
The organisational impact of SaaS adoption on CRM applications

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Abstract: Software as a service (SaaS) approach is a demand-driven application that provides network-based access to an integrated portfolio of applications across the virtual value chain of an enterprise. Therefore, the aim of the present paper is to investigate the organisational technological and economic factors, which influence the adoption of SaaS for customer relationship management (CRM) applications. The theoretical framework refers to transaction cost theory (TCT) and resource-based view (RBV) theory. The research is based on the case study method and analyses four companies of big dimensions, which have adopted the SaaS, approach at least for three years. The results show the importance of some organisational factors such as the optimisations of marketing processes, while other factors such as costs are strongly connected to the reduction of financial risks more than to the costs control in a strict meaning.

Keywords: software as a service; SaaS; outsourcing; customer relationship management; CRM; transaction cost theory; TCT; resource-based view; RBV.

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1 Introduction

This study investigates how certain organisational, managerial, and technological factors enable the adoption of software as a service (SaaS) model for customer relationship management (CRM) applications. In turn, it determines whether it is possible to specify a decision course for such adoption. In this context, CRM represents an integrated, structured process for customer management (Parvatiyar and Sheth, 2000; Renko and Rakuljic, 2010) that uses information and communication technologies (ICT) (Sawhney and Zabin, 2001) to define and develop personalised, long-term customer relationships (Blattberg and Deighton, 1996; Payne and Ryals, 2001) and thus create competitive value and advantage for the firm (Day and Wensley, 1988). Accordingly, CRM systems require a technological infrastructure that can support all processes (Christofi et al., 2013).

The SaaS approach is a demand-driven application that provides network-based access to an integrated portfolio of applications across the virtual value chain of an enterprise (Buxmann et al., 2008). A rapidly growing means of software licensing, SaaS differs from traditional approaches (Ergu and Peng, 2014), in which the buyer purchases a perpetual use license from the software publisher and makes additional investments to obtain hardware, installation, and maintenance services. In contrast, in the SaaS model, a user buy a subscription to the software, and the software publisher runs and maintains the software on its own hardware, granting subscribers access to the software via the internet (Choudhary, 2007; Xin and Levina, 2008).

We define SaaS as a service delivered according to a peculiar outsourcing procedure (Vaquero et al., 2009; Susarla et al., 2010; Bardhan et al., 2010), such that a software vendor hosts, operates, and manages a software service for clients, on a paid subscription basis.

Therefore, SaaS can support online CRM applications through two components: applications and platform as a service (PaaS).

Innovations in technologies and in the instruments for the services' optimisation are strongly modifying the economic theories, which have prevailed until now consequently changing also products, organisational models, resources, knowledge and relationships. This transition can be defined as 'disruptive technology' (Bardhan et al., 2010), that is a technological innovation which modifies the market and the industrial infrastructures, and gives birth to new business processes substituting actual technologies through the introduction of new products, services and structures. For this reason there is a growing interest in the area of service management (Rai and Sambamurthy, 2006; Cusumano, 2010), field in which the SaaS phenomenon is included.

In particular, the research question wants to detect the key organisational factors in the decision-making process for SaaS adoption placing emphasis on its impact on people, operative processes and services' suppliers. Moreover, the economic aspects have been investigated such as the costs and the technological aspects, which enable SaaS adoption in CRM applications. Today's, literature about that matter is very limited and the aim of this paper is to contribute to literature enrichment in this branch of research. For this reason, the paper intends provide concrete recommendations in the area of SaaS-based CRM adoption pointing to factors that are important for practitioners.

The adopted method is the multiple case studies of four large corporates, operating in North Italy in four different industries (chemical-textile; liqueurs-wine-growing and wine-producing; engineering-management; services).

First results are highlighting the importance of some organisational factors such as the marketing processes' optimisation, while other factors such as costs, are strictly connected to the reduction of financial risks more than to the cost reduction in a strict meaning.

The paper is structured as follows: after the background literature we present the research question. Then we describe our research method, research setting and we offer a discussion of the enablers that emerge from our case studies. Finally, we summarise our preliminary findings and comment on their organisational, economic, and technological implications.

2 Theoretical background

SaaS is a model of software for distribution and development, which has already been present in the field of information technology (IT) for almost ten years. That phenomenon aims to the substitution of the product providing concept with the service providing concept, making intangible to the user the remote place from which the application is provided and the modality through which the application itself is accessible to the final user (Xin and Levina, 2008; Vaquero et al., 2009; Susarla et al., 2010; Bardhan et al., 2010).

