

The Impact of Co-Creation with Customers on Service Innovation in the Moroccan Context

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ABSTRACT

In recent years, innovation has become the foolproof weapon of companies to hold competitive advantages. However, innovation in services remains misunderstood, due in particular to the intangible aspect of services. The aim of this research is to shed more light on the elements of service innovation, through an analysis by the concept of "co-creation" with clients, and the impact of the latter on service innovation in the Moroccan context.

Keywords-- Innovation, Services, Co-Creation, Customers

I. INTRODUCTION

In recent years, several elements have caused the transformation of the environment in which companies operate. In fact, today there is a major acceleration of competition under the influence of large multinational corporations. In this context of hyper competition, companies can only have a competitive advantage through innovation (Rene Lopez, 2015). The latter is the only tool to get rid of these constraints to build a new competitive advantage. Competition has led to an acceleration of the dynamism of the market, where it is impossible for a company to remain isolated from innovation. It is clearly recognized that innovation in industrial enterprises is based on form, packaging and industrial design (Cova, 2004). But what about services? That is, for the intangible by definition? What are the elements on which innovation in services is based? What about the role of the client? What is the impact of co-creation on service innovation in the Moroccan context? While many academic researches place a high value services innovation (Dotzel et al, 2013, Parasuraman et al, 2010), the concept of service innovation is broad and requires much more development and exploration.

The definition of service innovation is essentially problematic because it involves not only internal resources. But it also involves customers (Hermel et al, 2008). Today, co-creation of the offer with customers has become

essential (Venkat et al, 2018). Previously, the role of the consumer was "passive", and did not participate in the creation of the offer. While today, we are witnessing an "active" involvement of customers.

The purpose of our research is to present services innovation, through an analysis of the concept of "co-creation" of services with clients. Generally, most of the researches on service innovation are limited to internal resources, research and development done by companies to innovate. However, the researches carried out on service innovation, through the involvement of "customers" remain limited.

However, in order to avoid a myopic view of the subject, we will start by defining the services. Then, we will present the elements on which the firms focus to innovate in services, going from its initiation by Miles (1993), to its current state. After that, we will present different definitions of service co-creation. Then we will present the methodology of our empirical research, finally concluding with implications.

II. SERVICES

The rise of services marketing as a special representation of marketing actually began in the mid-1960s, and is the result of a long debate about its credibility. Services as a field of inquiry were devoid of meaning, and were termed by some terms as "unproductive", "residual", "non-evolving" (Bonoma and Mills, 1979). However, with the development of scientific and empirical research on the subject, the definition of services has evolved. We will present below the evolution of the definition of services.

Bonoma and Mills (1979) defined the service as a process or an act and not an object. The consequence is that the consumer cannot make a mental representation of the service and is limited to the affirmation or the promise of the service provider. In addition, even the claimant also has a difficulty in specifying how the client can perceive or evaluate the service (Bonoma and Mills, 1979). From Judd's point of view (1984), a service is an exchange

between a company and its customers, where the transaction is other than the transfer of ownership of a physical asset. Gummesson (1987) described the services in a "funny" way by presenting them as something that can be bought and sold, but it cannot fall on our feet. Lambin (1987) proposed a definition centered on three notions: need, utility and promise. For him, the satisfaction of the needs of the customers is not always based on the use of a tangible element, and also that the services are the ones which generate usefulness which is not materialized by the delivery of a commodity tangible to the buyer. According to Lambin, the promise is a key concept in the field of services, since unlike industrial goods, services are immaterial and customers can only rely on the promise of the service provider. From the point of view of Monique and al (1999), service is an activity or rather a series of activities that take place in the exchanges between the customer and the employee of the service company, and where there is the intervention of the front office and the back office, which brings together a set of activities in-house and which are invisible by customers. According to Smith (2008), "service produces an intangible outcome, it doesn't lead to the production of elements that have a certain physical existence". As for Lovelock and al (2008), the service represents an action or a service offered by one party to another. Although the process may be linked to a physical product, the benefit is transient, often intangible in nature, and doesn't normally result from the possession of the final result. In addition, the service is an economic activity that allows the creation of value and the production of benefits to consumers at a specific time and specific place in order to bring about the desired change in favor of the one who will benefit from the service. According to Patrick and al (2014), the services are presented under different fields of activity namely: trade, transport, tourism, financial services, real estate activities, administration, education, health, the different social activities. These fields of activity are classified as "merchant" and "non-merchant" services. According to George (2017), the services represent a series of activities, mainly intangible, that need to involve the customers in the creation of the service offer, and this happens through communication, exchange, to better meet their needs, to create a value, and to offer innovative services.

