Goods and services, that is, products[1]

Maurizio Rispoli - Michele Tamma

1. Introduction

The profound changes taking place in the world of production in the last quarter of (the 20th) century are putting into relief, among other things, some significant contradictions and inadequacies in the theories that have dominated economic analysis and interpretation in recent decades. This explains the efforts from various analytical perspectives currently devoted to "updating" theories that address the behavior of production organizations, based on data provided by empirical evidence and grounded in contextual and procedural approaches.

Within this context, the purpose of the present article is to dispute the separation between goods and services as a necessary starting point for any economic analysis. This separation still appears largely rooted in, and related to, the juxtaposition of *materiality* (generally associated with goods) and *immateriality* (generally associated with services).

After a brief introductory summary of the evolution of the capitalist production system within which we contextualize our discussion, we consider the principal factors at the root of the separation between goods and services, emphasizing their actual and theoretical reconciliation. The second part of the article proposes a reconsideration of the concept of product, conceived as the output of a production process of any kind and created to be exchanged between the producer and other economic agents (whether agents of production or consumption).

Using this definition with the goal of overcoming the goods/services juxtaposition definitively and adopting a new perspective concerning the phenomenon of production, we highlight, first, the cluster of characteristics that lead us to conceive of an *abstract product* as opposed to concrete products and the path necessary to shift from the former to the latter. Next, we point out the utility of the concept of product, both as a medium of interaction and a medium of distinction, in analyzing phenomena related to production.

2. The evolutionary pattern of production

Because the term "industrial" appears expressly related to machinery, facilities, and plants - that is, to the stereotype of the factory - in this paper we will use the term "productive capitalism" to refer to any kind of product or production. With this terminology, we intend to explain the intrinsically

[1] The paper was originally published in issue n. 29 September-December 1992 on "Economia delle risorse immateriali".

evolutionary reality that developed, beginning in the second half of the eighteenth century, through what some economic historians call the "first industrial revolution" [2]. Very briefly, we affirm that this reality derived from the combination of the scientific method of production and the competitive flexibility of economic structures (regulated by the market), socio-political structures (regulated by democratic debate), and scientific structures (regulated by the freedom of research). This combination accelerated over the years and has largely characterized (despite many lingering deficiencies and periods of crisis) the development of the most advanced social and economic systems[3].

The dominating characteristics of production that emerged during the first 100 years of the industrial revolution are widely known. Such production is traditionally seen as existing in opposition to artisanal production, which is usually characterized by the practical and difficult-to-replicate knowledge of the craftsman/businessman himself.

This first stage of industrialization was characterized by a production system based on knowledge that was gradually replicable; however, such knowledge was dispersed among a wide number of single factories, with machines that were neither connected to each other nor with those in other production units; they were characterized by high labor intensity and the use of rather few and still elementary technologies. Between the nineteenth and the twentieth century, a second evolutionary stage of industrialization took place. In this stage many new characteristics were added that led to a significantly different mode of production from that which had developed in the previous stage. This new stage of production was made possible by the application of a cluster of scientific discoveries in energy, chemistry, metallurgy, mechanics, foodstuffs, medicine, and others, all rapidly absorbed and operationalized by the capitalistic system[4]. Thus a new production system developed that was far more complex than its predecessor. Such complexity derived, on the one hand, from the development of interconnections between network supplies (electricity, gas, water, telegraph, telephone), transportation networks, and vertical and horizontal relations between companies resulting from the fragmentation of production cycles. On the other hand, this new complexity also derived from the increasing role of stock exchanges as regulatory structures that evolved from the traditional limited companies; by the new social status acquired by labor unions that led to the diffusion of industrial relationships; and by the emergence of the organization as a fundamental

[2] We are referring to Lazonick's approach, presented during the "2nd International Week of History and Business Studies" (Terni, October 1987). This scholar distinguishes between the first, second, and third industrial revolution.

