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An empirically-based typology of product innovativeness for new financial services: Success and failure scenarios

George J. Avlonitis*, Paulina G. Papastathopoulou, Spiros P. Gounaris

Department of Management Science and Marketing, Athens University of Economics and Business, 76, Patission street, 104 34 Athens, Greece

Abstract

During the last decade, an increasing number of studies have been concerned with the factors that lead to new service success. Quite a few studies, however, have examined the role of product innovativeness in new service development and performance. The present article aims to test empirically a widespread, yet under-researched argument, according to which, different innovative types may be associated with different development patterns and performance outcomes.

On the basis of a detailed literature review we designed the conceptual framework for the present study. More specifically, we propose that the performance outcome of a new service is the result of the development process followed, which, in turn, is influenced by the innovativeness of the new service. The development process is examined through three blocks of variables, namely new service development activities (i.e., the "what" component), process formality (i.e., the "how" component) and cross-functional involvement (i.e., the "who" component). Performance is viewed in relation to both financial and non-financial outcomes. The different dimensions of innovativeness form the basis of our classification scheme.

To collect the data, we followed the "dropping off" method. That is, we handed in self-administered questionnaires to participants and, a picking-up appointment was set. Respondents were NSD project leaders who were asked to select two financial services, one successful and one unsuccessful, that they had developed within the last three years and reply to all questions relating to the development and launching of these services. Overall, 84 financial companies participated in the study, providing data for 132 new financial services (80 successes and 52 failures) developed and marketed in Greece.

Data analysis revealed that six distinct service innovativeness types exist. They can be represented in the form of a continuum depending on the degree of innovativeness that characterizes each type. At the most innovative extreme of the continuum we find the new-to-the-market services followed by new-to-the-company services, new delivery processes, service modifications, service line extensions, while at the least innovative end service repositionings are placed.

These six types are found to be associated with different development patterns in terms of activities, formality and cross-functional involvement as well as performance outcomes. Interestingly enough, our data suggest an almost inverted U-shaped relationship between the degree of innovativeness of a new financial service and financial performance. On the other hand, the major service innovations make the strongest contribution on non-financial performance, while "me-too" offerings are the least successful ones.

The study has a number of research contributions as well as implications for managers involved in new service development in the financial services industry. The conceptualization of the continuum of innovativeness helps disclosing the critical points of the NSD process and its structuring which, depending of the type of new service and the degree of innovativeness that characterizes it, ensures that the management's objectives regarding the performance of the new service are attained.

1. Introduction

In the last two decades, a considerable number of studies have examined the critical success factors of new services. As a result, several different groups of factors have been identified as correlates of new service success/failure.[1] What is almost completed neglected though is the role of product innovativeness in the development process and ultimate performance of new services. Given the low performance records of these offerings [60] many researchers postulate that, in order to develop a more actionable body of literature, the innovative nature of such offerings ought to be considered [17,20,22,88,103,104].

Distinguishing among high and low innovativeness is considered important in examining the Success/Failure (S/F) factors. This importance mainly lies in the fact that the uncertainty associated with really new compared to incremental products is much higher. Past research concludes

* Corresponding author. Tel.: 301-823-1931; fax: 301-895-3704.
E-mail address: avlonitis@aueb.gr (G.J. Avlonitis).

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that the process of developing a new product is an uncertainty-reduction process and that its form depends on the degree of uncertainty managers perceive [93,95,103,112]. The more new is a product, the higher is the uncertainty associated with its characteristics and operation. In order to reduce this uncertainty, more (and different) information is needed by the development team [77]. Given the varying needs for both marketing and technical information when developing various product innovations, it would be logical to expect that completely new product development is best managed differently from making ongoing improvements [59]. Further, different types of new products have different objectives, different marketing programs, and are launched in different environments [110], necessitating a different approach vis-à-vis new product development.

In the NPD literature, there are a number of typologies of product innovativeness that could be considered when examining the NPD function [*inter alia* 2,7,17,43,50,109]. However, these typologies result from rather arbitrary combinations of various dimensions of newness. In other words, researchers tend to hypothesize about the types of product innovations without providing empirical evidence for their actual existence. Thus, a research question that still remains unanswered is whether various dimensions can be combined in an attempt to develop an empirically-based typology of product innovativeness that would reflect the actual innovative types of offerings (and their characteristics) that compete in the market.

To this end, the objective of the present study is twofold: (i) to examine whether an empirically-based typology of innovativeness can be constructed for new financial services, and (ii) to identify whether different product innovativeness types are associated with different development processes and performance scenarios.

In order to satisfy these objectives, we analyse data drawn from 132 new financial services that have been developed and marketed in Greece. The interest in conducting our study in the services sector stems from the fact that previous attempts to investigate the role of product innovativeness in the development process of new offerings have mainly focused on manufactured products [97]. One might question whether the same conclusions will stand for new services. Particularly so when the differences between manufactured products and services are considered.

For example, the intangibility inherent in services means that they cannot be felt or touched prior to purchase. This service characteristic has certain implications for the development of such offerings, e.g., testing is difficult, a more tangible representation of the offering is needed in order customers to conceptualize and evaluate it. Similarly, the simultaneous production and consumption of services (and their subsequent perishability) brings the customer in direct contact with the service delivery system [35], with certain influences on the development process, e.g., product quality as perceived by the customer may be influenced by both the service delivery system and the service itself [89]; capacity planning is also critical [60]. Further, the consequences of service heterogeneity are also related to the NSD process e.g., the service experience may vary across providers and over time, requiring constant emphasis on training by the supplier staff in order to reduce the risk of buying an offering which can not fully assess prior to purchase [60].

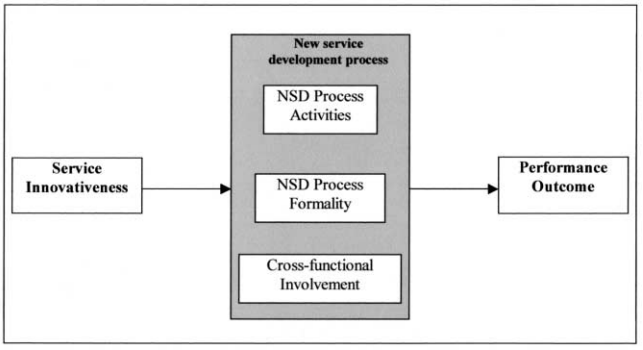

Fig. 1. The conceptual framework of the study.

In the remainder of the article, we, first, present the conceptual framework of our study. Next, we provide the research methodology and the measures used. Then, the data analysis and results are presented. Finally, there are the discussion of results, the contribution and implications of the study, together with the limitations and suggestions for future research.

2. Conceptual framework

A detailed review of the literature was undertaken and led to a conceptual framework for the study. According to this framework, which is depicted in Fig. 1, the performance outcome of a new service is the result of the development process followed, which, in turn, is influenced by the innovativeness of the new service.

The different dimensions of innovativeness form the basis of our classification scheme. Further, the development process is examined through three blocks of variables. These variables refer to three components of new service development that are managed by the company, namely:

1. the «*what*» component of the NSD process, which comprises the development activities that lead to the creation of new services;
2. the «*how*» component of the NSD process, which deals with the way the process is examined, in terms of three process formality dimensions, i.e., systematic behavior, documentation, and assignment of responsibilities during NSD;
3. the «*who*» component of the NSD process, which involves the degree of cross-functional involvement in the development of new services.

In the following paragraphs, we describe the variables of the conceptual framework in more detail.

2.1. Product/service innovativeness

Previous research results suggest that product innovativeness influences the new product development process [14,20,21,24,32,88,106]. However, details on the content changes of the development process due to differences in product innovativeness are scarce.