From these definitions, we can say that the definition of services has largely evolved with the growth of research. Admittedly, all the authors present the services as a set of activities, intangible processes, which have particular specificities, namely: immateriality, and indivisibility. However, the customer was previously represented as a "passive" element in the service offering, participating only in the production (downstream), and not in the creation (upstream). This restrictive vision has changed. Today, the definition of services has evolved

significantly to represent processes and exchanges of services between the company and its customers, involving the latter, in the co-creation of services, and motivating them by various means, to become involved in the process of supply generation (Fernando et al, 2014). In the same vein, Vargo and Lusch (2016) addressed a new concept, which is none other than the "Dominant Logic Service". This paradigm makes it possible to illustrate a new representation, of the place occupied by the service, compared to goods. Thus, according to these authors, we are witnessing a domination of the service, compared to goods. Previously, the company was isolated from the "market", producing in-house, without calling on customers (Narver and Slater, 1990). The offer was unilaterally designed by the firm and offered to consumers, without the opportunity to participate in the process of creation and production of the offer. The consumer was a passive beneficiary of the offer and did not participate in any way in its design. It was the "market to", as long as the offer was created to customers, without their real involvement. In contrast, the dominant service logic (SDL), is an approach, which considers the end consumer, as a central element of creation of the offer. True partner of the company, it is in exchange with her for the design and production of the offer. In this case, we are talking about "market with", the final service is the creation of exchanges between the firm and its final targets. The service is produced with the consumer in a bilateral way. The customer is no longer just a marketing target, but a collaborator of the company in question.

Due to the particular characteristics of services, such as their intangible aspect and the involvement of consumers, service companies opt for innovation to distinguish themselves from the competition. However, services differ from industrial goods and the innovation relates to different elements, from those used by industrial companies. For this, we will present below the elements on which the innovation in the services relates.

III. SERVICES INNOVATION

In services, and according to the scientific works done, the majority of researchers fail to identify the concept of service innovation, whether it is linked to service production processes, or to the outcome of services, or to technology, and organizational methods of work.

The concept of service innovation was first introduced by Miles (1993). This author presented innovation in services under three categories: the first categorization is "organisational" innovation; it's related to the internal management of the company, the relationship between directors and their employees, and the general framework of work. The second categorization is related to "process" innovation; it is related to the means of

production of the services, as well as the distribution channels. The third categorisation relates to innovation through “service offerings”, in which case the organisation sets up or optimises its offerings of basic services, and peripheral services, associated with basic services. According to the same author, these three categories make it possible to distinguish innovation from goods and services, and they can be technological, technical, or material. This model, represented by Miles (1993), was the basis for several research projects, as it sparked a scientific debate between different researchers.

Several authors have taken up Miles' model (1993), such as (Edvardsson and al. (1996), Sundbo (1997), Gallouj and al (1997)). These authors have grouped the innovation of services into three main fields: staff work, material support and clients. According to them, service innovation can be aimed at internal employees of the company, through the establishment of a new internal work system. Thus it can include the different interactions of the staff in contact with customers, when co-production of the service offering (Ex: the case of catering), and finally the innovation of the services can be related to the material support, such as: the equipment, the machinery and the interior architecture of the company. However, service innovation has created some debate among several researchers. For some, service innovation is relative to “the supply of services” itself. For others, it is related to “processes”, as will be presented below. While for other researchers, service innovation can incorporate both. For Den Hertog (2000), service innovation is linked to processes and services on four levels, namely: the renewal of service characteristics or the setting up of a radically new service. As well as the management of the “customer interface”, which refers to the implementation of new methods of production of services, in the presence of customers. In addition to the “service delivery system”, which incorporates new methods of service delivery, and finally the technological processes, which allow the company to produce a high-performance service. According to Menor and al (2002) associate service innovation with service processes, not final outcomes. Thus for Menor and al (2007), the choice of innovative processes is what allows the company to be efficient, and improve the final services delivered.

According to Droege and al (2009), Service innovation is a process that is initiated by the invention of a new concept or its improvement. The latter is the result of an accumulation of reflections and ideas between collective groups. In this sense, these authors present service innovation as the fruit of collective work among employees through processes. All the same, for Baron and al (2009), innovation through the processes of production, distribution, or any other form of process, is that which makes it possible to optimize the delivered final service or

to produce a new one. According to Toivonen and Tuominen (2009), service innovation is defined as the introduction of new services, or the renewal of existing services, and which brings additional benefits to the service enterprise. According to Damanpour and al (2011), service innovation concerns updating or setting up the basic services of the company, or peripheral services.

The definition of service innovation has not been limited to processes, and the results of service delivery. However, it has expanded greatly with theoretical and empirical research, to include clients as co-creators of services.

For Skalen and al (2015), service innovation, through processes, or through service delivery, creates end-value for customers, through their implications in the process of creation of the offer and not just in the process of the production. According to him, co-production is a traditional method of customer involvement, such as: self-service. However, co-creation involves involving clients upstream of the creation of the service offer, through communication and exchange to better understand their needs, and to take their suggestions into account. All the same for Biemans and al (2015), service innovation is not limited to the internal scale of the company. It includes customers as active participants in the process of creating the service offering.