The SaaS exceeds the traditional outsourcing concept and the application service provider (ASP) concept where it was the IT architecture of the supplier to be provided with a mechanism of software 'customisation' in favour of the client. On the contrary, in SaaS modality every personalisation is done directly from the client using web-based standard interfaces. The peculiarity that the applications' supplier does not make client-specific investments makes that model particularly competitive from the point of view of costs (Xin and Levina, 2008). Moreover, the possibility to support a better specificity in the investment in terms of integration easiness with the information system, which has already been present in the company, makes that approach more convenient in comparison with the solutions, which existed in the past. Moreover, this easiness in integration is strictly connected to the level of the client's architecture's maturity (Ross and Beath, 2006; Tanriverdi et al., 2007; Xin and Levina, 2008). Sourcing strategies find their theoretical basis in different organisational theories. The present study is based on two widely used and developed theories in literature: the resource-based view (RBV) and the transaction cost theory (TCT).

The choice of sourcing (SaaS) has been investigated in relation to its strategic value.

2.1 SaaS and RBV

In particular, the RBV has been adopted to investigate the impact of a SaaS approach choice on human resources working in the involved companies and on the operative CRM processes present inside the same companies (organisational factors). As a matter of fact, the RBV is based on the assumption that strategic resources are distributed among organisations in a heterogeneous way and that this characteristic is permanent in the course of time (Penrose, 1959; Grant, 1991).

Therefore, the company is not a set of contracts, but it represents a 'bundle of resources' (Penrose, 1959), where the resource involves all the assets, skills, internal

processes, attributes, information, knowledge managed by the company in order to find and implement strategies which can improve its efficiency and efficacy. The strategy consists in the 'match' (Grant, 1991) between internal strength-weakness and external opportunities-threats, with the goal to obtain an optimal combination between these factors.

The RBV adopts some assumptions that are common in other theories, such as the company's characteristic to be an entity for the profit maximisation and the limited rationality of managers and of the economic agents in general. On the contrary, other assumptions are specific for the present theory and detect the heterogeneous and immobility characteristics of resources. Based on these characteristics, an organisation can build a competitive sustainable advantage in a medium-long term compared with its competitors if it formulates and implements an adequate strategy. The strategy formulation should include an evaluation from the management of many indicators, through a decisional path that requires (Grant, 1991): the internal resources analysis, the evaluation of companies' skills, the analysis of potential profits, of resources and internal expertise, the selection of strategy, the extension and updating of the resources pool and skills.

2.2 SaaS and TCT

On the other hand, referring to the transactional cost theory (Coase, 1937; Williamson, 1991) the organisation is presented as a set of contracts and transactions, nexus of contracts (Coase, 1937) that regulates the process of resources acquisition for the support of internal activities. Under the analysis of that model there are the two structural organisational alternatives, which derive from the decisional phase between the two extremes: hierarchy or market. It is the latter to be considered a form of outsourcing. For this reason the sourcing decisional phase has been analysed focusing the attention on transactions, which derive from SaaS, approach. The aim is to optimise the operative processes making CRM transactions easier and more economic on one side and managing in a more efficient way the external relationships on the other. This aim requests the definition of adequate services levels (SLA). The decisional sourcing phase has been analysed focusing the attention on transactions that have an immediate relapse caused by the choice of SaaS approach. The aim is to investigate if and how can be achieved some improvements in terms of optimisation of CRM internal operative processes. The aim is to make the internal transaction easier and more economic on one side and to manage the external relationships in a more efficient way as it happens with every other outsourcing compared with a choice of hierarchical in-house sort. This aim requests the definition of adequate SLA. All the suggested aspects can be analysed through the TCT most of all in regard to the more economic-quantitative aspects, therefore referring to the economic, technologic and contractual perspective relationship with the supplier. The transaction investigated in this research has also qualitative features and therefore an analysis of the possible transactions hidden costs, produced by a more complex relationship with the supplier compared to the internal structure becomes essential. The evaluation of transactional costs is the function of three critical variables (Williamson, 1991): specificity of investment, environmental uncertainty, and frequency of transaction.

3 Research questions

Referring to RBV and to TCT, with the present study the following research question has been put: what are the technological and economic organisational key factors to guide the SaaS adoption choice? To this aim the following different sub-questions are presented.