[3] The characterization of the capitalistic production system quickly summarized in this section refers to the interpretive model that can be found in the second chapter of the book Transizione tecnologica e strategie evolutive. L'impresa industriale verso l'automazione (Di Bernardo and Rullani 1985, pp. 93-124).

[4] "There is no doubt that, during these thirty years (from the end of the nineteenth century to the beginning of the 1900s) there was a real shift in terms of the wealth of knowledge available for production; the technical landscape at the beginning of the 1900s was radically different than the one that developed after the beginning of the industrial revolution" (Saraceno, 1970, p. 15).

dimension of all decision-making and management processes developing within production companies.

A further groundbreaking change seems to have begun in very recent times, during the 1970s, with the flourishing of effects that resulted from the application of a new technical-economic paradigm[5] based on the combination of microelectronics and information and communication technologies. New communication technologies made automation flexible where it had once been rigid and made some scale economies lose their relevance. They also allowed for the diffusion of a different mode of information management, the importance of which, today, is increasingly necessary for any production activity.

With this third phase, the absolute, essentially *a priori*, separation between goods and services that guided and conditioned analysis and theoretical interpretation - and as a consequence also actual operational practices - for so long, is showing its substantial inadequacy. For many decades, during the second developmental stage of capitalism, the production system increasingly evolved toward the mass production of goods, by means of what we traditionally know as "industry", while services were generally considered as pre-industrial production, or even artisanal production. It is by now well known, however, that a number of services are obtained through methods similar to those we typically associate with industry and mass production. Some examples are widely acknowledged: automated banking services, supermarkets, automatic car washes, telematic networks, fast foods, and computerized medical analyses (Levitt, 1976; Thomas, 1978); additional examples, in our opinion, are catering, collective transportation, and hotel hospitality supplied by large companies. In all of these cases, the product relates directly to the characteristics of a standardized, mass production. Moreover, the production process of the businesses that offer these services is characterized by economies of scale, deriving from the indivisibility of production plants, and by economies of replication, made possible by standardization (Di Bernardo, 1991; Rispoli, 1992, 209).

All in all, today we can affirm that there are products - goods and services - that are obtained through production methods traditionally attributable to industrial production (even if made innovative through modern technologies); other products - goods and services - are instead obtained through methods traditionally and substantially artisanal in form[6].

[5] With this term, we consider the enormous change that occurs as a result of technological evolution, which goes beyond any single, episodic innovation, even if a radical one. Such change involves, generally and transversely, the entire production system. It can be identified as the fourth type in the taxonomy of Freeman and Perez (1987) and allows us, in our opinion, to separate the three industrial revolutions to which we refer.

[6] In our opinion, Rullani (1988) came to similar conclusions: "that which identifies the industrial mode of production and forms the basis of industrial capitalism is the use of machines and of scientific technology as the primary means by which to generate economic value. It becomes in this sense less relevant that this utility (…) is associated, or not, at the moment of sale to a physical good that is transferred by the company to the customer". Conversely, "the main trait of all activities that resist industrialization (artisanal or tertiary activities) is the impossibility of reducing them to abstract and reproducible processes that can be delegated to machines and scientific procedures", regardless of whether they are goods or services.

3. The separation of goods and services

Even after having proposed combining goods and services within the product category, we must not forget the basic elements from which the traditional theoretical separation between them originated. On closer analysis, it appears that industrial economists, business economists, and marketing scholars have concentrated their attention on at least three categories of diversity that have also informed their respective approaches:

1) some differences generally observed in the characteristics of the output (i.e., the result of the production process);
2) some differences characterizing the production/distribution processes;
3) differences in terms of the attitudes and behaviors of users, whether business producers or individual consumers.

With respect to the first point, we can refer to the differences most frequently noted by scholars investigating services: tangibility, storability, transportability, the possibility to present and show the results of production - characteristics that, while present in goods, might not be found at all in services (Berry, 1980; Cherubini, 1981; Flipo, 1989; Lejeune, 1989; Lovelock, 1983; Pivato, 1982; Sasser, 1976; Shostack, 1982).