New products can be classified in different categories depending on how innovative or new they are. Newness either to the firm and/or to the market can be used, while new product projects may be more or less innovative on a number of dimensions, for example market, technology, managerial practices [44,96].

Below, we provide a review of the key typologies of new product and new service developments that are available in the literature, paying particular attention to the dimensions of newness used for their construction. An extensive presentation of these typologies is provided in Table 1.

2.2. Key typologies of new product developments

The most popular classification of new products is that of the consulting firm Booz, Allen and Hamilton [7]. Specifically, six categories of products are identified ranging from new-to-the-world products to cost reductions. Similarly, Heany [50] have constructed a spectrum of product innovation with six categories, ranging from major innovations to style changes.

Based on the typology of Booz, Allen and Hamilton [7], Cooper and Kleinschmidt [17] distinguished between seven classes of new product types. The two ends of innovativeness spectrum refer to true innovations and fairly minor modifications of an existing company product respectively.

Roberts and Berry [86] have constructed the well-known «*Familiarity Matrix*» on the basis of two dimensions of newness to the firm, namely market served and technology employed. Johne and Snelson [58] suggested a similar categorisation, classifying product developments on the basis of technology and marketing practices employed from the firm's perspective.

On the basis of market newness and product newness, Ansoff [2] identified four different business opportunities that can be pursued using four different types of product development, respectively, ranging from new products/markets, through new product lines and product line extensions, to product improvements.

Wheelwright and Clark [109] talk about breakthrough, platform and derivative projects on the basis of the degree of change in the product and the degree of change in the manufacturing process.

Finally, combining the degree to which technology is new to the company or it is applied in a new way and the extent to which the innovation is based on an existing product, Crawford [22] described three types of innovations, that is (1) pioneering, (2) adaptation and (3) imitation.

It becomes evident that there is great discrepancy among researchers regarding the conceptualisation and measurement of product innovativeness. Unfortunately, these varying definitions of new projects really can cause confusion and lead to quite different and incomparable conclusions.

2.3. Key typologies of new service developments

In a service context, Gadrey, Gallouj and Weinstein [43] have observed four types of financial service innovations, namely (1) innovations in service products, (2) architectural innovations which bundle or un-bundle existing service products, (3) innovations which result from the modification of an existing service product, and (4) innovations in processes and organization for an existing service product.

Finally, the typology of Wheelwright and Clark [109] has recently been adapted by Debackere, Van Looy and Papastathopoulou [25] in describing the innovative nature of new financial services.

From the above literature review, it is clear that the types of new product developments provide the basis for describing innovations in the service industry. Not much work has yet been done to investigate whether there are types of developments that are particularly relevant to services.

2.4. New service development activities

The first block of NSD variables includes the activities that can be undertaken during the NSD process. A considerable number of models are available in the literature about the steps followed and subsequent decisions made during the NSD process. This process involves the activities carried out from the moment an idea about a new service is generated, up to its launching into the market [6,7,8,14,34,61, 91,103]. In most cases, these activities involve:

1. *Idea generation and screening*, which refers to the initial go/no go development decision after examining alternative ideas and assessing them against specific market-based and technical criteria;
2. *Business analysis and marketing strategy*, that is a cost-benefit analysis of the new venture, based on an analysis of market conditions, trends, customer needs, and the investment needed for developing and promoting the new offering;
3. *Technical development*, relating to the design and development of process procedures and systems design;
4. *Testing*, that is conducting an in-house and/or market test of both the service's operational and marketing aspects;
5. *Commercialization/launching* and post launch analysis of the service, which refers to the fall-scale introduction of the service to the market and the evaluation of its performance.

Recently, Song and Montoya-Weiss [96] examined the impact of product innovativeness on the relationship between certain NPD activities and new product profitability

Table 1
Summary of key typologies of new product/service innovativeness

Author(s)	Types of product innovations
Booz, Allen and Hamilton [7]	• New to the world products • New product lines • Additions to existing product lines • Improvements in/revisions to existing products • Repositionings • Cost reductions
Heany [50]	• Major innovations • Start-up businesses • New products for the currently served market • Product line extensions • Product improvements • Style changes
Cooper and Kleinschmidt [17]	• True innovations (totally new to the world products-entirely new market) • Totally new to the world products (existing market) • Totally new to the company products (new features vs. competition-existing market) • New product lines to the company (competed against fairly similar products) • New items in an existing product line for the company (existing market) • Significant modifications of existing company products • Fairly minor modifications of existing company products
Johne and Snelson [58]	• New product lines • Improvements to/extensions of existing brands or product lines
Ansoff [2]	• New products/markets (to supplier) • New product lines (to supplier) • Product line extensions (to supplier) • Product improvements (to supplier)
Roberts and Berry [86]	• Step-out product development • New businesses and new ventures • New items (existing lines) • Market development • Defend or penetrate • Market expansion (customer application projects)
Wheelwright and Clark [109]	• Breakthrough projects (fundamental charges to existing products and processes) • Platform projects (new product lines) • Derivative projects (incremental changes to products and processes)
Crawford [22]	• Pioneering products • Adaptations • Imitations
	Types of service innovations
Debackere et al. [25]	• Breakthrough projects (fundamental changes to existing products and processes) • Platform projects (new product lines) • Derivative projects (incremental changes to products and processes)
Gadrey et al. [43]	• Innovations in service products • Architectural innovations (bundling-unbundling of existing service products) • Modifications of service products • Innovations in processes and organisation for existing service products

in a sample of high tech products. Product commercialisation was found to be the most critical stage for the profitability of really new products, while increased efforts in strategic planning could also lead to increases in the profitability of highly innovative products. By contrast, extensive business and market analysis was associated with decreases in their profitability, probably because market needs and wants are still largely unspecified for this kind of

projects, and therefore the cost of a detailed market research is proportionately higher than its prospective benefits. Further, considerable emphasis in idea development and screening activities did not influence the profitability of highly innovative projects. In the case of incremental products, business and market opportunity analysis is the most important determinant of high profitability. In a similar vein, business and market analysis was positively associated with profitability, as this stage involve activities which allow the company to identify un-exploited marketing opportunities, target attractive market segments, and further differentiate and position a rather "me-too" product as having a unique selling proposition. In contrast, extensive strategic planning efforts could cause decreases in the profitability of these non-innovative offerings. Given the fact that incremental products build on previous experience, investing considerable time and effort in this stage is most probably unnecessary and could speed down market entry, and thus, allow competition to preempt the market.

Further, the only attempt to gain knowledge over these issues has recently been made by de Brentani and Kleinschmidt [32] in a study of new industrial services. Their analysis revealed that a well-organised up-front process leads to new product success in the case of incremental innovations, but it is not associated with the success of discontinuous innovations. Moreover, a planned launch influences performance positively in both incremental and discontinuous innovations, although its impact is significantly higher in the former type of business-to-business services.

Notwithstanding the usefulness of these results, there are certain questions that remain unanswered to date in the case of new financial services. For example, which development activities are more important for reaching high performance along different types of innovations, and whether certain activities could be skipped as we move from highly innovative to non-innovative offerings, given the limited risks and complexities of me-too offerings [14,21,88].

2.5. NSD process formality

The second block includes NSD variables describing the formality of the NSD process. Formality is viewed in terms of the structural characteristics proposed by Pugh et al. [84] and Hage and Aiken [49], namely:

1. *Systematic behaviour*, which refers to the degree to which regular systematic procedures and rules govern the development process;
2. *Documentation*, which refers to the extent and intensity of formal paperwork pertaining to service development; and
3. *Assignment of responsibilities*, which refers to the presence and/or degree of defined and specialized roles and assigned responsibilities regarding service development decision making.

