs are not empowered. In literature there is large agreement about the opportunity to empower frontline employees in order to be quick, responsive and relationally near to the customer in delivering the recovery (Hart et al., 1990; Boshoff and Leong, 1998) and this study doesn't disconfirm these indications. Alternatively, it proposes that good performances are achievable also through different choices, as the cases of Fiamm and Intesa Sanpaolo reveal, under the condition that solutions are aligned to other important elements such as declared strategy and organizational aspects of recovery systems (Roth and Menor, 2003).

In the end this research has pointed out that, with some difficulties in clarifying the conceptual differences between a decentralized organizational configuration and empowerment, it is possible to find two suitable matches between the extent of empowerment in making and implementing decisions and the specific role that a firm has in the group it belongs to, with the associated locus of control resources and responsibilities (organizational configuration). More specifically, centralized headquarters tend to present a lower degree of empowerment, whereas subsidiaries that operate in decentralized groups present higher levels of that dimension. This found support in the need not to assign recovery tasks responsibilities and resources to employees without providing them with proper power to use them, because this would result in symptoms of burnout and poor performance (Ashill et al., 2009) due to a feeling of frustration emerging from the impossibility to provide adequate responses. Furthermore this finding seems also coherent with a certain logical linkage that is present between the definitions of the empowerment dimension and the role of subsidiaries in decentralized groups, that represent one of the two polar profiles considered as alternative organizational configuration (Zabojnik, 2002). In fact, it is expected that decentralized subsidiaries, that are meant to control local performances over their assigned portion of market, are also empowered to deal with complaints that arise from local customers. This way, subsidiaries (or even local branches) take responsibilities both of normal service execution and possible service failures, and directly respond of what they do.

All in all, staying at theoretical discussion and research evidences, a contingency approach appears more adequate to describe the role of organizational configuration, supported also by other researches (Michel et al., 2009; Bowen and Lawler, 1995); as a result it is proposed that the empowerment level is contingent on the organizational configuration of the firm.

5.1.9 – Influence is contingent on the specific recovery positioning (RQ2)

Sometimes case studies offer the possibility to get interesting findings that couldn't be hypothesized before the beginning of the investigation, since they emerge as the research progresses and are outcome of the deepening work of the researcher that go through field data (Eisenhardt, 1989; Voss et al., 2002). This is the case of the influence dimension, which, in light of the analysed case studies, is supposed not to be dependent on the proposed contingencies, but to be rather related to firms' operational strategy. Within the (manufacturing) operational area several strategy-related contingencies have been investigated in literature, such as production volume, customization and variety (Sousa, 2003; Sousa and Voss, 2001), environmental uncertainty and firm orientation (Reed et al., 1996), degree of emphasis on HR flexibility (Kathuria and Partovi, 1999), firm size and strategic context (McKone et al., 1999, Koufteros et al., 2002). As far as service operations management is concerned, few researches have used a contingency approach in determining operational choices, pointing out factors such as volume-variety positioning, service concept (customization) and contact/non-contact distinction (Silvestro, 2001 et 1999; Zomerdijk and de Vries, 2007; Ponsignon et al., 2011).

On the other hand, strategic orientation has been largely considered a relevant contingency for operations management practices by many authors, in terms of contraposition of "operations vs. customer" perspective (Reed et al., 1996), "low costs vs. high service" focus (Zomerdijk and de Vries, 2007), "cost leader vs. broad differentiator vs. niche differentiator" strategy (Sousa and Voss, 2001), "standardized vs. customized" approach (Safizadeh et al., 2003), "productivity vs. customer satisfaction" (Michel, 2009). Nonetheless the same Smith and Karwan (2010, p. 121) required "more detailed study and tight comparisons across divergent contingency variables". In light of this, it is argued that the strategic orientation of a firm towards the service recovery is important in determining also the operational choices that are reflected in dimensions implementation. Indeed, proficient companies are able to find a profitable balance and fit between customer target, service concept and operational delivery, which are the pillars of the strategic triad (Roth and Menor, 2003). Staying at the strategy relevance that has been pointed out by literature, "it is argued that service recovery is a critical and essential component of a firm's operational system and associated procedures and processes" (Smith Nagy et al., 2012, p. 878), and indeed it has become one of the long-term service strategy pillars (Santos-Vijande et al., 2013), deserving this way attention as a strategic variable.

Using the service excellence paradigm by Johnston (2004), it is actually possible to understand whether service recovery is delivered just to keep the promise, or whether the firm is committed also to invest further in "using a personal touch" or "going the extra mile". The last two points, that clearly take the side of customer satisfaction and customization rather than favouring a productivity

focus, are really similar to the operational constituent of influence dimension, that refer to the possibility to adapt the process, tailor recoveries and exceed customer expectations. All in all, it seems appropriate to introduce the concept of recovery positioning, which describes the competitive priorities of the firm in terms of cost/service, standardization/customization, process/customer focus with respect to its service recovery practices (Michel et al., 2009; Zomerdijk and de Vries, 2007).