Regarding the differences characterizing the production/distribution process, the aspects typically cited are: the simultaneity between production and utilization processes; the interaction between consumers and employees; the importance of direct, human factors in production; replicability and therefore the degree to which production can be standardized (Lovelock, 1983; Eiglier and Langeard, 1988; Vicari, 1983). All of these are present differently in the production of goods and the production of services.

Finally, with respect to users' attitudes and behaviors, scholars have generally cited the degree of subjectivity in users' valuation and the possibility for users to display status "symbols", with the former typical of services and the latter typical of goods (Cercola, 1990; Cherubini, 1981; Parasuraman *et al.*, 1985).

The differences noted above have led scholars to analyze goods and services differently, first in the use of the concept of sector and then in industrial organization studies. This approach was likely established among scholars because, if we adopt criteria to identify sectors based on output (i.e., criteria essentially related to commodity: chemical products, energy products, metallurgical, mechanical, textile products, and so forth), we end up subdividing goods into many categories while grouping all services into a single category characterized by a common element: the absence of any kind of physical or *material* characteristic that could allow us to aggregate them in subsets, as we can in the case of goods.

Similar conclusions have historically been drawn by adopting the characteristics of the production process rather than the nature of the output as criteria of classification. In the case of goods, technological progress has enormously enriched, and differentiated, the diverse technologies in "industrial" terms and the industrial sectors have consequently been identified in terms of the differences in the production processes based on diverse technologies (e.g., chemical, metallurgical, mechanical, and

textile technologies); services, however, have never been approached in terms of industrial production processes by adopting a broader concept of technology (Porter, 1985; Faccipieri, 1989). Instead, as already noted, they have been addressed in terms of artisanal production. The ultimate result of this approach was the introduction of a residual sector - neither agriculture nor industry - known as the tertiary sector.

The use of the characteristics of output and production processes with the aim to create a sectoral taxonomy has actually produced, we conclude, absolutely asymmetric outcomes with regard to, on the one hand, the goods and, on the other, the services.

Essentially, in order to describe the production of goods for the purposes of industry analysis, our goal was to focus primarily on output (i.e., product), which is easily identifiable because of its specific, material quality: *"In product-oriented businesses, the physical reality of the product provides a simple but powerful base on which to build a business description"* (Thomas, 1978, p. 156). Secondly, we introduced other elements that accompany the specific productive process, particularly the technologies employed; finally, we added other elements such as the qualitative and quantitative aspects of demand, supply markets; the specific characteristics of human resources, and other relevant elements from an economic/managerial perspective.

In the absence of the requisite of materiality (or even assuming its absence), instead, the common starting point for analyzing and describing services appears to have been the production process and the type of customer. This approach begs the following questions: first, how are services produced? Next, for what kind of users are they produced? This sequence leads directly to the identification of the tertiary "category", and then to differentiate the tertiary sector for production - defined by many authors as advanced tertiary[7] - from the tertiary sector for consumption.

In fact, there has never been a serious effort to render services and goods homologous, which would have required scholars first to address the problem of defining exactly what is produced. The problem was only superficially resolved, instead, by introducing the concept of immateriality, which, in all its vagueness and ambiguity, exhibits the traits of a "non-characteristic"(of little significance).

With the present article, we aim to draw attention precisely on the need to adopt new lenses through which to look at the phenomenon of production and, particularly, to the theoretical separation of goods and services still rooted so strongly among many business practitioners and management/economics scholars.

4. The factual and theoretical reconciliation of goods to services

In proposing a somewhat new perspective, we are aided by the changes that are taking place in this current, third evolutionary stage of productive capitalism. Novel elements are clearly emerging and are now easily identifiable. At the same time, this evolutionary stage is increasingly revealing contradictions and internal inconsistencies in traditional economic models,

[7] See Frey (1987) for a review of the debate on the topic.

as has been demonstrated by many recent contributions to topics such as the relation between goods and services, and between industrial and tertiary sectors (Crozier and Nonnann, 1992; Di Bernardo, 1991; Normann and Ramirez, 1991; Rullani, 1992; Schlesinger and Heskett, 1992).