According to Goudarz and al (2017), innovation is a multi-faceted construct, which incorporates several stages, ranging from the generation, development and implementation of an idea or behavior, which is new to the firm concerned, involving not only the staff, but also the customers.

According to authors' representations, service innovation is linked to processes (means of production, distribution channels, etc.) and to the provision of services (basic service and peripheral services). It can be related to the introduction of a new technology or a new method of work in the organization. However, with the development of research, it turned out that innovation in services, can be complete, only if the customers are involved in the creation of services. For this, we will present below the concept of co-co-creation and its different forms.

IV. CO-CREATION

The involvement of the final targets of the company is designated by the concept of “co-creation”. Admittedly, user involvement is rooted in the model of Eiglier and Langeard (1987). The latter presented the involvement of users in the production of services, through the concept of “co-production”. However, the model of Eiglier and Langeard (1987) is limited to co-production, which is a part of co-creation. This is what will be explained below.

The effective participation of clients was first introduced by Eiglier and Langeard (1987). They presented it as an indispensable part of the co-production of services, and where the clients interact with staff and material support, to produce their offers. However, despite the success of this approach, it remains restrictive according to several authors, because of the limited role of the clients, which are implicated in the downstream process, and not in the upstream co-creation process. In this context, Prahalad and Ramaswamy (2000) were the first researchers to present the concept of "co-creation". According to these researchers, the latter represents the effective involvement of the final targets upstream of the design of the offer. As well as it's a technique, in which targets and company employees come together, to create new offerings, and new experiences, starting from the strategic level, up to the operational level of marketing activities. In the same vein, Gibbert and al (2002) presented co-creation as a tool that allows users to experience a unique and personalized experience through their personal interactions with the service organization. With this in mind, Campbell (2003) presented co-creation as a process through which organizations gain in competence and information from their targets to use this information to provide a satisfying experience, and innovative services. For Prahalad and Ramaswamy (2004a), co-creation refers to the interaction between employees of the company and their targets, with the aim of creating value. According to the same authors, co-creation generates positive experiences, since it is very often dependent on the active participation of users in the creative process. In the same vein, Rowley and al (2007) presented co-creation as the effective integration of company targets upstream of supply creation in order to make the most of information from these targets, as Rowley and al (2007) found "co-creation" to be of great interest to organizations because of their potential for performance and innovation. As for Dujarier (2008), co-creation is assimilated to partial work targets of the company, because through their involvement, they are committed to ensuring their tasks. According to Ramaswamy (2009), co-creation refers to the interaction and to the exchange between employees and users, within a framework of collaborative approach to create an innovative result. In the same vein, Payne and al (2009) presented co-creation as the way users interact and engage in a collaborative approach with organizations, in the design process of the offer, and its processes. Thus, for Chathoth and al (2013), co-creation refers to the collaboration between the company and its targets, which makes it possible to offer them personalized and innovative offers. As for Reniou and al (2013), co-creation is defined as the integration of the company's targets on different stages of the creation of the offer, going from the inspiration stage, up to the implementation stage, to produce an offer more adapted to their expectations. For

Campos and al (2015), co-creation has been presented as a "user experience" since it engages the latter in effective interaction and participation with the company. While for Beudon and al (2017), they broadened the definition of the concept of "co-creation" to present it as a "creative trust". According to these researchers, the latter reflects the company's responsibility to trust end-users and involve them upstream in the design of the offer. Tracy (2018) defined co-creation as the actual participation and the exchange between the company and its users during all stages of creating the offer. According to Tracy (2018), co-creation is even more important than the final service itself, because it reassures end-users.

To summarize, we can say that co-creation refers to the involvement and to the effective participation of end users upstream of the creation of the offer. It turns out that the role of users in the process of co-creation is essential, since the majority of researchers show the involvement of users as being "a production of innovation". Co-creation benefits users by reassuring them and gives them a unique experience with their companies, as it allows the company to extract the maximum amount of information to innovate. Thus, co-creation makes it possible to involve the customers during several phases of the process of creation of the offer, going from the phase of ideation, to the phase of implementation, and this in order to provide them with an offer, which suit their needs. In this context, companies use certain forms of co-creation to involve their final targets. This is what we will present below.

4.1. The Forms of Co-Creation

Co-creation is used in several service activities, namely: the telecommunications sector (Orange Labs). In general, there are three forms of co-creation used in services, which are: technological co-creation, co-creation through market research and relational co-creation.

For technological co-creation, organizations create participatory platforms, blogs, where users exchange and propose their ideas and proposals. The company launches calls for ideas on its website, or on its blog, as well as creating a platform for user suggestions and proposals. Technological co-creation is also a tool, which generates electronic traces, kept in the organization, to facilitate the understanding of the needs of the targets. They also represent a useful context for engaging users in an active way.

For co-creation established through market research, service companies develop interviews and group meetings with users, questionnaires and surveys. All these interviews are analyzed, through specific software, so that organizations decipher the most used keywords.