Influence seems to depend on the recovery positioning, indeed the will to involve the customer and tailor the process on his needs vary according to companies' recovery concept, maintaining coherence with the organizational structure (Nath and Sudharshan, 1994). In fact the distance from the customer may be a relevant factor in enhancing the capability and attitude to be flexible to the complainant needs, and customization empowerment and proximity are actually related concepts (Smith and Bolton, 2004; Sousa and Voss, 2009). Furthermore, influence dimension has been linked in literature to the control of the process granted from the company to the customer (Smith et al., 2009; Tax and Brown, 1998) that is a strategic operational decision (Dong et al., 2008); in addition there are many overlaps between the meaning of this dimensions emerged from the coding procedure and the recovery positioning (Zomerdijk and de Vries, 2007; Safizadeh et al., 2003), where customization propensity plays a pivotal role in discriminating firms' decisions. Besides, Smith Nagy et al. (2012) proposed that the as the customer contact increases the influence goes up, but they didn't find any strong correlation between the service type and the level of influence, that leads to propose that this dimension is not that strongly correlated to the proposed contingencies. This dimension has received high scores in three firms, and a low score in Intesa Sanpaolo, due to the declared "rigidity of the system" that actually minimizes customer's input and influence on the process. This feature, despite the coherent support to the overall recovery system design, seems to be rooted in a positioning decision, and the same is for other companies.

In the end, it is proposed that influence dimension is mainly affected by recovery positioning strategies; this is a new contingency emerged as the study progressed and, in spite of the absence of relevant discussion in literature, should be really taken into consideration for deeply understanding recovery design decisions, in light of the best fit that proficient companies have to achieve (Sousa and Voss, 2008).

5.1.10 - Further considerations

Despite the efforts of the researcher to present results findings and approaches through a schematic and clear organization, it is important to underline that management is not a discipline about "universal principles" and "black or white" situations (Lee, 1989), and many times it has been extremely difficult to make managers think carefully to the pivotal reasons that led to particular

decisions and configurations. Many practitioners are indeed used to adapting to the environment they meet taking for granted the situation the found without analysing critically the decisions made before. This behaviour occurs when there are not sufficient incentives and stimulation to improve, and result in a more lay-down propensity that doesn't aim at uncovering defective areas or proposing ameliorative solutions.

Furthermore, as highlighted by the influence dimension discussion, beyond the proposed contingencies – business sector and organizational configuration – it would be important to consider also another factor that has emerged as the research progressed. More specifically, it deals with the competitive priorities of firms, and catches their strategic approach towards service recovery. In other words, despite the importance that service recovery has, it would be interesting to deepen how firms strategically define the priorities of service recovery performance, for example in terms of the five main performance of operations management, quality, time, cost, flexibility, reliability (Slack et al., 2010). Indeed, strategic orientation has been largely considered a relevant contingency for operations management practices by many authors, in terms of contraposition of "operations vs. customer" perspectives (Reed et al., 1996), "low costs vs. high service" focuses (Zomerdijk and de Vries, 2007), "cost leader vs. broad differentiator vs. niche differentiator" strategies (Sousa and Voss, 2001), "standardized vs. customized" approaches (Safizadeh et al., 2003), "productivity vs. customer satisfaction" priorities (Michel et al., 2009), "customer-oriented view vs. internally-focused efficiencies" views (Johnston, 1999). Put differently, operational implementation could be dependent also on strategic vision and priorities of the firm. According to management expertise and shareholders' point of view, they are expected to be reflected in the operational systems, whose purpose is to sustain and make theoretical strategic indications concrete. To some extent, the highest level of strategy is also supposed to exert a certain influence on the reasons why a particular organizational model is adopted, together with other variables of the equation such as firm culture, history, competitors' behaviour. This is aligned to previous research that confirms a certain interrelation and interaction among the cardinal elements of context, strategy and operations (Ponsignon et al., 2011; Roth and Menor 2003).

All in all, despite this research has specifically addressed two particular contingencies, evidences from the field have led to the awareness that a complex interaction with strategy is somehow present, as it should represent common trigger stimulation and inspiration for every firm decision, and could be particularly investigated by future research in terms of dichotomy between "effectiveness-service" vs. "efficiency-cost" orientation.

5.2 – Findings, managerial implication, limitations and further research

This section represents the final part of the thesis that results in the formulation of research propositions to answer the research questions. Subsequently, managerial implications and limitations are presented before concluding with the essential take away of this research, that leaves intriguing directions for future research.

5.2.1 – Answer to the first research question

With respect to the first research question, that addresses the operational meaning of structural dimensions of service recovery systems, nineteen fundamental items have been refined and already presented in the methodology section and discussion above. Here, a summary of the main items that enrich the operational meaning of each dimension is provided.