What is currently occurring is a transferral process from the dynamics of economic reality to the dynamics of economic theory. This emerges in all those situations in which changes in the world of production trigger deep revisions of the analytical and descriptive frameworks underlying our theoretical constructs (Volpato, 1989, p. 111).

There is strong agreement today among scholars that production activities - much more clearly than in the past - present characteristics that are clearly ascribable to both the production of goods and to the production of services. However, it must also be noted that their arguments and the reasons authors cite to justify the reconciliation of the two forms of production cannot all be placed on the same level. The different contributions of scholars can be summarized and grouped around several principal themes:

a) the complementarity between the industrial and tertiary sector, which is made increasingly apparent by the evolution of economic and production systems in the most advanced countries (Costa, 1990; Di Bernardo, 1991; Vaccà, 1980)[8];
b) the evolution of production processes in manufacturing have allowed greater variety in the production of goods while attenuating the character of mass production of many goods and moving them closer to a "customized production" model (e.g., applications of microelectronics and information and communication technologies). Simultaneously, the introduction of new technologies in service production has moved it closer to the characteristics of industrial production (Levitt, 1976; Thomas, 1978; Rullani, 1992)[9];
c) the recognition that all the activities in the value chain (even those supporting production of an essentially tertiary nature) can allow for the development of sustainable competitive advantages (Quinn *et al.*, 1990; Normann and Ramirez, 1991);
d) the "degree of materiality" that can be attributed to single products. Ideally, products could be distributed along a continuum, the extremes of which could be total materiality on the one hand and total immateriality on the other (Shostack, 1982; Sasser *et al.*, 1978;

[8] Regarding the complementarity between the industrial and the tertiary sectors, it seems necessary to us to observe that it should not suggest that services are functional to the production of goods; rather, it should suggest a proper complementarity, in terms of a variable combination between the typical characteristics of the production of goods and services. We can also add that there is a need to abandon the reductionist perspective on which the vision of tertiary-as-a-sector is based. We must increasingly try to consider the production system as a "holistic reality that organizes within itself specialized functions (industrial and tertiary) to produce value as an undivided system, with joint production between different parts" (Rullani 1988, p. 22).

[9] Rullani's recent proposal appears particularly enlightening to us: "(…) new information technologies offer manufacturing the technical support that was lacking until now, in order to allow the tertiary sector to apply scientific and mechanized production techniques" (1992).

Cherubini, 1981). Note that the concept of a continuum is based on two aspects that are undoubtedly connected, but not necessarily coincident:

I. the assumption that all products are in fact packages that contain and integrate (to different extents) goods and services (and so material and immaterial elements) (e.g., Chase and Erikson, 1988; Normann, 1984; Thomas 1978);
II. the different "informational content" for simple as opposed to complex products, for which material support assumes less importance (or is not necessary at all) (Rullani, 1989; Rispoli and Tamma, 1991, pp. 19-23).

Two general considerations summarize the aspects described above:

a) today, production activities bring together process and organizational characteristics once ascribed to clearly distinct modes of production (i.e., mass production and artisanal production);
b) the results of these activities (outputs) present a multitude of characteristics because of higher complexity of packages offered by companies, making difficult to group outputs into homogeneous classes based on a single intrinsic characteristic.

Building upon these two considerations, we propose *a definitive move beyond the use of "goods" and "services" as opposing categories and as a necessary starting point for any economic and business analysis.* From this point of view, distinguishing between goods and services appears strongly misleading as soon as the relevance of the diversity factors can emerge equally clearly and with economic and managerial implications between two given goods as between a good and a service.

As an example, just think to the degree of diversity that is evident between the production of telephone services and the production of ethylene (a service and a good). Such degree of diversity could be equally relevant for the production of ethylene and the production of shoes (two goods).

Our goal is, therefore, to answer the following question. Given that the separation of products into the categories of goods and services as a starting point for economic and managerial analyses of production is neither valid, necessary, nor even useful, what other sorting criteria can be adopted - or can merely be useful - in the analyses of industries, competition, and business management?