Sub-question 1 Concerns the organisational factor ‘optimisation of internal CRM processes’.

The organisational ‘optimising’ factor in internal CRM processes is to be considered an enabling factor for SaaS adoption? In other words the choice of CRM applications in SaaS modality brings an improvement expectation in the management of internal CRM processes?

Sub-question 2 Concerns the organisational factor ‘people’.

A big internal orientation of the employers involved in marketing as well as a big practical expertise in the CRM field represents effectively enabling factors in SaaS adoption?

Sub-question 3 Concerns the organisational factor ‘supplier’.

The good suppliers’ reputation and its competence/knowledge in the business processes connected to CRM represent enabling factors in the SaaS approach adoption?

Sub-question 4 Concerns the ‘economic’ factor.

Effective cost reduction, a better skill in the cost control and the possibility to obtain economy of scale represent really fundamental factors in making a SaaS approach adoption more suitable?

Sub-question 5 Concerns the factor ‘technology’.

The level of maturity of SaaS technology in the same way as a bigger level of maturity in the client’s IT architecture represent really enabling factors in SaaS adoption? (Xin and Levina, 2008).

3.2 Research setting

In order to answer our research question, we undertook a multiple case study of four companies during 2013 and 2014. With this case study method, we can analyse data in a specific context in depth and thereby investigate a phenomenon in its natural setting (Benbasat et al., 1987) through a detailed analysis of a few events and their relationships (Yin, 1994). Furthermore, a case study offers a unique method to observe natural phenomena in the data (Yin, 1994), because unlike quantitative analysis, it considers data on a micro level (Benbasat et al., 1987; Eisenhardt, 1989). Accordingly, case study research supports the practical correspondence of phenomena, studied in their natural setting, and thereby helps answer why, what, and how questions by providing insights into the nature and complexity of those phenomena. Furthermore, a case study allows for explorative investigations when the variables are not known and the phenomena are not well understood. Case study methodology is particularly appropriate when the topic to be analysed appears particularly complex or if the analysis can widen the analysis model or

reinforce conclusions obtained from other investigations. Data collection mainly relies on directly recorded interviews, structured according to questions formulated according to the referential scientific theory and our research questions. As in any case study, our data collection maintained some flexibility, such that we could identify any unforeseen phenomena. With high-level managers as the respondents, we conducted semi-structured interviews in each company with one vice president, two with the IT manager, and two with the marketing manager. Twenty semi-structured interviews (approximately 70 minutes in duration) were conducted. The data and results obtained were presented to the main organisational actors and the board of directors of these four firms through the interview transcriptions and the interim results of the data collection phase. In this specific case, the authors used Atlas.ti Computer Assisted Qualitative Data Analysis Software (CAQDAS) to analyse the data because it enables its organisation and summarising by concept (e.g., improved collaboration, system adequacy, and error reduction).

3.2.1 Case ALFA

3.2.1.1 The company and its products

The company was founded in 1969 and is one of the principal actors, in Italy and in the world, in the field of synthetic fibre production and in particular in the production of polyamide 6 (nylon 6). It is organised in 13 plants and one engineering enterprise. It is present in three continents and seven countries. The group mission is to be the benchmark in the production of synthetic fibre defining new standards for the market, expanding more and more its presence on an international level and at the same time remaining leader from the point of view of sustainable development and corporate social responsibility.

3.2.1.2 The problem

Because of the peculiarity of its product, the company cannot manage the final customer face to face, but it has to manage its relationship with the big brands of industries, for example in the field of automotive, or with big chains as IKEA, with the big brands in clothing which study the polymer characteristics together with their company, while the printing and the actual realisation of product pieces is given in outsourcing. That means that the direct clients of the company are of a very small number, but extremely relevant, really sophisticated and demanding. Being forced to manage that kind of customer involves the impossibility to manage the CRM processes with easy instruments as EXCEL. The amount of data to be processed is really big and the kind of analysis is very advanced from the marketing point of view.

3.2.1.3 Solution and results

The company has adopted a CRM solution provided in SaaS modality. Implementation has taken about three months and the cost has resulted to be contained according to the scheduled budget. A significant aspect has concerned the integration with other applications already present in the company, which has not presented any difficulties. The solution has been implemented in its standard format with only a few and unimportant modifications and has produced significant advantages. First of all, the

competence of the software house in the CRM field have immediately provided the expected results as the use of that instrument inside the company has brought a very important improvement in strategies. As it has collected data and information on all the needs of the market and therefore the company could study in a better way the products and the client on which it should be more convenient to invest. Moreover, all the advantages of this solution have become evident in terms of minimisation of infrastructural investments and managing of costs.