For relational co-creation, organizations invite their targets to collaborative workshops, to discuss new ideas, and invite them to interact, as part of these

workshops, which are dedicated to testing, and exchanging ideas.

What can be deduced from these representations is that the forms of the co-creation of services are primarily related to technology, which has made new methods of customer implications emerge, through the creation of Internet sites, or blogs. As well as co-creation can be done through market research. Finally, there is relational co-creation, through which companies invite their targets to sharing workshops.

In our opinion, co-creation is a necessary element for service activities, since the risk sensation linked in particular to their immateriality fades with the effective involvement of users, since they attend the different stages of development of the service offer.

V. RESEARCH HYPOTHESES: CO-CREATION AND SERVICE INNOVATION

An examination of the existing relationship between co-creation and innovation in services has been the subject of several analyzes.

According to Gibbert and al (2002), on the one hand, co-creation allows users to live a unique and personalized experience, through their personal interactions with the company. On the other hand, the company understands the needs of its targets, to create innovative offers.

According to Prahalad and Ramaswamy (2004a), co-creation and user involvement in the process of creating the offer stimulates innovation, especially in the context of services, and allows the creation of value. In this context, Dujarier (2008) also considered that there is a positive relationship of cause and effect between co-creation and service innovation. Thus according to the same author, the active participation of users in the creative process, allows to generate an added value. In the same vein, (Paynet and al, 2009, Ramaswamy, 2009), associated co-creation with innovation, especially in the context of services, to describe how users communicate and engage in exchange with organizations to express their desires and expectations, and the company uses them to innovate. For Chathoth and al (2013), co-creation refers to the customization of services, designed in collaboration and with the participation of users, to create innovative offers.

According to (Maree and al, 2014, Maciuliene, 2014), co-creation represents an effective involvement of users in the design of the offer. According to the same authors, this co-creation allows the company to acquire, assimilate, and exploit the information and knowledge received from users in order to produce innovation. This process has been named by these authors as "absorptive capacity". According to these authors, the latter intervenes as a mediating variable between co-creation and innovation.

For Campos and al (2015), co-creation is a process of user involvement in the offer, so that the organization can get the most out of it, to innovate. In a similar way, Tracy (2018) showed the interest of co-creation in innovation, in this case that of services. According to this author, the interaction and the exchange between the actors of the company and the users, allows a better knowledge of the needs of the latter, and the creation thereafter of an innovative result.

In the same vein, (Kévin and al 2018, Genevieve and al, 2018) judged co-creation between the company's stakeholders and its targets, as being more important than the final service itself. In this context, they introduced co-creation as a process through which companies gain in competence and knowledge to deliver the best to their targets.

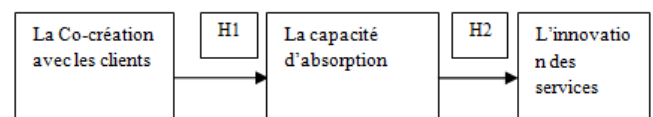
Based on the literature work presented above, which associates co-creation with service innovation, we can say that all authors state that co-creation is considered an "experience" experienced by users on the one hand, since it engages them in an interaction and a direct participation with the company, and on the other hand, it is a means used by the latter to better know its targets and to innovate on this basis. However, for some researchers, mainly (Maree et and, 2014, Maciuliene, 2014), co-creation does not have a direct effect on innovation. This causal relationship is mediated by "absorption capacity". Hence the following two hypotheses:

Hypothesis 1: Co-creation with users has a positive impact on knowledge absorption capacity.

Hypothesis 2: Knowledge absorption capacity has a positive impact on service innovation.

We present below the model of our research.

Figure 1: Hypothetical Research Model



V. EMPIRICAL STUDY

5.1. Study Context

Researches based on the impact of co-creation in the Moroccan service companies is rare or non-existent. This study aims to fill this gap and shed some light on the new methods of innovation management that have been proven elsewhere and that it would be appropriate to test them in the context of Moroccan service companies.

This study is based on a mainly quantitative methodology. It distinguishes two parts of investigation dedicated, on the one hand, to draw up an inventory of the practice of the innovation in the context of the Moroccan companies of services and, in the state of the co-creation in

the Moroccan system, to be able to analyze the impact relationship between the two.

Of the 125 questionnaires administered, we admitted 112 usable responses. It turned out that the interlocutors of our research work are human resource directors, marketing managers and technical directors, given their central position and function in the companies studied.

5.2. Strategy and Sample Size

We opted for convenience sampling, because we have specific criteria for our sampling, which are presented below.

5.2.1. Criteria Sought

- 1) Our target company must belong to the service sectors, mainly merchants.
- 2) The need for the marketing direction, the HR management and the technical direction in the companies in question, and this because of the importance of the interaction between these three directorates in the service companies.
- 3) The criterion of innovation.
- 4) The criterion of "representativeness"; all market service activities must be included in our sample.
- 5) Medium or large companies.