5. The product: redefining a concept

As noted above, the current evolutionary phase of productive capitalism poses major changes in the modes of production that bring us closer to realities that were once considered very different and very far away. Overcoming the separation of goods and services in production theory in favor of other approaches and criteria with which to properly analyze industry, competition, and strategic business management is now inevitable. We maintain that it is necessary to base this new approach on the identification of a *category* (concept), which, on the one hand, should be more general than "goods" and "services" as separate categories. On the other hand, this new category should constitute a solid base on which to represent

and appreciate the variety of specific productions that the evolution of productive capitalism has generated - and continues to generate.

The basic category we are proposing is the *product* - conceived, however, as the *output of a production process* of any technological nature[10] that is first *demanded and then supplied, or first supplied and then demanded*, insofar as it can satisfy the needs of single economic agents of production and/or consumption. Consequently, in concrete terms, the product may appear as a good, as a service, or (much more likely) as something that incorporates attributes from both theoretical categories and hence is not uniquely definable using traditional terminology.

The choice of product as a "category" of economic science on which to base the analysis of heterogeneous forms of production - and of the relationships between them - also becomes appropriate because it allows us to use a body of well-known analytical and theoretical works provided by scholars and practitioners in different fields.

For example, the literature on manufacturing production, even that which focuses on tangible products (i.e., goods in the current parlance), has contributed many concepts that belong to the domain of "production theory" - that is, clearly beyond a narrow focus on specific aspects of technical and technological production. Since these concepts refer to an abstract category, they are ultimately applicable to "intangible products" (i.e., services), as well.

Likewise, marketing studies based on the concept of "satisfaction of needs" have adopted - implicitly or explicitly - a broad concept of product that is tied neither to the "*good*" nor to the "*service*" category. This statement is true particularly when we consider sociological, psychological, and other analyses, notwithstanding that the great majority of contributions in the field of marketing (generally economic and management-based) refer to goods (and especially goods intended for consumption) (Rispoli, 1992, p. 208).

In general, we can agree that in any production analysis based on an economic/managerial perspective, the reference point is usually a rather broad concept of product. This can be explained by observing that the *product* category inevitably synthesizes elements that, on the one hand, are doubtless connected and interdependent (e.g., inputs, characteristics of production processes, packaging, images, usage modes); on the other hand, they belong to different perspectives of analysis (scientific, technological, economic, social, financial, psychological, and so on).

By adopting an approach like the one we are developing in this paper, based on an abstract concept of product (i.e., economic category), we should be able to develop industry, competitive, and strategic management analyses more effectively. In this context, it appears necessary (as we will see in the next paragraph) to follow a trajectory that leads us from *the abstract product to concrete products* (items)[11] by identifying and using

[10] We are referring to the broad concept of technology that is used by Faccipieri (1989) in strategic analysis. The concept is also used by Porter as a premise in the development of the "value chain" concept (1987, pp. 43-73)

[11] We clearly refer to specific products, particular to a company and the result of a knowledge set and a production organization that is unique and unrepeatable (see Di Bernardo e Rullani 1990, pp. 123-60).

specific taxonomies. Such taxonomies should allow the definition of ever narrower and consequently more homogeneous output sets, without adopting any separation between the different kinds of production that do not express economically relevant diversities. They should also be significantly connected to the intended objects and frameworks of analysis.

From a methodological point of view, the trajectory we are following - leading from abstract categories and concepts to specific, empirically-identified items, and vice versa - resembles the logic that is generally followed in developing theoretical, descriptive and normative frameworks at the core of many managerial-economic analyses.

The concept of *abstract product* that we are adopting as a starting point to move toward *concrete products* must have dual properties and meanings:

l) product as a "medium";
2) product as a "shell".