3.2.2 Case BETA

3.2.2.1 The company and its products

Beta is one of the leader companies in the field of alcoholics. Among its liquors there is a particularly famous one, which is widespread in 160 countries and has almost two centuries of story. It is the “Italian liquor more drunken in the world”. Moreover the company produces and commercialises brands connected with the Italian story and tradition. The company belongs to a holding of 23 different societies, among which there are companies, which produce wine in Sicily, and many companies, which are operating in the confectionery field. The holding participates as well with a 30% quote to the bigger Chinese wine production company and manages distribution companies on the Dutch and Swiss areas through which the same company works.

3.2.2.2 The problem

Even if there are not direct contacts with the final customer, it has become more and more evident the need of an instrument able to support the CRM, very operative and which could pay attention to provide more and more innovative services for the commercial area. That need derives from the fact that in consideration of the 27.000 stores of the large-scale retail trade, which are present in Italy, the company is present in the majority of them with a constant promotional activity. Therefore, the commercial costs which derive from that presence are very high. The consequence is the need of a continuous monitoring and optimisation of these costs.

3.2.2.3 Solution and results

The selected choice has been a system of CRM provided in modality ‘as a service’, implemented without particular customisations. The incentive to this direction did not arrive from the commercial or selling manager but directly from the president and the keyboard. That is due to the fact that the company has found itself into a moment of pressing control by the owners that have decided to accept this sort of solution in order to control costs, overall, the costs connected to promotions as they have increased during the last years in a more than proportional way if referred to the sales proceeds. The most evident advantages have been the very fast start up, the lack of need to invest in any hardware or database, a guarantee on the front of data and access security, the easiness of integration with the already existing applications. The project has been completed in about four months and a half and the whole complexity of the system has been

completely hidden to the final user. The system is adopted by the so called ‘key accounts’ which have in charge the management of products visibility and the promotion inside the stores. It is interesting to notice that a key account, that means one of the final users, has cooperated during the whole phase of the application implementation.

3.2.3 Case GAMMA

3.2.3.1 The company and its products

The company was founded in 1955 and since then it has been leader for the planning of structures and infrastructures in its local area as well as all around the world, as its knowhow in the planning of undergrounds has been asked worldwide. From 2003, it is also trustee for the management of the integrated water service. Among the services it provides there are: realisation of development plans and consequent analysis about their practicality, planning of great works, management of the works direction, assistance for public corporations, projects’ review in order to gain their validation, other general activities such as project management and management of contracts.

3.2.3.2 The problem

The company’s management had expressed the need of a new CRM system, as they were not satisfied with the traditional and homemade existent systems. There are several reasons, but from the chairmanship have arrived many signals for a more precise costs analysis about the commercial area. It would have been impossible to give all that information without an advanced and articulated CRM system.

3.2.3.3 Solution and results

The solution has been the adoption of a CRM system provided in modality ‘as a service’ which was able to offer high performances, being the result of the great technical competence of the software house which has developed a very trustful relationship particularly during the implementation phase. Advantages have not only concerned the control of costs related to the commercial area but there have been several improvements in the whole optimisation of processes in the same area.

3.2.4 Case DELTA

3.2.4.1 The company and its products

The company was born in 1948, founded by two layers from the USA who realised the lack of a service, which could satisfy the demand of temporarily workers. Today, the group works through 4,000 offices dislocated in 82 countries and it is world leader in the services for the management of human resources. In 1994, the company opened one branch also in Italy with an office specialised in recruitment and training and in 1997 it obtained the first authorisation provided by the competent bodies to work as a company which provided temporary workers. Today, it is the major agency for the work market in Italy and counts more than 400 offices in 20 different regions.

3.2.4.2 *The problem*

On the operative level the main aspect, which characterise the present business: very high number of contacts with the potential workers. All these data must be catalogued, stored and often they need to be recovered and analysed as it can happen that the worker himself needs to have his data for a Work Inspectorate inspection. The management of such a big amount of data brings to a huge loss of resources both economic and of time by the employers committed to the management of commercial relationships.