In the figures below, we summarize the results for our sample.

Figure 2: Distribution of surveyed enterprises by sector of activity

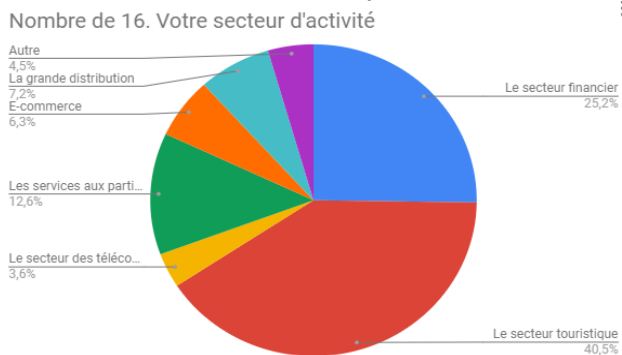
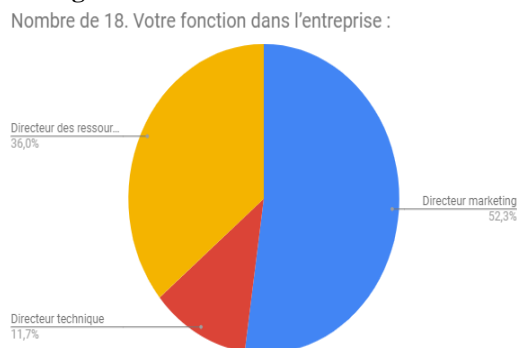


Figure 3: Distribution of surveyed firms according to the firm's size



Figure 4: Distribution of the surveyed enterprises according to the function of the interlocutors



After having presented the methodology of our research, we will expose below the results of this last one.

VI. RESULTS OF THE STUDY

This research work has made it possible to explain the impact of co-creation on innovation in Moroccan service companies. To test and validate our research model, we used structural equation methods, using the PLS approach. However, before presenting the results of the structural research model, it is necessary to present the results of the measurement model (relation between the constructs and their items), through the presentation of the results of the exploratory factor analysis (AFE), and confirmatory factor analysis (CFA).

6.1. Validation of the Measurement Model

Validation of the measurement model requires examination of exploratory factor analysis and confirmatory factor analysis.

6.1.1. The Results of the Exploratory Factor Analysis (AFE)

The exploratory factor analysis requires examination of the internal consistency, through examination of Cronbach's Alpha, which must be greater than 0.70. In contrast, in case its value is less than 0.70, the item is eliminated, since it is considered uncorrelated with the other items of the construct they measure.

However, according to Akrou (2018), some measurement scales can have very good Cronbach Alpha indices. However, in some cases, they can be artificially inflated by the high number of items or by the redundancy of the latter. In this context, Akrou (2018) considered that it is thus appropriate to measure the average inter-item correlation. The latter is considered satisfactory, if it is equal to or greater than 0.30.

Table 1: Results of Exploratory Factor Analysis (AFE)

Constructs	Number of items selected	Mean inter-item correlation	Cronbach's Alpha
Co-creation	5	0,50	0,80
Absorptive capacity	5	0,40	0,82
Degree of the offer innovation/Offers	2	0,38	0,73
Nature of the offer innovation/Offers	2	0,54	0,74
Type of the offer innovation	2	0,40	0,71
Degree of process innovation	2	0,41	0,72
Nature of process innovation	2	0,52	0,75
Type of process innovation	3	0,39	0,83
Degree of organizational innovation	2	0,42	0,82
Nature of organizational innovation	2	0,51	0,71
Type of organizational innovation	2	0,35	0,70
R&D Expenses	2	0,45	0,71
R&D financing methods	3	0,41	0,75

For all of the constructs, the Cronbach Alpha coefficient exceeds 0.70. As well as the inter-item correlation exceeds the threshold of 0.30, which is the minimum threshold required to judge the good quality of the average correlation between measurement items developed since the literature.

6.1.2. The Results of Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis requires consideration of the reliability of the measurement scales and their validity. For the reliability of the scale, it is evaluated by the "composite reliability", which is a concordance index. According to Akrouf (2018), the accepted threshold is (> 0.70).

According to Akrouf (2018), for validity, two types are to be considered: convergent validity and discriminant validity. For the convergent validity of constructs, it refers to the correlation between the measurement items of a construct. It is evaluated by two criteria: the first is relative to the measurement of factorial contributions, in order to judge the quality of the correlations between the items and their constructs (loadings). In this context, the correlations that are greater than (0.70) are satisfactory, the correlations that are at (0.5) are acceptable and those that are less than 0.5 are eliminated. As for the second criterion of convergent validity, it is relative to the AVE (Average Variance Extracted). The latter represents the percentage of the variance captured by each group of manifest variables (items) measuring their latent (constructed) variables, and this with respect to measurement errors. The allowed threshold is (> 0.5).