Johne [56] and Johne and Harborne [57] have already used these three formality dimensions in examining how product innovation activities are organized. By splitting their sample in active and less active product innovating companies they concluded that, both types of companies have a loose structuring of the development tasks during the initiation phase of the NSD process. However, as they move to the implementation phase, active product innovators witness a shift in their structure, towards a tighter one, while less active product innovators seem to retain a loose structure.

In the light of these results, it would be counterintuitive to assume that all new offerings follow an equally formal development process.

2.6. Cross-functional involvement

The third block of NSD variables refers to cross-functional involvement. In the literature, any discussion of new product development can hardly go on without some reference to *the people* involved [21]. Some researchers deal with ways of managing inter-departmental relations and communication flows in new product development [46,48, 67,73,74,82,83,100]. Others examine the relationship between new product success and the co-operation between different functional units, thus investigating implications for new product success rates [45,47,51,75,87,99].

In the literature, it has been argued that, as the degree of product innovativeness increases, "*the amount of relevant experience*" a firm's personnel can draw on during the NPD process decreases [77]. Highly innovative products depart considerably from current, market and/or technological, company knowledge. By contrast, non-innovative products maintain the company into familiar development and marketing practices. In this respect, it would logical to expect that the degree of cross-functional involvement required in the NSD process differs depending on the need for information, which in turn depends on the type of service innovation.

Notwithstanding the importance of these studies, to date the issue of whether the degree of product innovativeness influences the degree of cross-functional involvement during the development process is largely neglected.

2.7. New service performance

A number of studies underscore the importance of the degree of product innovativeness in new product performance [12,29,50,93,110] as well as new service success/ failure [32]. However, this situational factor has not been widely used as primary construct in conceptual models that investigate relationships in new product/service development.

A possible explanation for this reluctance of researchers to investigate in depth the development of different project typologies is given by Craig and Hart [21] who argue that

«*. . . defining the different types of product development is a complex task*». As it was previously discussed, there are too many dimensions that could be used in such classifications, so that deciding on what basis the products should be classified becomes a complicated issue to handle.

Moreover, an increasing number of researchers have turned their attention to a specific aspect of non-financial performance of service firms, namely first-mover or pioneering advantages [5,68,76,79,97,98,105].

According to Bharadwaj et al. [5] product, process and managerial innovations can give the company a competitive advantage to the extent that the technology underlying such innovations remains proprietary. However, services providers have a difficulty in sustaining a competitive advantage because their offerings are largely intangible and therefore, not patentable. Consequently, imitative rivals can easily free-ride on innovative services at a lower cost [105].

Furthermore, financial service providers can use innovations to expand their market base, gather information about investor identities and preferences, and as a result reduce search costs for future research [97]. Such an information advantage can lead to a cost advantage in the future [105].

Apart from intangibility, another characteristic of services, namely heterogeneity, also, makes it more difficult for service innovators to sustain a differentiation advantage [22]. This is because heterogeneity creates opportunities for later entrants to tailor their services to particular customer needs. When Tufano [105] examined a sample of financial securities innovations, he concluded that pioneering banks were unable to create a differentiated offering and sustain a higher price. However, they enjoyed cost advantages in relation to trading, underwriting and marketing, which they passed on as lower prices, resulting in larger market shares.

3. Research methodology

3.1. Sample

A list of 115 financial companies operating in Greece was traced through the ICAP Directory [55], Gallup's subsidiary in Greece. The single criterion for inclusion in our study was that the company had developed new financial services over the past three years. Each company was contacted by telephone to find whether or not they met this criterion and also, to identify potential respondents. This procedure produced a sampling frame of 100 companies from various financial sectors.

Next, a personalised pre-notification letter was mailed to the potential respondents explaining the objectives of the study and soliciting cooperation. A week after the mailing of the pre-notification letter a telephone call was made to them in order to discuss the possibility of participating in the study. This approach has been found to increase response rates considerably [111]. At first, all companies agreed to participate in the study.

3.2. Research instrument

The data were secured by means of a 10-page self-administered questionnaire as part of a wider examination of the new service development and launching practices in the financial industry. Following the suggestions of Churchill [11], when developing the questionnaire, existing scales were adopted, modified and extended. Information was gathered employing various forms of response such as 1–5 Likert-type and other scales, as well as dichotomous and multichotomous questions, when appropriate.

A first version of the questionnaire was prepared in English and then it was translated to Greek. This version was developed using the parallel-translation/double-translation method [1,92,94,95]. Two Greek professional translators independently prepared Greek versions of the questionnaire, and two English professional translators independently translated the Greek questionnaires back into English. Only minor inconsistencies occurred and were resolved in a group meeting with all four translators.

The appropriateness of the Greek version of the questionnaire yet was confirmed through another pretest. The questionnaire was administered to four Greek post-graduates from English Universities and four Greek executives from the financial services industry. These bilingual respondents completed the questionnaire in the presence of the second author, asking questions and making suggestions for improvement of the final version of the research instrument.

Finally, before administering the questionnaire, it was submitted to three University Professors with long experience in academic research, as well as seven test respondents drawn from the population under investigation in order to increase the content validity of the research instrument [33,53].

3.3. Data collection and response

To collect the data, we followed the «dropping off» method [42]. Questionnaires were handed to respondents and, in most cases a picking-up appointment was set. Respondents were NSD project leaders who were asked to select two financial services, one successful and one unsuccessful, that they had developed within the last three years and reply to all questions relating to the development and launching of these services. The decision to contact the project leader was based on the need to acquire an as much objective as possible gauge of the various dimensions pertaining to the NSD process and, thus, avoid the fact that different functional areas might exaggerate about their role and involvement in the NSD process. However, project leaders were urged to consult other company personnel for the questionnaire's completion, where it was considered to be necessary, in an attempt to avoid some of the disadvantages inherent in the «*key informant technique*» for data collection [81].

After two follow up contacts by telephone and fax, 132

Table 2
Service innovativeness dimensions—A principal components analysis

Factors	Variables*	Loadings
F1: Operating/delivery process newness (27.6% of variation)	• The service required the installation of new software to the company [18]	0.808
	• The service required the installation of new hardware to the company [18]	0.834
	• The service was supported by innovative technology [18]	0.573
	• The service required similar NPD and marketing practices compared to current company products** [pre-study interviews]	−0.471
	• The service required a change in the customer's buying behavior (i.e., way of buying and using it) [3,77]	0.565
F2: Service modification (15.1% of variation)	• The service was a modification of an existing company product [17]	0.877
	• The service was a revision of an existing company product [18]	0.882
	• The service was a repositioning of an existing company product [7]	0.758
F3: Service newness to the market (9.9% of variation)	• The service was totally new to the market [7]	0.715
	• The service offered new features versus competitive products [17]	0.802
	• The service required a change in the customer's buying behavior (i.e., way of buying and using it) [3,77]	0.442
F4: Service newness to the company (8.1% of variation)	• The service was totally new to the company [7]	0.537
	• The service allowed the company to enter a new market for the first time [7]	0.526
	• The service supplemented an existing product line [7]	0.806
	• The service created a new product line for the company [17]	0.427

Kaiser Meyer Olkin measure of sampling adequacy = 0.68862 Bartlett Test of Sphericity = 547.94302, sign. = 0.000.

* Numbers in brackets represent the source of each item.

** This item was constructed by the mean of eight 1–5 scaled questions: Familiar service development process; familiar marketing strategy; familiar types of advertising/promotion; familiar selling methods; familiar distribution charmers; familiar pricing methods; familiar customer service; familiar operating delivery process.

usable questionnaires (80 for successes and 52 for failures) were collected from eighty-four financial companies, representing a project response rate of 71.4% and a company response rate of 84%. The responses covered the full range of financial services, for example savings accounts, personal loans, pension plans, credit cards, unit trusts, mutual funds. The lower number of failures compared with successes is consistent with previous research using a comparative methodology [12,15,36,37,40,52].