3.2.4.3 *Solution and results*

Therefore, the company has selected a CRM system provided in modality 'as a service'. The software house, which was chosen by the company, has been selected because of its competence in the marketing area and because of the completeness of the provided service, which has turned into reduction of infrastructural investments and in the elimination of the managing costs and responsibilities impacts inside the organisation. The data security is guaranteed through there saving both on magnetic and optical disks and all that has a positive impact on the business continuity and on a potential disaster recovery. The solution has been implemented after some customisations, which were necessary because of the peculiarity of the needed services, but it has not brought particular problems in the initial phase. This project has doubtless represented a fundamental improvement for the whole organisation that has become more flexible and less exposed to delay in the hypothesis of the need of a global analysis on the clients' data concentrated in the same period. The project has been realised in about four months.

4 Findings

Findings reflect the three main perspectives and thus can be classified as follows: organisational factors include working processes, people, and suppliers; the technology and economic factors each represent their own categories.

4.1 *Working process (Table 1)*

Making reference to the working processes the research question was: the organisational factor 'optimisation of internal CRM processes' is an enabling factor for SaaS adoption?

When a company adopts a CRM application in the SaaS model, it aims to optimise the processes supported by the application or enable process standardisation. Process criticality does not deter the choice of SaaS though. The application's flexibility is preferred over personalisation or high feature customisation. Therefore, users privilege the system's flexibility more than having a system that is easy to customise. The use of the sourcing model also appears motivated by the possibility of reducing risk.

Table 1 Operative processes perspective, some of the questionnaire answers

<i>Answers to the questionnaire</i>	<i>Meaning</i>
‘Before adopting this model, there was not any supporting system for the critical CRM process, it does not even exist (Alfa)	Optimisation of the operative processes
‘We took the application without any modification as we considered that it had been effectively created ‘ad hoc’ to support CRM processes. We only brought some little change and integrations, but about the 90% is still standard, even if it is effectively really customisable (Beta)	Optimisation of the operative processes

4.2 People (Table 2)

From the answer to the interviews the sub-question 2 has provided a positive feedback.

Table 2 People perspective, some answers to the questionnaires

<i>Answers to the questionnaire</i>	<i>Meaning</i>
“The SaaS is a strategic choice that must be taken by the company board management with the aim to invest in order to renew” (Gamma)	Management commitment
“These new sourcing models that have been emerging consent to give a bigger input to innovation” (Delta)	Management commitment
“The IT is a very important actor because it has the duty to choose both the product and the supplier, to take care of the contractual aspects mainly connected to the SLA, to assure the satisfaction of the business needs” (Alfa)	IT involvement
“Abilities on CRM processes are important and prior, very extended skills on the applicative platforms are not fundamental. The comprehension of the problem of the process itself is preferred, neglecting in some way all the technicality that can be finally solved through outsourcing” (Beta)	a IT skill adequacy b Users acceptance

Managerial commitment is fundamental; it relates to the structure of the company, which should embrace a culture that accepts innovations in sourcing models for ICT. That is, the firm perceives innovation as a means to achieve strategic business aims. The ICT department also plays a central role, because it warrants efficiency. Moreover, it must establish cooperation and coordination across users and the supplier. Regarding expertise, in all four case studies, we found a process of conversion that prompted ICT users to focus more on aspects connected to processes, rather than on strictly technological aspects. User involvement was more important for the choice of the application than for the consideration of whether it could be delivered traditionally or through SaaS. This involvement explains the high levels of acceptance and low resistance to change we found.

The change of internal IT skills in terms of acquisition of a bigger ability in project management, in the management of contractual agreements, in the ability of control and supervision of the provided service, shifts the attention to the improvement in the relationship with the supplier.

4.3 Supplier (Table 3)

From the answers to the interviews the sub-question 3 has provided a positive feedback.

Table 3 Suppliers' perspective, some answers to the interviews

<i>Answers to the questionnaire</i>	<i>Meaning</i>
“The choice of the supplier has been strictly influenced by its knowledge of CRM business processes. We valued its reputation in connection to the success references already present in our sector” (Beta)	Services supplier reputation
“A SaaS application really involves the supplier to whom the operative CRM process is completely delegated creating thus a sort of dependence. That's why it is important to have a trustworthy relationship that should be bigger in comparisons to the one which could have been done with a traditional supplier (Alfa)	Confidence and reliability with the services supplier

The supplier role refers to its own offer, namely, whether it offers services that integrate with the company's information systems or a product. In all cases reputation is fundamental and a trustworthy relationship must be in place. In two cases a key choice criterion is the supplier's brand. Our case study respondents unanimously noted their perplexity when it came to choosing suppliers of innovative offers; they consider SaaS a very new and developing phenomenon. The characteristics and peculiarities of the supplier are considered in a positive way. As a matter of fact, the constitution of a stricter partnership is preferred in comparison to the approach with a traditional supplier.