The AVE is also used to evaluate the discriminant validity (external validity) of the measurement model. This validity makes it possible to measure the variance between the different constructs of the theoretical model. It is considered satisfactory, when the square root of the AVE of each construct is greater than the correlation of the latter with the other constructs.

In the following table, we present the results of the reliability of the scales of measurement, calculated by the composite reliability, as well as the results of the convergent validity, calculated by the factorial contributions, and by the index of the "AVE". Finally, we present the results of the discriminant validity, calculated by the square root of the "AVE".

Table 2: Factor contributions (the loadings)

	Co-creation	Absorptive capacity
Co.cr1	0,65	-0,20
Co.cr2	0,60	-0,18
Co.cr3	0,87	0,11
Co.cr4	0,85	0,21
Co.cr5	0,70	0,11
Ab.Cap1	0,12	0,65
Ab.Cap2	0,09	0,72
Ab.Cap3	0,03	0,81
Ab.Cap4	0,09	0,84
Ab.Cap5	0,03	0,58

After examining this table, all the factorial contributions of the items represent good results, since they exceed the threshold of 0.5, so they are well correlated to their theoretical constructs. In addition, the correlations for each block of items related to their constructs are higher than the

correlations of these items with other constructs of the model, with which they must be uncorrelated.

After presenting the factorial contributions of our measurement model, which is the first criterion for measuring convergent validity. We will present in the table below the second criterion of convergent validity, which is the AVE. Thus we will present the reliability of the scales of measurements by the "composite reliability", and the discriminant validity, by the square root of the AVE.

Table 3: Reliability (Composite Reliability), Convergent Validity (AVE) and Discriminant Validity (Square Root of the AVE)

	Co-crea-tion	Absorpt-ive capac-ity	Service-innovat-ion/off-er	Service-innovat-ion/pro-cess	Organi-zational innovat-ion	R&D Inn-ovat-ion
Items	5	5	6	7	6	5
C.R	0,85	0,85	0,80	0,82	0,83	0,75
Co-crea-tion	0,9					
Absorpt-ive capac-ity	0,25	0,72				
Service-innovat-ion/off-er	0,33	0,10	0,76			
Service-innovat-ion/pro-cess	0,01	0,09	0,50	0,73		
Organi-zational innovat-ion	0,04	0,06	0,49		0,75	
R&D Inn-ovat-ion	0,23	0,26	0,26			0,80

After examining the table above, representing reliability, convergent validity and discriminant validity, we deduce the following conclusions:

For the threshold of the Average Variance Extracted (AVE), it is satisfied for all the constructs, since it is greater than 0.5. So the second criterion of measurement of the convergent validity is satisfied.

In terms of the reliability of the measurement scale, which was calculated by the "composite reliability", to judge the agreement of the scales measures. Its values are satisfied for all the constructs, since their threshold is greater than 0.70.

For the discriminant validity, the set of values of the square root of the AVE are satisfactory, since the square root of the AVE of each latent variable is greater than the correlation of the latter with the other latent variables. As a result, the set of latent variables share more variance with their manifest variables (items) than with the other obvious variables of the measurement model.

After presenting the results of the measurement model, we will present the results of the structural model test and the research hypotheses.

VII. RESULTS OF THE STUDY

	Standard Deviation (STDEV)	T Statistics	Validation of the hypotheses
Absorptive capacity -> Services innovation	0.031	0.623	Invalidate
Co-creation with clients -> Absorptive capacity	0.030	1.063	Invalidate

The set of Student Test values are less than "1.96", and the "standard deviation" values are all less than the "5%" percentage. In this case, all assumptions are reversed.

VIII. CONCLUSION

This article has made it possible to better understand innovation in services, intangible by definition, through an analysis of the concept of "co-creation" with clients, particularly in the Moroccan context. In particular, co-creation has been presented as a tool on which companies must rely to innovate and to stand out from the competition. All economies are now represented as being service economies and it is useful for firms to use new ways to create value for their targets, especially since the intangibility of services makes it difficult to perceive by the customers. To this end, co-creation is a tool that allows

organizations to reduce the feeling of risk felt by customers, and reassure them by integrating them upstream of the creation of the service offering.

This research made it possible to draw up a general inventory of services innovation, going from its oldest representations to the most recent ones. We have noticed that the definition of service innovation has evolved considerably. According to the researchers, it is represented as a process (implementation of new distribution channels or new modes of production), and of service offering (launch of new basic service or peripheral service). It can be technological or organizational. However, innovation through processes or service offerings is no longer sufficient in a competitive market. The integration of customers as "co-creators" of services is essential, to fight against competition, and to win the trust of customers.

Co-creation contributes to the innovation of services, subject to the forms used by service companies. According to the scientific works represented in this research, three forms of co-creation stem from it: co-creation through the creation of participative platforms and exchange blogs with clients. As well as co-creation through market research, questionnaires on the Internet, polls, group interviews. Finally, there is relational co-creation, where firms invite their clients to meetings, to discuss new ideas.