1) The concept of product must be a medium that allows us both to link (interaction effect) and to distinguish (separation effect) two or more economic agents. The simplest case involves one producer and one user, whether an intermediate or a final user (i.e. a company or a consumer). The first aspect - *product as a medium of interaction* - is relevant for discussing the division of labor between actors along the entire value chain. The second aspect - *product as a medium of separation* - allows us to delimit, for descriptive purposes, the production activities of single organizations (businesses and enterprises) and of single individuals (labor) on the one hand, and the usage activities of, again, organizations (along the supply chain) and single individuals/households (for their consumption activities) on the other.
2) The concept of product should also be an effective "shell" for those characteristics (descriptive variables) that - even if belonging to different perspectives and categories of analysis - are necessary to identify and describe specific, concrete products (items) and to discuss the specific technical and economic issues on which the analysis is focused.

In the previous pages, we argued that within the term "product" we encompass the results of any production process (outputs), by means of any technology, that are demanded and thereby supplied or supplied and thereby demanded to satisfy the needs of single economic agents of production and/or consumption. However, such a definition might wrongly suggest, for the purposes of our analysis, that the results of any production activity, performed anywhere or by anyone, has to be included in the same category. This category would include both the activities performed by production organizations (profit and non-profit, or, in any case, any organization that produces to transfer the results of their activities to other economies) and those self-production activities that any subject-person, as an economic agent of consumption, can put in place in order to satisfy personal needs. Instead, the outputs of the production activities represented in our concept of "product" must form a category that, while still broad, nevertheless constitutes a subset of the broader category described above. It must include the outputs of all those activities that we consider relevant for the production economy in general as well as for its component parts. In a nutshell, *we define as products only those outputs that are realized for*

the purposes of being transferred (in any form) from a producer to other economic agents (whether of production or consumption), that is, outputs that will be the object of transaction[12].

It thus becomes clear how such a definition of product, in all of its generality, leads to a category that is inevitably abstract, but this is in fact what is necessary to proceed in our frame of analysis. It is therefore a concept - very different from concrete items exchanged in the real world - that has to be considered on the same logical level as many other theoretical categories of production economics, such as company, consumer, entry barrier, cost, capital, and so on. Conceived in this way, the "product" immediately evokes neither material goods nor manufactures, nor services. Rather, as previously noted, it evokes the generic outcome of a production process (output) intended for transfer/exchange. This way of conceiving a product incorporates the first of the two meanings emphasized in the previous paragraph: *the presence of a "good"(material) is not necessary to connect or distinguish a supplier from a consumer; instead, regardless of its nature, an output that is exchanged is sufficient*. Consider, for example, a collaboration agreement between companies concerning the transfer of know-how: this transfer might assume various forms, such as "lending" technical personnel, software stored on a device, a project with its related manuals, and so forth. There is surely a change in the "technical" form of the exchange - the description of which has to do with the second significance noted above (multidimensionality); however, the essence does not change: it nevertheless remains a transfer of a product (in this case, know-how).

In order to employ this concept as a platform for the analysis of real-world production, it is necessary to adopt a multidimensional approach that allows us to operationalize our second meaning. Recall that the second meaning posits that the abstract product must contain certain attributes and characteristics that, from time to time, are used with respect to first, the degree of generality and type of analysis one intends (i.e., industrial, competitive, distributional, organizational), and second, to the different, specific connotations assumed by products realized in different ways and situations, which is important to observe, again, across different analytical levels (see the "technical" form in the previous example).

6. A different way to approach product analysis

This reflection is not strictly aimed at considering concrete products - single items. Rather, it focuses on the approach required to appreciate and meaningfully analyze economic production phenomena. Such a process forces us to develop groupings and distinctions according to several different perspectives depending on the goals of the analysis, keeping in

[12] We refer to the concept of transaction, understood as the way by which the actors of the economic-production system relate to each other, with the aim of overcoming resource scarcity (characterizing the environment in which they operate) and of realizing in this way the transfer of goods and services (see Commons, 1934; Coase, 1937, Williamson 1975, 1986).

mind that "obscuring the specificity of analysis and of argumentation does not lead to generality, but rather to vagueness" (Volpato, 1989 b. XXVI).