The first research question asks what the operational constituents are, that involve managers and personnel in recovery system design and everyday execution, and specifically which are the variables considered by managers in operational decision making processes. This research has confirmed the importance of all items by Smith et al. (2009), and added some other operational constituents that, referring to each dimension, are:

- accessibility:
  - assistance provided in complaining, that catches how customers are helped in advancing their claims and requests;
- comprehensiveness:
  - list of recovery options and
  - list of possible failures, which together address a tangible description of what being comprehensive means, that is to be able to formulate suitable failure and recovery scenarios for the large majority of possible incidents;
- empowerment:
  - empower FLEs to implement decisions, that describes the effective possibility given to the frontline to fully cope with complaints on site up to the solution of problems;
- formality:
  - appraise compliance and
  - maintain procedures updated, that stress together the need to maintain and check procedures respect after having defined guidelines, and actually it implies a non negligible additional workload;
- human intensity:
  - competences, that translate and characterize the need of specific employees' profiles for the recovery division;

  - specialization, that conveys the understanding about how human resources are organized at work;
- influence:
  - going the extra mile, that addresses the extent to which firms want to exceed customer expectations, going beyond complainant requests;
- system intensity:
  - databases and reporting, that catch again the operational aspect linked to data and performance management, that requires advanced tools for quick and correct elaboration.

In the end, these items extend and complete those provided by Smith et al. in 2009, that find confirmation also in this study but appear no to be sufficient to adequately catch important operational elements of service recovery systems. The other operational constituents, not mentioned in this paragraph, reinforce those already codified and used in literature. On the other side, this study is far from the ambition to be exhaustive or inclusive, but has led to a deeper insight about what the cardinal operational decisions that affect design and execution of service recovery management are. Furthermore, one of the intriguing confirmations and results of this thesis is that:

P0: the structural dimensions of service recovery systems may be used in very different contexts, maintaining a multi-sectorial general validity. In particular, the emerged operational constituents fit and adapt to very different business sectors, from banking to manufacturing firms.

This finding, before having undertaken the current research, could only be rationally hypothesised staying at the general character of items proposed by Smith et al. (2009).

5.2.2 – Answer to the second research question

The second research question is two-fold and addresses the role of the proposed contingencies in affecting the implementation levels of the structural dimensions of service recovery systems. This research has studied in four organizations how those dimensions have been designed and are executed with respect to their operational constituents, that have been pointed out through a coding procedure developed on the field (Voss et al., 2002). After that, a deep within case analysis has been carried out in order to assess the level of the dimensions' implementation, discovering the reasons why particular decisions have been made. This has led to some evidences that allowed the researcher to build a complex cross case analysis resulting in a series of following comparisons between single cases and group of cases. In particular, a first overview of the four cases together permitted to observe where the main commonalities and differences emerged, and led to the

decision to compare before couples of single cases taken within the same business sector. This led to highlight sectorial distinctive characteristics. Subsequently, sectorial evidences built through the within-sector cross case analysis were used to create two conceptual virtual case studies, that represent the common traits of firms belonging to the same industry. In doing this, the focus has been just on those dimensions that appeared similar in firms within the same sector for analogue reasons, and very different between different sectors. The same method has been used with regard to the other contingency, the organizational configuration, that exploited the main common differences emerged comparing couples of single cases belonging to the same sector. This resulted in the possibility to notice that the main differences between cases in the same industry were basically the same, and let the author concentrate on those dimensions that seemed to be mostly affected by the second contingency, considering the comparison between two groups of cases, each of ones characterized by a particular organizational configuration. In the end, all evidences – emerged as research progressed and confirmed and discussed in the previous paragraphs – and theoretical dissertations result in the following propositions, that represent the answers to the second research question (presented in the same order adopted in the discussion paragraph).
Before presenting the answers, the second research questions are re-proposed:

- RQ2 – coming from the contingencies analysis: *"What are the relevant contingencies that affect the operational implementation of service recovery systems?"*

And in particular, staying at literature review and analysis:

RQ2-a) - "*How does the business sector affect the implementation of the structural dimensions of service recovery systems?*

That is: does the business sector affect the structural dimensions of service recovery systems? With respect to the seven structural dimensions of service recovery systems, which dimensions are affected by the business sector? How?"

RQ2-b) - "*How does the organizational configuration affect the implementation of the structural dimensions of service recovery systems?*

That is: does the organizational configuration affect the structural dimensions of service recovery systems?

With respect to the seven structural dimensions of service recovery systems, which dimensions are affected by the organizational configuration? How?"

The answers to the second research questions come from the deep within case and cross case analysis, whose evidences have been discussed and elaborated to draw the following propositions,

grouped by the sub-question (R2a or R2b) they refer to. The final research answers are presented hereunder. The reasons that led to their formulation have been largely discussed in previous sections and are not recalled here again.

As far as the effects of business sector on operational implementation of service recovery system are concerned, three dimensions seem to be affected by this factor, as follows.

Comprehensiveness:

P1 (R2a) – the extent of comprehensiveness dimension is contingent on the business sector.