The results of our empirical study have shown that co-creation in Moroccan service companies is almost non-existent, and particularly marked by traditional methods, because it does not take into account modern and competitive tools. As a result, co-creation does not have a positive impact on service innovation.

From this observation, we present below some managerial implications.

8.1. Managerial Implications

8.1.1. A Culture of Openness and Involving Customers in Co-Creation

The company must involve its customers in the process of creating the services. On one hand, this approach called "co-creation" gives the company's clients the opportunity to contribute to the creation of new services or to personalize them in order to become the most adapted possible. On the other hand, it allows service companies to get as much information as possible from these targets, and to reduce the feeling of risk felt by them.

The majority of the respondents to our questionnaire associated co-creation with questionnaires, which are "passive" methods and which have little value, in the face of active supports, such as, co-creation methods, especially technological methods, namely: creating blogs and forums, websites dedicated to co-creating with customers, launching calls for ideas and calls for contributions on the company's website.

In the same context of co-creation, the latter makes it possible to promote the absorption of knowledge.

However, Moroccan companies do not yet have a culture of questioning their traditional way of working, in order to open up on new creative methods. As such, creating a culture of openness to new ideas received from customers is essential.

Moroccan service companies are far behind in terms of co-creation and customer involvement. They have not yet understood the importance of co-creation and its implications. They are still lagging behind in terms of current managerial practices that they should fill to achieve a successful innovation management system.

Certainly, this research has allowed to present the different facets of service innovation, through an analysis by the concept of co-creation. However, many research remains to be done on this subject, because of the importance of the resulting benefits for service companies.

8.1.2. Encouraging Radical Innovation

In a fiercely competitive environment, service companies use innovation to create change and change the rules of the game in the marketplace. Certainly, radical or incremental innovation can create change. However, incremental innovation consists of incremental improvements, and a partial adaptation of the organization's offer. It represents small improvements made to the company's offer, and does not consist of large operations that create change. In this context, the recourse to radical innovation is favorable, since it allows to create entirely new, creative and in particular different offers towards the competitors, in all its forms. As it represents the change that allows to terminate with the previous offers put in place by the company.

This implication amounts to the lack of radical innovation found in the answers to our questionnaire. Through these, we have found that the majority of Moroccan service companies in our sample use their own funds to finance their innovation activities. In this context, the financial means are sufficient for these same companies to finance their radical innovation.

REFERENCES

- [1] Akrouf, F. (2018). *Les méthodes des Equations structurelles*. (2nd ed.). 30-372.
- [2] Baron.S et al. (2009). Innovation in services: present findings, and future pathways. *Journal of Service Management*, 20(2), 131-155.
- [3] Beudon, N. (2017). Mener un projet avec le design thinking. *I2D-Informations, Données & Documents*, 1, 54, 9-12.
- [4] Biemans.W.G et al. (2015). Perspective: New service development: How the field developed, its current status and recommendations for moving the field forward. *Journal of Product Innovation Management*. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/jpim.12283>