Studies developed in different areas of research that, over time, have considered products (e.g., production, marketing, the sociology of consumption, consumer psychology, industrial economics) reveal continuous attempts to identify less and less abstract product categories and have referred instead to significant subsets of that single, all-embracing category of the product concept we proposed in the preceding pages. Beginning with specific aspects of their actual products, they look for broader categories by which to classify them in order to compare with their competitors' products on the one hand and with the needs of different segments of the market on the other.

We must also observe that these attempts, especially those aimed at market and industry analyses, have almost always implicitly assumed the validity of the *product=good* equation, in the sense that the product to which they refer is characterized by an essential materiality. Adopting different taxonomic criteria, these contributions have made us familiar with several different and opposing categories of products-goods: consumer goods and producer goods; durable and nondurable goods. Consumer goods were further divided a long time ago (Copeland 1923) into "convenience", "shopping", and "specialty" goods, in relation to the purchasing effort on the part of the consumer. They were also distinguished as goods for immediate consumption, semi durable and durable consumption, clearly using alternative criteria. Producer goods were instead classified into equipment (plants, machines, tools); basic raw materials; industrial supplies; semi-finished products; and component parts.

Rather than continuing with further classifications, we need to ask ourselves: what do these product categories represent? Are they still abstract products or homogeneous groups of actual, real products?

It appears to us that we are still operating at a level of significant abstraction, even if less abstract in relation to the concept of product that we proposed, in that the classifications adopted and noted above lead to putting actual products that are objectively different into the same category.

Actually, it is only through a process of specification that refines the description by adding a series of characteristics from different areas of analysis (e.g., engineering, process, distributive, communicational, usage and so on) that we can finally identify an actual product - that is, the one labeled with the term 'item' (for example, a "two-speed, percussion and rotation action drill for *bricoleurs*, obtained through mass production, with a power of 300W that allows for the use of multiple accessories, from the XYZ brand, available at the largest retailers and at specialty shops").

It becomes clear that it will never be possible to distinguish between and analyze items using a single feature or a single, commodity-related characteristic. Nor can the lack of this latter, commodity-related characteristic (to which scholars generally refer as immateriality) be a discriminating element, sufficient alone to develop a product theory. Rather, it simply represents a characteristic among others that must be considered within a *multidimensional* approach.

In our opinion, this is the way to study all products, and therefore also those that are traditionally called services. For these, attempts at classification have followed a particular developmental arc: the term product - and the complex concept it represents - has rarely been employed. In this context, we recall the following criteria of distinction between services[13]: degree of materiality (immateriality); degree of interaction between producer and consumer; degree of customization; importance of the human factor; manner and location of service delivery; exportability; degree of innovation[14].

On the other hand, it is worth pointing out that the reconciliation - both factual and theoretical - that we have noted between goods and services, also cited by those who have analyzed the evolution of the industrial and tertiary sectors - has introduced several analogies in the use of taxonomic criteria. This has led, for example, to the distinction between consumer services and producer services, between services to individuals and business services, between innovative services and traditional services, and between automated and unautomated services.

In proposing a new, multidimensional approach, we are following an idea that is not entirely new, even if it matured in different disciplinary contexts and in different research environments. See, as one example of many, the approach of Lancaster (1979), which considers the product as a set of characteristics.

In addition, as we have repeatedly noted, a wide set of characteristics from different analytical perspectives (industry-based, marketing, operations, logistics, etc.) is generally used when moving from abstract to actual products. These sets are related to the application of different theoretical frameworks that express distinct purposes of analysis.

If we therefore deepen the study of products by adopting a particular analytical perspective, the selection of characteristic combinations allows us to group the enormous variety of production outputs into product families. Products included in these families are still abstract, but they are also suitably recognizable and thus sufficient to analyze, understand, and explain most of the products' common features within each family.

In this way, even in the study of products, the following dichotomies can be overcome:

a) the peculiarity of the single case: when carried to its logical extreme, it allows for a precise definition of an actual product (item), with all of

[13] For a review of efforts at service classifications developed in the past, see the summary by Lovelock (1983).