In particular, case studies evidences suggest that prescriptions of regulation that forces ad hoc responses in banking and high volume/variety/complexity of complaints don't allow for a comprehensive preparation of failures' and recoveries' scenarios; on the other side, the possibility to exploit a product-service stable platform and propose recovery outside any legislative impositions lead a higher level of comprehensiveness.

Formality:

P2 (R2a) – the extent of formality dimension is contingent on the business sector.

In particular this research suggests that the prescriptions of regulation make formality higher due to the strong impact of normative details on recovery operations, whereas the possibility to act free from normative impositions and to design recovery as a firm initiative make formality lower, finding a different balance between explicit rules and freedom to act.

Human intensity:

P3 (R2a) – the extent of human intensity dimension is contingent on the business sector.

Specifically, case studies' analysis suggests that the complexity introduced by regulation and contractual details make human intensity higher, focusing on specific competences training and specialization. Conversely, the possibility to act free from normative imposition and the need of coordinating multi-competence profiles between commercial and technical skills make human intensity lower.

As far as the effects of organizational configuration on operational implementation of service recovery system is concerned, one dimension has been found affected.

Empowerment of frontline employees:

P4 (R2b) – the extent of empowerment dimension is contingent on the organizational configuration.

More in depth, evidences suggest that decentralized subsidiaries, with responsibility of recovery performances and resources allocated to units close to the customer, present higher levels of empowerment; on the other hand centralized headquarters, with controlling activities responsibilities and resources located at the central site, present disempowered frontline employees.

In addition, even if there is no sufficient evidence to build a strong proposition confirmed by the four case studies, organizational configuration is supposed to exert a significant effect on human intensity. More specifically, it doesn't affect the level of the dimension but leads to different decisions for personnel organization and desired competences, depending on its position and role with respect to the customer. This is for example the significant case of banks, both of them with high human intensity, but with some differences in its implementation.

Moreover, as explained in paragraph 5.1.10, an important factor emerged from the study even if it was not hypothesised at the beginning staying at literature analysis: the service recovery strategy. More specifically the recovery positioning catches the commitment of firms to deliver effectiveness(customer)-oriented or efficiency(operations)-oriented recoveries. Since there weren't specific research questions about this contingency, it is related to the general research question 2.

Influence:

P5 (R2) – the extent of influence dimension is contingent on the recovery positioning of the firm.

More in detail, a customer-service-effectiveness recovery orientation makes influence higher, while a more operations-cost-efficiency recovery orientation makes influence lower, determining the extent of flexibility both in terms of process and outcome.

Finally two dimensions, accessibility and system intensity, have been found rather high in all the four cases, except for the level of accessibility in Intesa Sanpaolo that was moderate to fit its particular process. Anyway, all the involved informants underlined the absolute need to maintain these dimensions at high levels, since they represent necessary conditions for recovery activities (accessibility) and the capability to exploit and take advantage of previous errors (system intensity), as if they were the common alpha and omega of proficient recovery systems. In other words:

P6 (R2) – High levels of accessibility are expected to be found in highly performing service recovery systems, to enhance voice behaviours and let the corrective process start easily for the customer.

P7 (R2) – High levels of systems intensity are expected to be found in highly performing service recovery systems, to maintain strict control over performances draw improvement indications to "close the loop".

Propositions P1 to P7 represent the answer to the second research question, and provide the first operational insight into the effect of contingency factors on the implementation of recovery system dimensions.

5.3 - Implications for managers

This research is dense of managerial implications, which could provide practitioners with useful insights about service recovery operations management.

First, it gives deep insights about what the operational constituents of service recovery systems are, enlarging and enriching the work by Smith et al. (2009). Managers need to make decisions about concrete variables that, despite the theoretical call for generalizability of constructs that sometimes leads scholars to too high scope speculations, have to deal with field tangible problems. Such a deep understanding of managerial perspective and systems' characteristics could be caught just through a field research where executives work and make decisions. Indeed, this perspective completes surveys results, that embrace more organizations but at a more superficial level. This research has pointed out several operational meanings, elaborated from the very ground floor of operations management (side by side with operative employees) and validated with managers. This way the operational constituents, found through the presented coding procedure, provide a meaningful check-list of relevant aspects and characteristics that should be taken into account in order to design and manage the recovery system, according to the very core mission of service

operations management (Johnston, 2005), that in reality is not as mature and consolidated as its manufacturing version (Smart et al., 2009).

Second, this study deepens the role of the business sector in affecting specific dimensions of the recovery system, and points out the relevance of regulation, product presence and sectorial peculiarities (high volumes, variety, complexity of complaints, physical elements to assess). Managers working in similar highly regulated contexts (e.g. banking, insurance, hospitals, energetics services, etc.) have to adapt recovery operations (with respect to formality, system intensity and comprehensiveness) to fit the environment official rules and peculiarities so as to achieve high quality and time performances (Drazin and Van der Ven, 1985). On the other side, executives belonging to servitized manufacturing B2B contexts (stressing the role of recovery) should take full advantage of the possibility to define their systems degree of formality, in order to provide personnel with helpful non-constraining guidelines, and exploit product-service characteristics and historical failures to set a comprehensive menu of suitable and feasible recoveries. Similarly, managers should adapt their human intensity coherently with the business sector, opting for specific training sessions of employees that have to cope with complex contractual details or regulation (banking), or encouraging learning by doing dynamics when coordination of specialist resources is the key point (manufacturing).