- [5] Bonoma, V & Mills, K. (1979). *Developmental service marketing*. Graduate School of Business, University of Pittsburgh, working papers.
- [6] Campbell, A.F. (2003). Creating customer knowledge competence: managing customer relationship management programs strategically. *Industrial Marketing Management*, 32(5), 375–383.
- [7] Campos, A.C et al. (2015). Co-creation of tourist experiences: a literature review. *Current Issues in Tourism*, 21(4), 1–32.
- [8] Chathoth.P et al. (2013). Co-production versus co-creation: a process based continuum in the hotel service context. *International Journal of Hospitality Management*, 32(1), 11–20.
- [9] Cova.V. (2004). Le design des services. *Decisions Marketing*, 34, 29-40.
- [10] Damanpour, F et al. (2011). Managerial innovation: Conceptions, processes, and antecedents. *Management and Organization Review*, 8, 423–454.
- [11] Den Hertog, P. (2000). Knowledge-intensive business services as co-producers of innovation. *International Journal of Innovation Management*, 4(04), 491–528.
- [12] Dotzel, T et al. (2013). Service innovativeness and firm value. *Journal of Marketing Research*, 50(2), 259-276.
- [13] Droege, H et al. (2009). Innovation in services: present findings, and future pathways. *Journal of Service Management*, 20(2), 131–155.
- [14] Dujarier, M.A. (2008). *Le travail du consommateur : De McDo à eBay : Comment nous coproduisons ce que nous achetons*. Paris: Editions La Découverte.
- [15] Edvardsson, B & Olsson, J. (1996). Key concepts for new service development, *The Service Industries Journal*, 16(2), 140-164.
- [16] Eiglier, P & Langeard, E. (1987). *Servuction. Le marketing des services. Stratégie & Management*. Paris: Mc Graw-Hill, 10-79.
- [17] Fernando, J.F et al. (2014). From the classical concept of services to service systems. *Procedia Technology*, 16, 518-524.
- [18] Gallouj, F et al. (1997). Innovation in Services. *Research Policy*, 26(4–5), 537-556.
- [19] Genevieve, M et al. (2018). *Facilitating design thinking: A comparison of design expertise*. *Thinking Skills and Creativity*, 27, 177-189.
- [20] George, Y.Z. (2017). *Marketing services and resources in information organizations*. Elsevier Science, 20-50.
- [21] Gibbert, M et al. (2002). Five styles of customer knowledge management, and how smart companies use them to create value. *European Management Journal*, 20(5), 459–469.
- [22] Goudarz, A et al. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review*, 26(2), 324-336.
- [23] Gumesson, E. (1987). Lip service: A neglected area in services marketing. *Journal of Services Marketing*, 1(1), 19-23.
- [24] Hériard, S.D et al. (2007). Inventer avec le client les produits de demain. *L'Expansion Management Review*, 3(126), 42-52.
- [25] Toivonen, M. et Tuominen, T. (2009). Emergence of innovations in services. *Service Industries Journal*, 29(7), 887–902.
- [26] Lin, H. E., et al. (2013). Managing the exploitation/exploration paradox: The role of a learning capability and innovation ambidexterity. *Journal of Product Innovation Management*, 30(2), 262–278.
- [27] Kévin, M et al. (2018). *L'innovation managériale: Design thinking, réseaux apprenants, entreprise libérante, intelligence collective, modes collaboratifs, ateliers participatifs, shadow cabinet, hackathon*. Junior Entrepreneur, (Ed. 1), Eyrolles.
- [28] BOYD Harper W., RAY Michel L., & STRONG Edward C. (1972). An attitudinal framework for advertising strategy. *Journal of Marketing*, 36(2), 27-33.
- [29] Lovelock.C et al. (2008). *Marketing des services*. (6th ed.) Éditions Pearson Éducation, 9-155.
- [30] Maciuliene.M (2014). *Linking value co-creation and organizational absorptive capacity: Theoretical study and conceptual model*. Proceedings of International Academic Conferences, International Institute of Social and Economic Sciences.
- [31] Maree, L et al. (2014). *Co-creation, absorptive capacity and innovation performance*. Research Exchange Conference, Sydney, Australia.
- [32] Menor, J. (2007). New service development competence in retail banking: construct development and measurement validation. *Journal of Operations Management*, 25(4), 825–846.
- [33] Menor, L.J et al. (2002). New service development: areas for exploitation and exploration. *Journal of Operations Management*, 20(2), 135–157.
- [34] Miles, I. (1993). Services in the new industrial economy. *Futures*, 25(6), 653–672.
- [35] Monique, Z & Eric, L. (1999). *Marketing et stratégie de la banque*. Troisième Edition, 8-13.
- [36] Parasuraman, A et al. (2010). Service innovation viewed through a service-dominant logic lens: A conceptual framework and empirical analysis. *Journal of Service Research*, 14(1), 3-23.
- [37] FARLEY Laurence J. (1986). Going global : Choices and challenges. *The Journal of Consumer Marketing*, 3(1), 67-70.

- [38] Payne, A.F et al. (2009). Co-creating brands: diagnosing and designing the relationship experience. *Journal of Business Research*, 62(3), 379–389.
- [39] Prahalad.C.K & Ramaswamy.V. (2004a). Co-creation experiences: the next practice in value creation. *Journal of International Marketing*, 18(3), 5–14.
- [40] Ramaswamy, V. (2009). Leading the transformation to co-creation of value. *Strategy Lead*, 37(2), 32–37.
- [41] Rene Lopez Flores et al. (2015). collective intelligence to solve creative problems in conceptual design phase. *Procedia Engineering*, 131, 850-860.
- [42] Reniou, F. (2013). Co-innover avec les clients : entre intérêt et réticence pour les entreprises grand public. *Décisions Marketing*, 71, 59-75.
- [43] Rowley, J et al. (2007). Customer community and co-creation: A case study. *Marketing Intelligence & Planning*, 25(2), 136-146.
- [44] Skålen, P et al. (2015). Exploring value propositions and service innovation: a service-dominant logic study. *Journal of the Academy of Marketing Science*, 43(2), 137-158.
- [45] Sundbo, J. (1997). Management of innovation in services, *Services Industries Journal*, 17(3), 432-455.
- [46] Toivonen, M & Tuominen, T. (2009). Emergence of innovations in services. *Service Industries Journal*, 29(7), 887–902.
- [47] Tracy, H. (2018). The use of co-creation within the luxury accommodation experience-Myth or reality?, *International Journal of Hospitality Management*, 71, 11-18.
- [50] Vargo, S.L & Lusch, R.F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(4), 5-23.
- [51] Venkat, R. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, 84, 196-205.