4.4 Technology [Table 4(a) and Table 4(b)]

From the answers to the interviews the sub-question 4 has provided a positive feedback.

Table 4(a) technological perspective (following the TCT approach), some answers to the interviews

<i>Answers to the questionnaire</i>	<i>Meaning</i>
“Through the externalisation of the CRM application with a SaaS logic we gave the responsibility to the supplier that is the owner of the provided service. Our efforts have been concentrated, first of all on the choice of a valid vendor and later on a really well considered definition of SLA in order to be sure of adequate assistance and reliability” (Beta)	Guaranteed assistance
“We started from the assumption that the security guaranteed by SaaS was not minor if compared with the one of the IT environment inside our company. Maybe it was even bigger as it should be the pillar on which the supplier's offer is based. We decided to trust the people who were offering the service to us” (Gamma).	Guaranteed security connectivity
“We did not consider at all the possibility of transferring in-house the applicative in the future as we considered SaaS as the first step towards change in the management of our IT infrastructure. We had to go forward and not to go back again” (Alfa)	In-house transfers possibility Possibility of integration with the companies systems

Table 4(b) technological perspective (following an RBV approach), some of the answers to the interviews

<i>Answers to the questionnaire</i>	<i>Meaning</i>
“We choose SaaS because the CRM application would have been released promptly: that gave the possibility to us to satisfy our business needs in a more immediate way and, therefore, we could make the time-to-market faster” (Beta)	Initialisation
“It was important to choose an easy usable application with interfaces already familiar to the users. This way we could be sure about their agreement and we could mitigate the resistance to change (that is nevertheless always present and must be managed)” (Alfa)	Use easiness
“The most critical aspect has been to integrate the application with our systems. In that situation, the support of our IT personnel has been fundamental. Nevertheless, it has been a critical aspect that, in retrospect, would not have influenced negatively the SaaS adoption choice” (Gamma)	Efficacy and initialisation process
“The business opportunities change very fast and therefore the operative needs of the business people changes as well. The IT must be able to follow this continuous change. That is why we choose SaaS: we had to be guaranteed about its flexibility and scalability in order to answer our users needs” (Delta)	Volumes scalability and functionality

Ease and speed are major influences on the choice to adopt a CRM application with a SaaS model. The respondents highlighted the need for short implementation times, regardless of the integration with existing systems. Flexibility and scalability determine the ease of adaptation and thus represented two other key choice determinants, along with simplicity of use.

The technology factor results to be transversal, with transactional implications and with an impact on internal resources and competences; the aspects of service measurability, scalability, security, on which the connectivity variable has a big importance, lead to a transactional analysis from which the simplification of the responsibility burden related to the applicative performances emerges. The fact that this responsibility has been totally given to the supplier is another aspect that makes SaaS-adoption really convenient in regard to the investment specificity, also in virtue of the high competence, which has been acknowledged to it. At the same time the uncertainty factor weights negatively in connection with the over quoted elements, as it does not result to be easy to define ex ante the services levels having the flexibility to advantage the preservation of the company business.

Therefore, it can be affirmed that the relational aspect results to be positive on a cooperation level, that means during the phase of the relationship conduction, with the relating monitoring and controlling tasks, but it presents some negative and critical aspects in the contractual definition, on which the whole uncertainty engraves; the step of formulation and drafting of the contract appears therefore to be really complex.

The security aspect represents a very fragile factor in SaaS-adoption, such as it is explained in literature and by the players. The empirical analysis positively surprises referring to that point, as security does not emerge as an intrinsic factor in this model, on the contrary, some affirmation value this criticality as a strong point, as it is an establishing aspect for the business success from the vendor’s point of view. On the

contrary, security more connected to the connectivity aspect is perceived as a particular risk factor.

It is significant to notice that the possibility of transferring the applicative in-house is not considered at all, even if it is prefigured; that expresses in a strong way the consent to SaaS, moreover referring to the company positive commitment regarding innovation. From that characteristic originates the probability of more future infrastructural investments on internal service oriented architecture (SOA) IT architectures, that presents the SaaS logic as stimulating new investments, and not only as a base for an IT infrastructural saving.