Third, the same concept of fit is relevant to guide managerial decisions about empowerment, whose design and implementation are influenced by the organizational configuration of the firm. Operations practitioners can't afford to neglect the organizational impact on recovery operations, and may find here practical examples and indications about how to manage decision-making and decisions-implementing power given to frontline employees. The managerial take away consists of the call to adapt the empowerment dimension according to the organizational structure of the firm: a centralized perspective with the headquarter responsible for recovery performance and in charge of its control matches with a lower degree of FLEs' empowerment, whereas a more decentralized view, which enacts peripheral units to control their own performances being responsible for them, matches with empowered frontline personnel.

Fourth, influence dimension choices have to consider the recovery positioning definition of the company, and operations managers in charge of recovery delivery may found useful indications in this study about how to be aligned to the firm operational strategy. In fact, companies that want to excel for their capability to provide high-quality recovery that meet customer desires should include him in the process, opting for a considerable degree of participation and influence. On the other hand, firms oriented to cost/efficiency performance ought to maintain a quite standardized

approach, limiting deviations from the codified process and consequently avoiding intrusive presence of customer during the recovery formulation.

Fifth, independently from the business sector, the organizational configuration and the recovery positioning that characterize a firm, accessibility and system intensity should always be carefully considered and implemented at high levels. These dimensions enhance an open and easy communication by customers and allow for proficient management failure data, respectively. Indeed, gathering failure information through friendly channels of communication and exploiting them by using effective instruments to store elaborate and retrieve data is pivotal to link complaint management to profit (Johnston, 2001). Actually, these dimensions deal with the beginning and the closure of the loop, and should never be neglected.

All in all, this study provides several indications to recovery operations practitioners about what the main relevant variables to manage are, which important contingencies should be considered in design and executions of service recovery, and how these contingencies may affect decisions, offering insights from four highly-performing banking and manufacturing organizations.

5.4 – Limitations

This study has several limitations, and in particular presents the typical features of case study research. First, only four case studies within the Italian national perimeter have been considered in this work, and that could affect generalizability due to country-introduced bias (Voss et al., 2002). Despite this, the selected companies are particularly representative of the banking sector in Italy and the servitized manufacturers operating as B2B providers, and findings are easily extendable to similar organizations, also in other countries, under the same theoretical restrictions of selection criteria. Moreover, the limited number of cases helped the researcher go more in depth and acquire all necessary information to provide detailed insights. Obviously the limitation of the small number of cases could be overcome by further research, broader in number of companies and investigated industries, such as the leisure hotel and restaurant sector, transportation, or luxury products manufacturers. These sectors have been touched by service recovery literature but no operational insights are available in terms of operational knowledge. It would be really intriguing challenging the present findings in other contexts and find out whether the important role of the proposed contingencies is confirmed or not.

Second, it has been hypothesised that recovery practices adopted by the case studies are exemplary due to their high performances quantitatively and qualitatively measured. Someone could argue that performances should have measured differently, anyway empirical data witnessed a certain satisfaction of customers with recovery activities, and both time and quality dimensions

have been largely described in literature as fundamental for customer satisfaction with recovery (Boshoff and Leong, 1998; Wirtz and Mattila, 2004). Furthermore, the author is confident that this assumption is reasonable within the OM contingency paradigm that links "good" practice to performance (Sousa and Voss, 2008), since operational good performance is strictly related to the correct design and execution of operations.

Third, the research was organized in order to catch the main effects of single variables, evaluating the single contingencies factors on the specific dimensions. However, as it was expected, context strategy and organization appear related (Ponsignon et al., 2011; Roth and Menor, 2003) in several occasions, and some combined effects seemed to emerge. In light of this, in presenting the comparisons and the discussion the researcher has always tried to take into consideration combinatory effects, respecting the cases evidences that always suggest a major influence of one contingency with respect to the others. Anyway, a specific multiple-contingency investigation has not been explicitly executed, and may reveal interesting joint effects, for example mixing the recovery positioning with the organizational configuration or the business sector.

Fourth, the emerged items to complete operational meaning of recovery structural dimensions couldn't be tested with a large sample, even if they have been collected in a meaningful reliable and controlled context and subjected to different informants evaluation. Actually the researcher has tried to take into consideration any possible bias in collecting and elaborating data, but despite the controlled environment, the alignment and extension of previous research and the methodological rigor, it is possible that other organizations drop some constituents or find out other relevant items.