4. Measures

4.1. Service innovativeness

Service innovativeness was measured using seventeen items/statements drawn from past research and the results of a pre-study, which was conducted in a sample of 14 NSD managers. Using a five-point scale, respondents were asked to indicate their degree of agreement with each of these 17 service innovativeness items/statements (1: strongly disagree, 5: strongly agree). An examination of the correlation matrix of the seventeen items of service innovativeness suggested a considerable amount of interrelationship among them. Thus, it felt reasonable to expect that these items could be reduced to a more manageable set of service innovativeness dimensions. For the purposes of examining this possibility, a principal components analysis (with varimax rotation) was performed. The initial solution revealed a five-factor model. However, three items had loadings of less than 0.30 on any factor, and for that reason they were removed from successive analyses.[2] These were: (1) the service concept was easy for customers to evaluate and understand [31]; (2) it took a short time before customers could fully understand the service's advantages [41]; and (3) the service was more complex than other services in the same market [41]. Factor analysis was repeated after refining the items used to conceptualize the dimensions of service innovativeness. Table 2 shows the results of this analysis together with the sources of the retained items of the product innovativeness scale. This analysis yielded four readily interpretable factors (eigenvalue ≥ 1, Cum. percent of variance explained = 60.7%), each representing a different dimension of service innovativeness.

The first factor represents a conceptualization of service innovativeness that emphasizes the newness of the service's operating/delivery process (i.e., hardware, software) to the company, the technological newness of the service's delivery process and its subsequent newness to the customer, and the newness of the new service development & marketing process to the company. The second factor characterizes the evolutionary nature of new services in the form of modifications, revisions and/or repositionings of existing company services. The third factor represents the newness to the market of the service and its delivery process. The fourth

factor recapitulates the newness to the company of the service and the market it is aimed at.

4.2. NSD process activities

A literature review on new product [6,14,64] and new service [40,91] development models pointed to 29 specific development activities. We then presented this list of activities to 14 NSD managers who had agreed to comment and assist in the development of the research instrument. Their assistance was particularly helpful in adjusting the activities identified in the literature to fit the specific characteristics of the service industries, and, thus, adapt the NPD activities in a service context. Further, these NSD managers provided their considerable help in categorizing each of the 29 NSD activities in specific NSD stages, namely (1) idea generation and screening, (2) business analysis and marketing strategy, (3) technical development, (4) testing, and (5) launching. The breakdown of the development process in five stages has already been reported in previous investigations [95,103].

Using a five-point scale, respondents were asked to indicate the extent to which each of the 29 activities was undertaken during the development process (1: not at all, 5: to a very large extent). The degree of execution of each stage was measured by adding the scores of the respective items. Internal consistency of each stage was measured by calculating Cronbach's Alphas. Details on the operationalisation of the NSD process are provided in appendix A.

4.3. NSD process formality

The overall formality variable was measured through the construction of a Likert-type summated scale, which included ten items rated on a five-point scale (1: strongly disagree, 5: strongly agree). Internal consistency of the scale turned out to be quite high ($\alpha = 0.763$). As for construct validity, a factor analysis (varimax rotation) revealed that the formality scale represented three subconstructs, each tapping a unique structural characteristic (conceptual space) of formality as proposed by Pugh et al. [84] and Hage and Aiken [49], namely (1) systematic behavior, (2) documentation and (iii) assignment of responsibilities (see appendix B). In order to provide a better representation of the formality dimensions, each dimension was measured by averaging the original scores of the items comprising each respective factor/dimension.

4.4. Cross-functional involvement

Cross-functional involvement was operationalized as follows: a 8×5 table was provided to respondents, in which the rows presented the five development stages described earlier, while the columns presented the following eight functions, namely (1) Marketing; (2) EDP; (3) Network/Sales; (4) Operations; (5) Treasury; (6) Underwriting; (7) Advertising/Promotion; and (8) Public Relations.[3] The involvement of functions was measured on a 1–5 scale on each of the five development stages (1: none, 5: very high). Cross-functional involvement was measured at two levels: first, overall—constructed by the sum of each function's involvement in all the development stages and second, in each development stage—constructed by the sum of each function's involvement in the respective stage.

4.5. New service performance

New service performance has been consistently reported as a multidimensional construct [18,27,28,102]. Therefore, overall performance was measured through the construction of a Likert-type summated scale including eleven items drawn heavily from Cooper et al. [18]. A principal components analysis in the performance scale revealed the existence of two different performance dimensions, namely financial and non-financial performance (Appendix C). Thus, these two types of performance were also measured, by averaging the original scores of the items comprising each respective factor/dimension of performance.

5. Data analysis and results

5.1. Classification scheme of new financial services

In order to explore the possibility that different types of service innovativeness exist, a hierarchical cluster analysis (Ward's method) was performed in the 132 service cases using the factor scores of the four service innovativeness factors. After examining the 5-, 6- and 7-cluster solution, the 6-cluster solution was considered as the most acceptable one on the basis of maximum external isolation and internal cohesion, and parsimony of explanation [62,85]. The 132 new service cases were fairly evenly divided among the six clusters, and no outliers were detected.

For validating the 6-cluster solution, first, cluster membership was related (one-way ANOVA and Duncan multiple-range test) to the original 14 product innovativeness variables, testing for homogeneity within and differences between clusters. Cluster means were found significantly different on all 14 variables at the 0.000 level (Table 3). It must be noted that, the interpretation of clusters was derived by this analysis.

Second, we performed a multiple discriminant analysis with cluster membership as the grouping variable and the four factors of service innovativeness as the independent variables. This analysis showed that 96.15% of the cases were correctly classified, providing support for the appropriateness of the 6-cluster solution.[4]

Further, in order to identify the "service innovativeness scenarios" and to assess their relationship with the development process and performance outcomes, cluster membership was related to variables describing the development activities, formality, cross-functional involvement and performance. To this end, one-way ANOVA

Table 3
Typology of service innovativeness

	New to the market services (15%)	New to the company services (19%)	New delivery processes (24%)	Service modifications (16%)	Service line extensions (14%)	Service repositionings (12%)	F	Sign.
The service allowed the company to enter a new market for the first time (new clients/needs)	**[4.58]**	4.33	4.38	4.33	3.28	(2.38)	13.779	0.000
The service offered new features versus competitive products	**[4.58]**	4.33	3.47	4.33	(2.11)	3.56	14.310	0.000
The service was totally new to the market	**[4.21]**	3.42	2.88	3.71	(1.39)	2.50	10.995	0.000
The service supplemented an existing company product line	3.68	**[4.96]**	4.38	4.81	4.33	(3.81)	5.915	0.000
The service was totally new to the company	4.47	**[4.88]**	4.69	4.57	4.00	(2.75)	12.296	0.000
The service created a new product line for the company	4.16	**[4.42]**	4.16	4.29	(2.44)	2.50	10.680	0.000
The service required the installation of new software to the company	3.74	2.71	**[4.75]**	3.81	(1.56)	2.12	21.311	0.000
The service required the installation of new hardware to the company	1.58	1.17	**[4.50]**	2.14	(1.06)	1.19	60.133	0.000
The service required a change in the customer's buying behavior (i.e., way of buying and using it)	3.74	2.50	**[3.78]**	3.29	(1.50)	2.31	11.429	0.000
The service was supported by innovative technology	2.63	2.42	**[3.12]**	2.71	1.39	(1.38)	6.700	0.000
The service was a modification of an existing company product	1.79	1.58	(1.47)	**[4.29]**	2.44	4.06	29.064	0.000
The service was a revision of an existing company product	1.53	1.00	(1.06)	**[3.95]**	1.89	3.88	65.359	0.000
The service required similar NPD and marketing practices compared to current company products	(2.74)	3.69	3.14	3.72	**[4.56]**	3.68	13.244	0.000
The service was are positioning of an existing company product	2.00	1.04	(1.03)	2.86	1.11	**[3.19]**	19.704	0.000

Figures represent mean values in each cluster. Maximum values are in brackets while minimum values are in parentheses (based on Duncan multiple-range test, $p < 0.10$). Sign indicates level of significance based on one-way analysis of variance.