In this context the elements related to the performance and impact on the operative CRM processes are fundamental. The board emerged from the interviews are very positive, the initialisation is fast and allows to satisfy in a good way business needs, with immediacy and qualification of a better time-to-market. The easiness in use through familiar interfaces optimises the acceptance from the users and makes the resistance to change milder, activating evidently even a direct connection with the people perspective and indirectly, but important, with the perspective of the operative processes.

The problem concerning the integration of the application with the existent systems is presented again but, with the support of the IT internal human resources, this criticality has not constituted a deterrent, as it has been seen afterwards; on the contrary the SaaS-adoption choice confirms to be satisfactory.

The scalability, in functional and volumes terms, confirms to be a strong point with the passing of time; therefore users result to be saved in their needs.

The analysis from the resourced-based point of view of the technological factor expresses positive influences in SaaS-adoption, in virtue of the ability of the latter to enable strategies for an innovative process able to guarantee better performances through a sustainable competitive advantage.

4.5 *Economic factor (Table 5)*

From the answers to the interviews the sub-question 5 has provided a positive feedback.

Eventually, considering the Economic factor in reference to the TCT, positive feedback emerges in reference to the SaaS models promises; in any case, costs do not appear to be the most important decisional variable: without speed and operative efficiency, the cost of the on-demand suppliers loses its value. Therefore, it is significant to notice that the appreciation is particularly referred to flexibility, dynamicity and solution speed, allowing this way a superior operative efficiency. From the transactional point of view, costs are kept down in the short term and, through the processes optimisation, they are even reduced in reference to a longer period of time, thanks to the efficiency that activates major economies of scale.

The advantages related to the costs saving on an infrastructural level and about the time for realisation in comparison with a traditional supply are confirmed, representing that way a strong motivation for SaaS-adoption. Therefore, there is an orientation to innovation in order to get a saving in terms of costs, but without giving up quality. The applicative specificity has been valued very positively by the IT officers who have been interviewed and the technological and business uncertainty does not only appear not to be scary, but on the contrary it is perceived as an opportunity for innovation (technological) and as a guarantee for operative efficiency even in case of scenery changes and operative needs (business).

Table 5 Economic perspective, some of the answers to the interviews

<i>Answer to the questionnaire</i>	<i>Meaning</i>
“When we decided to adopt the application as a service, we first considered the advantages in terms of speed and operative efficiency, and later we took into consideration costs.” (Alfa)	Optimisation of operative processes
“We did not think about SaaS as a choice which brings necessarily an economic improvement. We knew that we had to sustain some costs that were justified through the achievement of a flexible dynamic and, more than all, fast solution” (Beta)	Optimisation of performance company process
“The choice towards a CRM application with a traditional model would have produced higher costs, if not for other reasons, at least for the longer time needed for its realisation. And this fact has brought us to decide for SaaS without making much more considerations” (Gamma).	Optimisation of HW and SW costs, and of the infrastructure Achievement of a satisfying ROI Financial strategy
“For us SaaS meant an opportunity for innovation in order to get an improvement in costs management, but without forgetting quality” (Gamma)	Achievement of economies of scale

5 Discussions

The applications examined in this research present a high level of specificity and therefore they also have a significant strategic value in providing support to the different business companies' areas. The aim is to guarantee an adequate service in order to make CRM processes more efficient.

This last aspect represents the core of the suppliers' challenge with the aim to make the strategic value of the SaaS business reliable to activate a transparent and less virtual supply of applications allowing internal capabilities, which can develop distinctive performances through a sustainable competitive advantage, and to enable the internal IT architectural restructuring process. It has emerged that the development of the on-demand software takes place also thanks to the possibility to create strategic alliances and that brings to mitigate the aspects of contractual risks which are normally perceived, making the trust supplier-company stronger. Moreover, a well-considered and correct definition of SLA allows to the client organisations to be protected from technological development and business uncertainties.

The efficiency and efficacy of the answer to the IT question will also pass through the standardisation of the architectural systems with the aim to guarantee the interoperability and transfer possibility from one player to the other, and from the security, considered as the integrity and protection of data, privacy, service continuity, connectivity, in order to be protected from operative risks.