Fifth, the same contingencies effects couldn't be statistically tested, despite these strong case studies' evidences have been collected and elaborated in order to match the research questions' objectives, leaving intriguing propositions for future quantitative research. Hence, it is possible that other relevant contingencies affects the dimensions implementation, to be explore with other in depth case studies.

Sixth, this research has considered four case studies taken from two different sectors. Despite this, two of them are almost direct competitors in banking sector, whereas the other two cases are not. This could limit the breath of findings drawn from the pure service organizations, but doesn't affect the validity of the present results. Indeed, the theoretical sampling has filled clear case studies profiles that emerged from literature, and the elaboration fully exploits those characteristics without relating in any way to the fact the two organizations are direct competitors. On the contrary, having two manufacturing cases that are not in the same sub-industry, despite many commonalities exist and are actually relevant to consider them matching the same case study profiles, reinforces the generalizability of the findings, that don't depend just on a specific market niche.

All in all, these limitations together don't affect the validity of the results, but rather stimulates further research.

5.5 – Future research

This study leaves many open issues for future research. First, the final propositions could be quantitatively tested through large samples, both in the banking setting and in manufacturing industry, enlarging the number of cases to validate results for the same profiles or exploring new ones. Regarding this, some intriguing appealing contexts could be, due to their large use in literature and particular aspects in value delivery, the leisure sector (hotel, restaurants, cafes), the transportation sector (railways, airlines, ships), other regulated sectors (insurance, energy distribution, healthcare), retail chains, emotional expensive products manufacturers. In particular, sectors subjected to intrusive regulation and involving the presence of significant tangible elements would be the natural next setting for this research testing and extension. Besides, further qualitative confirmations could be added analysing case studies in other countries, contrasting also places with different culture, that has been largely studied as a key factor in determining customer expectations and providers behaviour (Mattila and Parson, 2004; Wong, 2004).

Second, some other contingencies may exist and could be explored. Voss and Sousa (2008) grouped contingency variables in four broad categories: national context and culture, firm size, strategic context, other organizational context variables. Some of them have been considered in this study, but further inquiries are possible, for example firm culture and history could be interesting variables to deepen, because sometimes they are the foundations of the main organizational decisions. Other typical contingencies that slightly emerged as possible candidate to affect the operational implementation of structural dimensions, not directly addressed but this research's design, are volumes and variety of complaints, largely studied in literature and always present as relevant operational variables (Silvestro, 2001).

Third, combined effects of contingencies may reveal intriguing interactions between different factors in affecting the operational implementation of recovery systems, and deserve to be further investigated. For example, it could be reasonable to expect that a cost-oriented recovery positioning together with high volumes and low variety of complaints leads to a particular operational configuration that differs from the case with low volumes and high variety: in the first case empowerment could be low to enact standardization and efficiency without customer input, whereas in the second could be it could be high to empower personnel to deal effectively with very different complaints. This kind of research, together with the exploration of other possible contingencies, may lead to the identification of other best-fit performing profiles, which would enrich the

managerial knowledge about how to organize proficient service recovery systems depending on contingent variables.

Fourth, not only sectors comparisons could be intriguing, but also contrasting for-profit, non-profit and public organizations could provide further insights on triggers for operational implementation, and reveal the effects of different level of competition (Gruber and Frugone, 2011) and missions on structural dimensions' implementation.

Fifth, all the findings of this thesis could be tested quantitatively. Future surveys, encompassing different sectors of specific industries, could test the propositions after a slight refinement in order to adapt them for a quantitative study. It would be also intriguing to assess whether some natural "fit patterns" exist within different dimensions, that is to ascertain whether good performances are achievable with specific configuration that interconnect the dimensions, for example: is high system intensity suitable without high accessibility? Is high human intensity pursuable without a high degree of formality? Finally, many meaningful results have emerged from this research and findings are expected to inspire future research in terms of testing, confirming and refining.

5.6 – Conclusions

This research has explicitly addressed the operational side of service recovery practices, by deepening the field and theoretical meaning of structural dimensions of recovery systems, and investigating some contingencies that were quite consolidated in operations management literature but have just slightly been touched by service recovery researches so far (Michel et al., 2009; Mattila; 2001). Case studies' depth and thoroughness allowed for an accurate work of dimensions refinement, and led to point out other potential interesting items that complete those proposed by Smith et al. (2009). These constituents in turn provide insights into the daily decisions that managers cope with. In addition, the gathered evidences let the author formulate seven propositions about the role of the investigated contingencies on the implementation of the structural dimensions of service recovery systems.

More specifically, accessibility and system intensity are found similar across the cases for very analogous reasons, and appear to be fundamental dimensions that large proficient firms have to implement at a high level, in order to enhance recovery beginning and remarkable results on satisfaction and operational side. On the other hand, comprehensiveness, formality and human intensity are found contingent on the business sector and very different from manufacturers and banks, due to the major role of banking regulation, sector's complex characteristics in terms of volumes and variety, and the presence of physical products with related technical skills, equipment and logistics consequences. Furthermore, empowerment is found contingent on the organizational

configuration, since firms coherently enhance autonomy and locate the power to make decisions (empowerment) in the same organizational units that are responsible for performance, controlling activities and budget assignation (centralized vs. decentralized). Consequently, if subsidiaries are accountable for recoveries of their failures, they are empowered, otherwise, in case of a central responsibility for recovery performances, they are coherently disempowered. Finally, influence is contingent on the operational strategy, being mainly linked to the recovery positioning decided by the firms, according to their competitive priorities.