Table 4
Typology of service innovativeness and associated variables (results of ANOVA)

	New to the market service	New to the company service	New delivery process	Service modification	Service line extension	Service repositioning	F	Sign.
Idea generation and screening	**[3.50]**	3.38	3.18	3.33	(2.72)	3.02	2.261	0.052
Business analysis and marketing strategy	**[3.56]**	3.40	3.16	3.29	(2.75)	(2.91)	2.336	0.046
Technical development	3.38	3.31	3.00	3.21	2.75	3.30	1.454	n.s.
Testing	**[2.25]**	1.40	1.59	1.98	(1.26)	1.77	3.321	0.008
Launching	3.36	3.22	3.16	3.28	(2.39)	(2.66)	4.330	0.001
Dimensions of formality:								
Systematic behaviour	3.85	**[4.11]**	3.79	3.96	(3.21)	3.34	3.198	0.009
Documentation	3.54	3.62	3.86	**[3.93]**	3.19	(3.04)	2.623	0.027
Assignment of responsibilities	2.50	2.33	2.70	2.12	1.94	2.53	1.359	n.s.
Formality (*overall*)	3.49	**[3.61]**	3.60	3.58	(2.95)	3.09	3.808	0.003
Cross-functional involvement during idea generation and screening	13.26	10.46	10.16	**[13.52]**	(8.12)	12.43	2.790	0.020
Cross-functional involvement during business analysis and marketing strategy	**[12.28]**	9.54	8.84	11.67	(7.24)	11.00	2.793	0.020
Cross-functional involvement during technical development	**[14.38]**	12.75	12.88	**[14.37]**	(9.18)	12.71	1.933	0.094
Cross-functional involvement during product testing	15.25	15.12	14.33	13.79	14.00	14.60	0.087	n.s.
Cross-functional involvement during launching	**[15.16]**	14.17	11.53	**[15.38]**	(9.12)	11.57	2.836	0.019
Cross-functional involvement (*overall*)	64.05	51.96	46.09	**[64.14]**	(34.47)	52.14	3.658	0.004
Performance (*overall*)	3.59	3.40	**[3.69]**	3.61	2.63	(2.56)	4.400	0.001
Financial performance	3.32	3.27	**[3.64]**	3.56	2.63	(2.25)	3.995	0.002
The service was profitable	4.05	3.75	**[4.28]**	3.95	3.28	(2.94)	3.437	0.006
Total sales of the service were high	3.53	3.29	**[3.78]**	3.71	2.61	(2.19)	3.902	0.003
The service had a large market share	3.00	3.00	3.25	**[3.71]**	2.28	(2.06)	3.705	0.004
The profitability of the service exceeded its objectives	3.11	3.38	**[3.75]**	3.14	2.39	(2.19)	3.894	0.003
The service exceeded its sales objectives	3.21	3.17	**[3.53]**	3.38	2.50	(2.13)	2.739	0.022
The service exceeded its market share objectives	3.05	3.08	3.25	**[3.43]**	2.72	(2.00)	2.429	0.039
Non-financial performance	**[3.92]**	3.55	3.75	3.68	(2.63)	2.93	4.488	0.001
The service had a positive impact on the company's perceived image	4.16	**[4.25]**	4.16	4.05	(3.06)	3.25	3.511	0.005
The service improved the loyalty of the company's existing customers	**[4.16]**	3.92	3.91	3.57	(2.94)	3.13	3.042	0.013
The introduction of the service enhanced the profitability of other company products	3.11	2.87	3.13	**[3.38]**	(2.06)	2.69	3.139	0.011
The service attracted a significant number of new customers to the company	**[3.79]**	3.17	3.74	3.67	(2.56)	2.63	3.113	0.011
The service gave to the company an important competitive advantage	**[4.37]**	3.54	3.72	3.71	(2.56)	2.94	4.425	0.001

Figures represent mean values in each cluster. Maximum values are in brackets while minimum values are in parentheses (based on Duncan multiple-range test, $p < 0.10$). Sign. indicates level of significance based on one-way analysis of variance.

and the Duncan multiple-range tests were undertaken, as shown in Table 4. The "service innovativeness scenarios" found are also shown in Fig. 2 and are discussed further down.

6. Discussion of results

A number of researchers have argued that a situational or scenario approach is more appropriate for reaching mana-

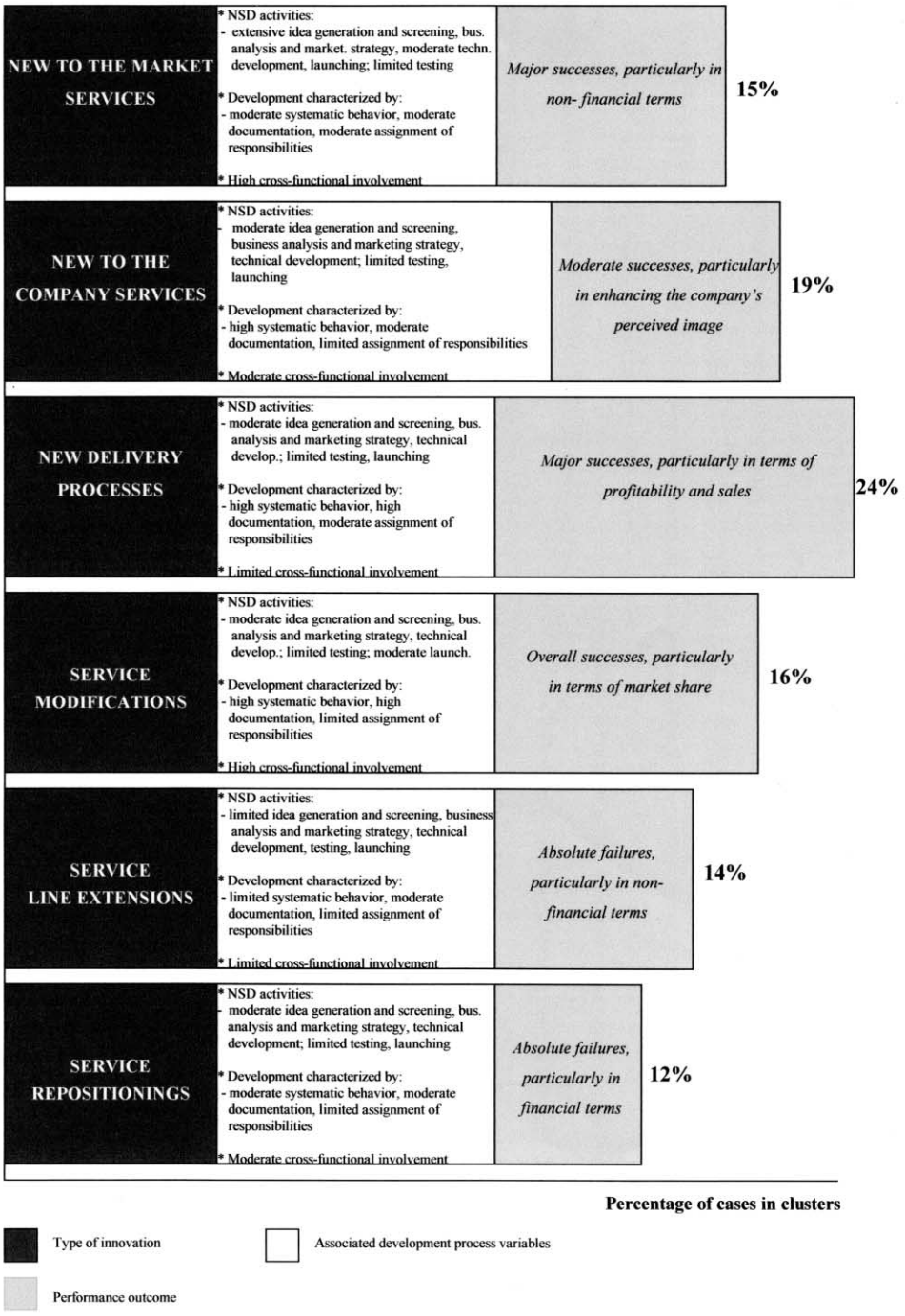

Fig. 2. Typology of product innovativeness and associated variables.