Moreover, the present study wants to over go the concept of a SaaS market exclusively referable to little companies: while the planning and implementation of virtualisation on a long range of the internal systems is a specific peculiarity of medium-big dimensions companies, SaaS solution has been, in the recent past, always characterised by a bigger attention from small dimensions companies, with the aim to get

a quality in IT service similar to the one obtained in big dimension companies but with more affordable costs and moreover, more controllable, avoiding at the same time investment for infrastructures. That means they have given over part of their old infrastructures making their IT department streamline.

On the contrary, the companies analysed in this research are of big dimensions and the aim of this is to understand the real development of recent SaaS-adoption, verifying the positive attitude of big companies in reference to this sourcing model. Some researches (Kern et al., 2002) have supposed and noticed a negative connection between the dimensions of the client company and the on-demand software to get a faster and easier access to precious IT resources and skills, but this assumption nowadays does not get the value of an absolute statistic representatives (Benlian et al., 2009).

This study, which has the aim to fill the gap still present in literature about these themes, can represent a significant source of information but cannot be inclined to such a generalisation to let consider absolute the results, which have been exposed in that research on the basis of the executed data gathering. Moreover, the present study presents only a limited field of the Italian context.

Nevertheless, it is possible to notice some SaaS development perspectives, which have emerged from the present work. This research has underlined the importance of costs containment in the transaction evaluation. Nonetheless, this attention to costs does not represent the main element in the decisional process for the adoption of a SaaS model.

The most critical aspects in SaaS approach have been originated in relation to a transaction-based evaluation, confirming that way the frequent intangibility of relationship which undergoes through the nets' net.

From the investigation it emerges that SaaS produces a company's attitude crosswise favourable to that model and moreover, thanks to the easiness in use and speed in implementation, users are supported in the continuity of their task inside the CRM operative processes. The new role, which is asked to be played from the IT team, which takes the part of the warrantor for the operative efficiency, does not represent a deterrent in the SaaS-adoption. Nevertheless, a reconversion of the personnel skills is indispensable, in order to be more oriented to processes than to technology, but they still have a very important role, if not even more critical, as it is the role of the intermediate user-supplier, with whom he will have to cooperate. The IT team will be called to act in supporting functions, transforming their tasks from asset-oriented to process-oriented, therefore involved in the creation, support and adaptation in the intelligence of the organisation whose part they are.

Concerning this aspect a positive acceptance from the users has emerged, even if they have not always been involved, to confirm the opportunity offered by SaaS-adoption to enable cooperative aspects and of systemic coordination particularly in CRM field. After the over mentioned considerations the solution to problems related with the supplier, which represent one of the future challenge of this web-based technology, will appear more and more crucial.

6 Conclusions

The study presents both limitations and new ideas for research. The security aspect has not represented the critical aspect perceived with a major weight; that is a very important element to be developed through new researches, but it can be noticed how they perceive from the point of view of the demand of that requisite is really positive, connected to the fact that the supplier is seen more and more specialised in that field in reference to the kind of delivery that it expresses. In particular, security and data protection, with the related privacy are taken into consideration as significant aspects in the decisional process but they do not appear to be a deterrent for SaaS adoption (Cusumano, 2010). On the contrary, it is the connectivity the most controversial aspect even if not decisive, that is considered the object of more deeper investigations, more than all regarding the supply of SaaS which includes different systems with relevant complexities and integrations.

Integration is exactly the aspect which will have business developments in parallel with technological developments: the architectural suppliers will have to create, through specific agreements, a net for SaaS supply which could guarantee the interoperability inside service-oriented architectures (SOA), so that they could allow to the companies which are planning investments in that field to have at their disposal environments where there are not barrier in the choice of sourcing and supplier: it is always the client organisation that must have the control of its own data, while the supplier will have to guarantee the data privacy and availability. Concerning this matter, the present study has noticed that companies are more interested in innovation to enable more and more business needs with the aim of making the time-to-market faster; the interviewed people have pointed out their interest towards change in the management of the whole IT structure if compared to the possibility of transferring in-house the future CRM application. In the cases, which have been analysed, the integrity has been in any case guaranteed by the fundamental support of the IT personnel, in spite of the difficult integration process.

The future development of SaaS adoption models also goes through the transparency in that field, even in virtue of the measurability services' characteristics, which are enclosed in the model itself.

Moreover, it will be interesting to understand, through future researches, if the companies which have been often investigated could present a strong causality requisite through studies of a longitudinal kind that even investigate the behavioural aspect of people during a certain amount of time, possibly making researches which include different organisation stakeholders.

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