Some of the formalized findings challenge previous research on structural dimensions, executed mainly through surveys (Smith et al., 2012, Smith and Karwan, 2010; Smith Nagy et al., 2012), offering a deeper contextual insight and supporting the principle that management is not made of "universal truths" (Lee, 1989). Furthermore, "black and white" distinctions are quite rare in management and some overlaps and relationships between contingencies have emerged and have been integrated in the final propositions. This is aligned to previous research, that confirms a certain interrelation and interaction between the cardinal elements of context, strategy and operations (Ponsignon et al., 2011; Roth and Menor 2003, Rhee and Mehra, 2006).

To conclude, this thesis has pointed out and discussed the role on business sector, organizational configuration and operational strategy on how firms implement the 7 structural dimensions of service recovery systems. Some relevant effects have been suggested by cases evidence and elaboration, confirming that management is basically about being able to match a specific set of constraints and resources. This is also the reason why, despite an infinite number of theoretical studies, the role of researchers hasn't released its potential yet. Basically it is because life is made of real facts, problems and decisions, and reality has the enormous defect (of fascinating feature) to be where it is, when it is and how it is, without offering too many possibilities for absolute generalization. Actually, management is about doing, more than knowing, and the role of researchers should be supportive to managerial behaviours, providing insights into the linkages between causes and consequences in similar situations, without the ambition to be universal. Despite some limitations, this thesis hopes to be useful for some practitioners that look for operational suggestions, and for researchers that will be committed in helping the real world, admitting limitations and working hard to build applicable findings. Without consequent facts, knowledge risks to be nothing more a beautiful illusion.

"Quello che l'esperienza e il senso ci dimostra, si deve anteporre ad ogni discorso, ancorché ne paresse assai ben fondato" (G. Galilei, "Dialogo sopra i due massimi sistemi del mondo", 1624-1630).

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Sempre e comunque Vvvvix. Virtù. V e M.

Appendix

DISCO, the European Dictionary of Skills and Competences, is an online thesaurus, available at http://disco-tools.eu/disco2_portal/terms.php, which currently covers more than 104.000 skills and competences terms and approximately 36.000 example phrases. It has been translated in eleven European languages. DISCO is one of the largest collections of its kind in the education and labour market.

The DISCO Thesaurus offers a multilingual and peer-reviewed terminology for the classification, description and translation of skills and competences. It is compatible with other European tools such as Europass, ESCO, EQF, and ECVET, and supports the international comparability of skills and competences in applications such as personal CVs and e-portfolios, job advertisements and matching, and qualification and learning outcome descriptions. The organization of competences is reported in the screenshot hereunder (figure 35), that has been taken from the aforementioned website.

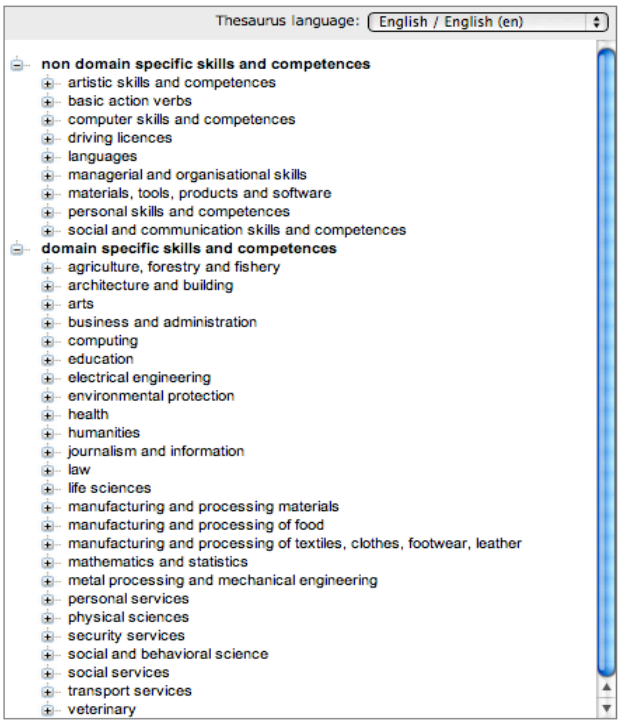

Figure 35 - A view of the typology of competences codified in DISCO

DISCO classifies competences in “domain specific competences” that refer to particular business sectors (such as agriculture, forestry and fishery, architecture and building, arts, business and administration, computing, education, electrical engineering, environmental protection, health, humanities, journalism and information, law, life sciences, manufacturing and processing materials, manufacturing and processing of food, manufacturing and processing of textiles, clothes, footwear, leather, mathematics and statistics, metal processing and mechanical engineering, personal services,

physical sciences, security services, social and behavioural science, social services, transport services, veterinary) and "non domain specific competences" that are transversal competences mainly related to personal skills and not to the particular business sector (artistic skills and competences, basic action verbs, computer skills and competences, driving licences, languages, managerial and organizational skills, materials, tools, products and software, personal skills and competences, social and communication skills and competences). Figure 36 and 37 present respectively an example of "domain specific" and "non domain specific" competences that emerged in this research.