gerial decisions [65,70,71]. In a similar vein, Hunt [54] argues that: "Classificational schemata play fundamental roles in the development of a discipline since they are the primary means for organizing phenomena into classes or groups that are amenable to systematic investigation and theory development". Similarly, such a synthesis approach has been considered as particularly useful in evaluating the attractiveness of new product projects [10,31].

On the premises of these arguments, the present study attempts to develop an empirically-based typology of product innovativeness for new financial services that might contribute to more parsimonious understanding and streamlining of NSD decision-making. On the basis of four service innovativeness dimensions, six types of financial service innovations have been identified, which are associated with different development processes in terms of activities, formality and cross-functional involvement as well as performance outcomes.

Furthermore, these six types could be conceptualized as

representing a continuum depending on the degree of innovativeness that characterizes each type: At the most innovative extreme of the continuum the *New-to-the-Market* services are placed; at the least innovative end, the *Service Repositionings* can be found. In between, the remaining four types could be classified (starting from the most to the least innovative type) as follows: *New-to-the-Company* services, *New Delivery Processes*, *Service Modifications*, and *Service Line Extensions*. This conceptualization can be quite helpful in unveiling various aspects of the NSD process that, depending on the degree of the innovativeness that characterizes a new service effort, can lead to better developed new services and superior performance.

6.1. New-to-the-market services

To start with, when it comes to major innovations (*New-to-the-Market services*), the achievement of the management's performance expectations is facilitated by placing increased emphasis on specific stages of the NSD process, namely, *idea generation and screening*, *business and marketing strategy analysis and testing*. The increased emphasis on these three particular stages allows the company to ensure that the new service will gain at least a certain rate of acceptance when it will eventually be introduced in the market. As it is the case with every new offering, the better it meets the needs of the target market, the greater the willingness of the targeted buyers to purchase it. The problem with major innovations though is that, potential customers are unable to articulate their need for the new product or service. Their needs remain latent [23]. This is particularly true for new services, since this type of offerings is mostly intangible in nature. Thus, it is during these stages that specific, but latent, customer needs and wants are translated into a new (pioneering) service that offers a unique and novel solution to the market. Hence the emphasis on these stages aims to ensure that the interpretation of the customers' latent needs is accurate.

This finding appears to be inconsistent with what has generally been suggested in the literature. More specifically, for really innovative offerings, it is argued that customer needs are often un-specified, while competition is usually non-existent [96]. Thus, potential users cannot compare the new offering with something similar in the market, and they are often unable to envision the potential entailed in a highly innovative new offering [104]. Consequently, emphasis in this set of activities could be ineffective and possibly undesirable [66]. Actually, Song and Montoya-Weiss [96] found that extensive business and market opportunity analysis is associated with decreases in the profitability of really new products. Further, de Brentani and Kleinschmidt [32] found that a formal up-front process (i.e., formal idea evaluation and screening, market study and customer concept evaluation, service rendering, detailed 'drawing board' approach during design) does not influence the performance of business-to-business innovative services.

However, one should notice that previous studies in the field focus mainly on the financial dimensions of performance. Our study, by providing evidence of the positive contribution of the marketing activities on the non-financial performance of new-to-the-market services, points to the need of effectively executing both marketing and technical activities if both dimensions of performance can be nourished.

With regard to the structuring of the development process of major innovations, our findings show that, the degree of formality does not seem to bear a significant impact on the achievement of the management's performance objectives. However, ensuring the involvement of different company functions, especially during the stages of business analysis and marketing strategy development, technical development and the stage of launching, improves the possibility for attaining the management's performance objectives. Apparently, as the service being developed represents a major innovation, the firm's experience with the market is minimal, if not non-existent. Hence, in order to meet the management's expectations on performance, the company has to ensure that the expertise of different managerial functions is fueling the development process. This is particularly true for the business analysis and marketing strategy development stage since, as the findings suggest, only new-to-the-market services require the maximum of cross-functional involvement at this specific stage of the NSD process.

Should these conditions be met, the new service can then outperform management's expectations in terms of non-financial performance and, particularly, in terms of enhancing the degree of loyalty of the company's existing clientele, attracting new customers for the company and in terms of creating a sustainable competitive advantage. Besides, it has been argued that, innovating in services is a prerequisite for building reputation and image [22]. The fact that financial performance criteria are not affected is not of concern; the non-financial achievements of a new-to-the-market service which results through this kind of development process can ensure, all contingencies been considered, long-term growth and profitability.

6.2. New-to-the-company services

With regard to the second most innovative type of new services, namely, new-to-the-company services, it is probably the case of services, which are developed in order to meet or outstand the offerings of the company's competitors. According to our study, it would appear that the most important contribution of this kind of services is the impact that it can bear on the company's overall image.

In fact, previous research suggests that financial companies seem to place considerable importance to image implications in their NSD activities [35]. The intangibility inherent in most services entails considerable uncertainties and risk to customers [72]. Having developed a good image in the eyes of the customer helps minimize the risk associated with the new offering and emphasizes its ability to (also) offer a particular service or its ability to offer an improved

(me-too) service. However, before a positive contribution to the company's image can be realized, it is necessary to ensure that competitive offerings and strategy have been well analyzed, unambiguous marketing objectives have been set and a crystal clear marketing strategy has been designed.

Our findings suggest that these requirements increase the overall formality of the NSD process and particularly the systematic behavior of those involved in the development process and, primarily, the extent to which the progress of the process is measured against specific criteria that the new service must meet, is regularly and systematically reviewed and whether the process as a whole follows specific guidelines and/or procedures. Thus, ensuring the standardization of the development process, allows the company to develop a service that can meet its objectives and, thus, make a positive contribution to the company's image.

6.3. New delivery processes

When it comes to *New Delivery Processes*, the third most innovative type of new financial services, our study suggests that the most important contribution is in terms of financial performance, and particularly the profits generated and their profitability level. Apparently, this type of new services aims to taking advantage of modern technologies in the delivery of the service and, thus, renders the delivery more cost-efficient and therefore, profitable. Many IT-based innovations in the financial services sector have been driven by cost considerations [90]. After all, one route for survival and growth in the service industry is to reduce the costs of producing existing services [102].

However, according to the findings of this study, the achievement of the management's objectives does not seem to relate to the NSD process itself or its structuring. One possible reason for this may be the fact that the most important dimension of innovation for this type of new services is the technology that is incorporated in the delivery process.

Thus, it seems possible that the ability of the new service to meet the profit generation and the profitability objectives of the management is dependent on factors pertaining to the technology that is incorporated in the delivery process, e.g., whether the technology is easily understood by the clients, whether it offers a significant advantage over competition which is hard for competitors to immediately imitate and so on. If this is the case then, the success of this type of new services, will relate to the adoption process, the criteria employed and so on, which the company applies when considering the use, or not, of a new technology in the delivery of an existing service.

6.4. Service modifications

For *Service Modifications*, our findings suggest that the most important contribution in terms of performance refers to improvements of the market share. Interestingly enough, this type of new services is found to also make a contribution to the profitability of other services. One possible explanation for this may be the opportunities that the new service created for cross-selling: The (new) clients of the new (modified) service provide a pool for selling other, existing, services of the company. It is already recognised that the ability to cross-sell services in the financial services sector is an important part of a successful marketing strategy [69]. By providing services that supplement existing product lines, it is more likely that the customer will see the financial institution as a "one-stop" shop that can satisfy their needs. This stops customers from looking for, or even buying competitive offerings [102].

The achievement of the management's performance objectives for this type of innovation requires increased emphasis on the structuring of the NSD process. Indeed, high degree of involvement of the various company functions is particularly important and especially during the stages of idea generation, technical development and launching of the modified service. Modifications of an existing service may have an impact on various aspects of the service. For example, a modification of the service may call for changes regarding the back-office procedures, lead to alteration of the core benefit that the company offers to its customers, force the company to reconsider its marketing strategy regarding the service, compel a shift of the extent to which clients participate in the delivery of the service and so on.

Thus, as the results of this study suggest, it is important to ensure the involvement of various functional departments in the development process so that, not only the possible consequences of the modification are tapped, but also, to make sure that these consequences are well understood prior to the commercialisation of the modified service and the necessary adjustments of the service blueprint have been done.

Further, the formality of the NSD process for this type of innovations should be kept at moderate levels, except for the need to hold formal meetings and keep track of the decisions in order to ensure that these decisions are properly incorporated in the modified service during the development process. Apparently, this need stems from the coordination requirements, which result from the need to have a large number of functional departments involved in the NSD process.

6.5. Service line extensions

As far as *Service Line Extensions* are concerned, it would appear again that the immediate contribution of this kind of new services is in terms of non-financial performance. According to the findings of our study, for this type of innovations, all but the stage of the technical development are important for the new service to achieve the performance expectations of the company's management.

In closer examination, the development process of this type of innovation resembles the new-to-the-market type of innovation, except to the fact that increased emphasis is

required during the launching of the new service. A possible reason for this resemblance may be that the conditions under which this type of new service is developed are similar to those pertaining to the development of a new-to-the-market service. Indeed, frequently, there are many directions towards which an existing service line can be extended.

Thus, in actually developing the new service, the company has to ensure a close match between customers' primary needs and wants with its capabilities to serve them and its own marketing objectives. Hence, increased emphasis is given to those stages of the NSD process that ensures this match. However, launching is also important because, in this case, the new service probably has to face existing competitors' offerings and potential customers that are more experienced and demanding. Thus, the activities of the commercialization stage become really important. Their importance lies on the effort to gain a competitive advantage, possibly through intense promotional support and assistance to the front line personnel in coping with customers' enquiries (e.g., through manuals of the new service).

With regard to the structuring of the innovation process for service line extensions, formality is important in achieving the management's performance objectives, particularly the systematic behavior of those involved in the process. Service line extension occur in order for the company to achieve its marketing objectives through the development and launching of a new service which, while new to the company, complements its existing line of services. Issues such as service cannibalization must be monitored during the development process and tackled as early and efficiently as possible.

To this end, a formal NSD process is required and particular emphasis is needed in ensuring that the service which is eventually chosen to be developed meets specific criteria and can attain the intended marketing objectives, that the NSD process is regularly and systematically reviewed and, also, that the process as a whole follows specific guidelines and/or procedures.

The involvement of the various company functions in the NSD process is also important in facilitating the achievement of the management's performance objectives. According to our findings, increased involvement is required during all stages, except that of the technical development of the service. The need for increased involvement again may be justified because of the large number of alternatives towards which the service provider may consider when contemplating the extension of an existing service line. When extending existing service lines, the company has a significant experience about the market as a whole and its own capabilities and skills. Strategic marketing objectives are also rather clear. Thus, by increasing the degree of involvement of the various functional departments in the NSD process, the company ensures that this experience, in its entirety, is incorporated in the development process and confusion regarding the most appropriate alternative is diminished.

These findings are quite significant as they demonstrate the large degree of similarity that characterizes the successful development process of new-to-the-market services with service line extensions. Although for different reasons (lack of previous experience in the case of the former, while ensuring strategic synergy of the latter), except for the increased formality that differentiates these two types of service innovations, our study shows the need to emphasize on almost the same stages of the NSD process and to increase the involvement of the various functions in almost the same phases of the process.

6.6. Service repositionings

Finally, for *Service Repositionings*, the least innovative type of the six types that our study revealed, the findings suggest that they fail to make an important contribution on the company's financial performance, in terms of both profit generation/profitability and sales/market share. Although it might be argued that the management had set unrealistic performance expectation in the first place, hence the perception of service repositionings as "financial failures", a strong correlation between actual and subjective evaluations of performance has long been established [108]. Thus, successful service repositioning would require particular attention to specific aspects of the NSD process and, unless this is done, according to the findings of the study, these efforts are doomed to financial failure.

More specifically, the success of service repositionings appears to rely heavily on the emphasis placed during the stages of business analysis and marketing strategy development and launching. Service repositionings are merely an effort to shift the market's overall perception of the company's services relatively to that of competitors. Apparently these two stages are particularly important since it is during these two stages that this perceptual shift is designed and implemented.

For the same reason, the involvement of the various functional departments does not appear to influence the success of this type of new services. Repositioning is a sheer marketing task and, as the findings of this study confirm, other functional departments have a limited participation and involvement during the development process.

An interesting finding refers to the need of maintaining a formal communication and information exchange between the various functional departments and the marketing function during the effort to develop and introduce a repositioned service in the market. Successful redesign of the marketing strategy requires that the market environment is fully comprehended, buyers' behavior is well understood and competitors' stance is clearly determined. This calls for extensive use of market intelligence, some of which is collected from the market through formal market research and some of which is collected through the company's Management Information System. Our study suggests that the latter is equally important for the success of this type of new services: although the involvement of other functional departments in the development process is not a critical factor for the success of the project, their participation to provide the market intelligence that is necessary to be considered when designing the marketing strategy is an essen-

tial ingredient of the project's success. Hence, the need for increased documentation during the development process.

7. Research contribution and implications

The study makes a contribution because the types of new services that were revealed are fairly consistent with the innovative types available in the pertinent literature. In this respect, the proposed typology validates empirically and further extends previous work in the field, especially that of Booz, Allen and Hamilton [7]. In so doing, the study "legitimises" the extensive use of their typology by researchers, providing an adaptation of this typology for new services, particularly financial services.

The study has also significant implications for practitioners as it offers them a blueprint for successful new service development. The conceptualization of the continuum of innovativeness helps disclosing the critical points of the NSD process and its structuring which, depending of the type of new service and the degree of innovativeness that characterizes it, ensures that the management's objectives regarding the performance of the new service are attained.

A second contribution for practitioners lies on the relationship between the degree of innovativeness of the new service and its performance.

With regard to financial performance, our data seem to suggest that an almost inverted U-shaped relationship exists with the degree of service innovativeness. That is, the most and the least innovative new services are relatively less successful in terms of financial performance compared to the moderately innovative types of new delivery processes and service modifications. Although this conclusion is somehow tentative, as its deeper investigation was beyond the scope of this study, it provides the management of companies in the service sector with an initial basis for achieving a match between financial performance objectives and new services development strategy.

On the other hand, the most innovative new services make the strongest contribution on non-financial performance, i.e., company image, building loyalty among existing customers, attracting new customers and so on. Again, although this conclusion is also somehow tentative, it would seem to suggest that major innovations in the financial services sector fulfill long-term objectives, which are not related with the company's immediate financial performance.