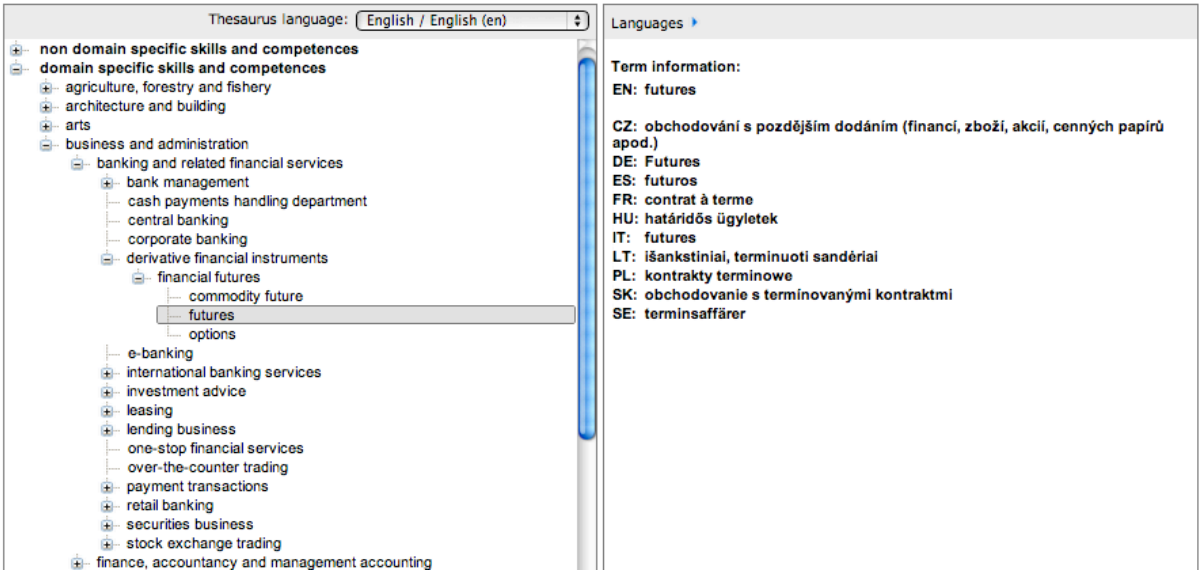

Figure 36 - Example of "domain specific" competence emerged in this research

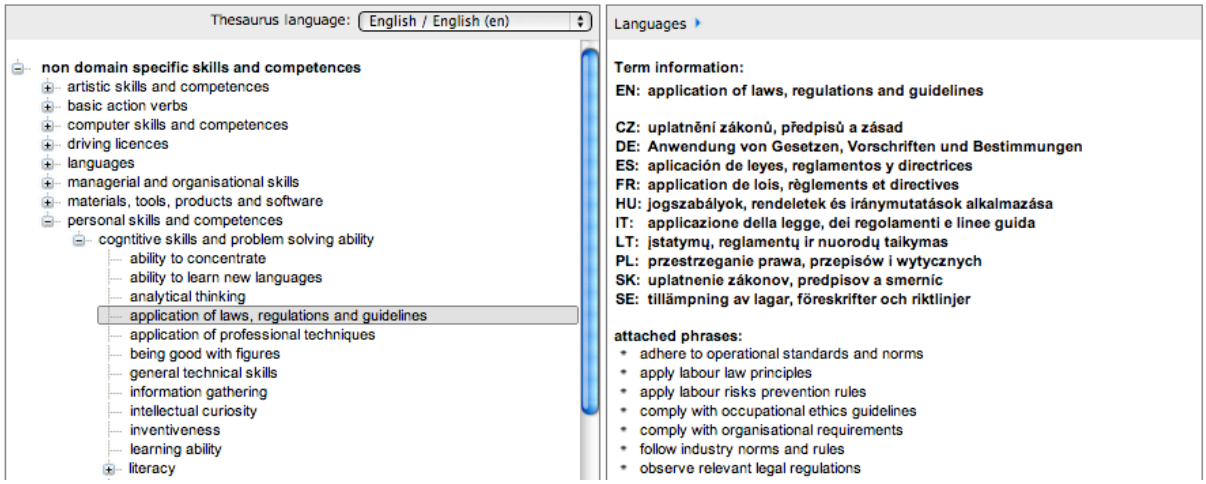

Figure 37 - Example of "non domain specific" competence emerged in this research

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