Thus, companies competing in this sector need to have a balanced service portfolio, in terms of types of innovations in order to ensure their present and future competitiveness. The appropriate mix will depend on company's resources, top-management's priorities and market opportunities.

8. Limitations and future research

Notwithstanding its importance, the present typology of newness for new financial services, undoubtedly, has its limitations.

First of all, the study has been conducted in a specific national context (i.e., Greece). Further, the study is based on a cross-sectional sample. Moreover, the moderating role on new service performance of variables exogenous to the new service development process (caused by difficulty to imitate, lack of patentability, required capital investment and so on) was not studied.

A first possible path for future research is its repetition in other geographical/cultural settings in order to explore the relationships identified in this study. Moreover, additional research is needed in order to investigate the relationships revealed in this study in samples of specific service categories. Furthermore, another research possibility is to replicate the study in different financial services sector separately (i.e., banking, insurance, money market). Also, future research could examine the main and moderating effects on new service performance in a single study. Finally, it would be extremely interesting to investigate in detail the relationships between service innovativeness, the NSD process and new service performance. In this article, several possible reasons were suggested for explaining the performance outcomes of new services with a different degree of innovativeness. Future research, which will attempt to probe the soundness of these claims, is mostly welcome and absolutely necessary before a solid body of knowledge can be produced.

Notes

1. New service success/failure factors include product advantage [16,18,27,28,30,35,36,101]; marketing support [18,27,28,29,30,16,36,37,39,101]; nature of the marketplace [27,28]; corporate environment [16, 18,27,28,29,36,39] and nature of the process [16,18, 27,28,30,35,36,38,39].
2. This procedure of purifying factors by taking away items with low factor loadings have been suggested by Churchill [11] and Peter [80] and has repeatedly been adapted by researchers in the field of new service development [*inter alia* 18,28].
3. It must be noted that, taking into account the results of both the in-depth interviews that preceded the main study and the questionnaire pre-testing, it was decided to provide separate columns for marketing, advertising/promotion and public relations since many financial institutions seemed to have in place independent organisational units for these three marketing-related activities.
4. This extensive procedure of validating a cluster analysis solution has previously been used by [4,9,10,31,105].

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Appendix A. New service development activities (items and reliability)

1. *Idea generation and screening activities (Cronbach's Alpha = 0.836)*
- Systematically collecting ideas about the service to be developed.
- Initial screening of the service idea-the first review of the venture.
- Translating the idea into a full service concept.
- Translating the service into business terms (i.e., market share, profitability, satisfaction of needs).
- Exploring the performance implications of the new service on other company service (e.g., cannibalisation)
- Exploring the business implications from the development of the service (e.g., in operating/delivery systems).

2. *Business analysis and marketing strategy activities (Cronbach's Alpha = 0.901)*
- Identifying market characteristics and trends.
- Conducting a complete market study-research of customer needs and preferences, purchase process etc.
- Analysing competitors in detail-number, power, products.
- Identifying the target-market for the service.
- Identifying «appeal» characteristics that would differentiate the service from competition.
- Developing a program for «service positioning».
- Preparing a complete marketing plan for the service—pricing, distribution, promotion.
- Assessing time, human resources, investment requirements and setting the performance objectives of the service.

3. *Technical development activities (Cronbach's Alpha = 0.824)*
- Deciding on the final service specifications.
- Determining the operating/delivery process procedures that would support the service.
- Inspecting and adjusting the operating/delivery systems that would support the service.
- Building a service «prototype».
- Executing operating tests of the service «prototype» and conducting the necessary adjustments to procedures and systems.

4. *Testing activities (Cronbach's Alpha = 0.807)*
- Executing service tests within company's personnel.
- Executing service tests within potential customers.
- Evaluating the results of service testing and conducting appropriate adjustments to the service (specifications, procedures).

5. *Launching activities (Cronbach's Alpha = 0.835)*
- Finalizing the marketing plan of the service.
- Promoting the service to frontline personnel.
- Designing service manuals for the frontline personnel.
- Organizing training seminars for the frontline personnel.
- Launching the service in the marketplace-promoting, distributing, selling.
- Receiving feedback from customers regarding the service.
- Taking «corrective actions» regarding service launching.

Appendix B. Formality dimensions—a principal components analysis

Factors	Variables	Loadings
F1: Systematic Behavior (38.4% of variation, $\alpha = 0.84$)	• The selection of the service idea was based on specific criteria and objectives.	0.599
	• Progress in service development was assessed through specific criteria that had to be met.	0.869
	• Progress in service development was regularly and systematically reviewed.	0.891
	• Service development followed a set of specific guidelines/procedures.	0.767
	• A highly skilled company personnel was involved in service development.	0.643
F2: Documentation (15.9% of variation, $\alpha = 0.68$)	• The final decision for developing the service was the result of a typical/formalized process.	0.735
	• The service development process was depicted in a written form.	0.631
	• Service development was the result of typical/formalized meetings and reports exchange between various departments in the company.	0.799
F3: Assignment of Responsibilities (12.3% of variation, $\rho = 0.63$)	• The idea for the service was generated from one department of the company (rv.).	0.795
	• Service development was the responsibility of only one department of the company (rv.).	0.772

Principal component analysis with Varimax rotation, eigenvalue ≥1.0, Cum. percent of variance explained = 66.6%, Kaiser-Meyer-Otkin measure of sampling adequacy = 0.75296, Bartlett test of sphericity = 497,98717 Significance = 0.00000

Appendix C. New service performance: a principal components analysis

	Mean	Standard Deviation	Factor 1 Financial Performance (α = 0.95) Loading	Factor 2 Non-Financial Performance (α = 0.94) Loading
• The service was profitable	3.80	1.28	0.709	
• Total sales of the service were high	3.28	1.51	0.828	
• The service had a large market share	2.95	1.46	0.766	
• The service exceeded its profit objectives	3.11	1.47	0.812	
• The service exceeded its sales objectives	3.09	1.52	0.832	
• The service exceeded its market share objectives	2.98	1.42	0.865	
• The service had a positive impact on the company's perceived image	3.89	1.28		0.806
• The service improved the loyalty of the company's existing customers	3.64	1.27		0.823
• The introduction of the service enhanced the profitability of other company products	2.92	1.20		0.709
• The service attracted a significant number of new customers to the company	3.33	1.47		0.655
• The service gave to the company an important competitive advantage	3.54	1.39		0.703
Eigenvalue			7.46	0.90
Percent of variance explained			67.8%	8.1%
Cumulative percent of variance explained			67.8%	75.9%
Kaiser-Meyer-Olkin in measure of sampling adequacy		0.91378		
Bartlett test of sphericity		1338.5170		
Significance		0.000		

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Biographical Sketches

George J. Avlonitis received his Ph.D. in Marketing from the University of Strathclyde, Scotland, where he lectured for five years. His is currently a Professor of Marketing at the Athens University of Economics and Business in Athens, Greece. His primary research, teaching and consulting activities are in the areas of product policy, industrial marketing, sales management and the application of new technologies in marketing. His academic works have appeared in various prestigious journals including *Journal of Marketing, Industrial Marketing Management, Journal of the Academy of Marketing Science, European Journal of Marketing, International Journal of Research in Marketing, Journal of Product Innovation Management, Journal of General Management,* among others.

Paulina G. Papastathopoulou received her Ph.D. in Marketing from the Department of Management Science and Marketing of the Athens University of Economics and Business in Athens, Greece. She is currently a research associate in the same university. Her research interests are in new service development, financial services marketing and marketing for non-profit organisations.

Spiros P. Gounaris is a Lecturer of Marketing at the Athens University of Business and Economics. He has published both in European and American journals, including European Journal of Marketing and Industrial Marketing Management. His current research interests focus on marketing management, marketing of services, customer satisfaction and loyalty, relationship marketing as well as on digital marketing.