[14] With respect to this characteristic, (…) it makes no sense, in our opinion, to set boundaries and distinctions between advanced services (i.e., advanced tertiary, as they are often called) and other services. Instead, it is enough to reflect on the fact that, on the one hand, such characteristics might not refer to services only but any type of output, and therefore also goods. On the other hand, any type of output can assume a more or less "advanced" characteristic, from a technological point of view (i.e., regarding production techniques, the way output is exchanged, the way the output is used; in terms of the innovation capabilities of single companies or individual consumers) (Rispoli, 1991, p. 16)

its specific characteristics, yet it prevents any kind of generalization, and therefore comparison, in economic analysis;

b) the vagueness of generic results that, as any researcher knows, prevents any kind of effective comparison[15].

The proposed goal of our work is to definitively move beyond the use of the "goods and services" dichotomy as a necessary starting point for establishing and undertaking business, economic, and industrial analyses. It must be noted that the characteristics of products most frequently cited in analytic frameworks used in such analyses can combine "old" goods and "new" services in the same sets.

The following characteristics (an indicative list that, in our opinion, is significant but not exhaustive) come from both the most recent studies that focus on the world of services and the results of traditional analyses that have accumulated over time regarding the world of goods. The clear and somehow predictable prevalence of the latter has to be noted:

- intended use/purpose,
- purchasing effort,
- combination of use (with other products),
- fashion,
- status symbol,
- seasonality,
- type of asset (current, non-current),
- frequency of purchase,
- customization,
- transportability,
- storability,
- package,
- information content,
- reproducibility/replicability,
- production conjunction,
- automation (of self service distribution),
- diffusion,
- image,
- financial contribution,
- economic contribution,
- public interest,
- usage functions (class of characters),
- commodity-related aspects (class of characters)[16].

We checked for the presence of both goods and services in product categories that can be obtained using one or more of the characteristics listed above, but we did not include our findings in these pages insofar as they might have appeared redundant, if not pedantic. It is much more

[15] "It is a matter of recomposing the separation between inductive and deductive methods, trying simultaneously to differentiate normative general and abstract knowledge to ensure its greater adherence to historically-determined situations and to interrupt the vicious cycle of single-case analysis and to move toward more general logical categories (Rispoli, 1991, p. 298).

[16] "Commodity-related characteristics" and "usage functions" are differentiated from previous categories insofar as they themselves constitute classes of n. characteristics.

relevant, in our opinion, to underscore that the listed characteristics can be used in implementing specific analyses for any kind of product (goods or services, tangible or intangible outputs). Obviously, different goals, analytic perspectives (e.g., occupational, organizational, distributive, productive-operational, strategic, etc.) and concrete contexts must be taken into consideration (studying, for example, the problems of an entire industrial sector rather than a single district, a company rather than a single line of production). Therefore, the sets of characteristics and of concepts through which products are identified and described in interpretive frameworks will be different and specific in each case.

7. Summary and conclusion

At the beginning of this article we introduced a hypothesis concerning the non-necessity of separating goods and services as a necessary starting point for any economic analysis.

Historically, this separation has strongly influenced both practice and theoretical analyses. Our hypothesis appears to be corroborated by the argumentation presented in our work.

From the profound changes that have occurred in the last twenty years in the world of production, which have put into question many descriptive-interpretive and normative perspectives, some factual evidence has emerged:

a) today, there are products - both goods and services in the general sense - that are obtained through traditionally industrial production methods, even if those methods are made innovative through technology. Other products - again, both goods and services - are instead obtained through processes that can be generally associated with artisanal production.
b) there has never been a serious effort to equate services to goods in terms of confronting the problem of precisely defining and describing the outcome of production in the case of services (as was common for goods). The problem was instead "resolved" a bit hurriedly by introducing the concept of non-materiality, which, in all its vagueness and ambiguity, seemed to exhibit the traits of a "non-characteristic";
c) the actual reconciliation between goods and services noted above corresponds to a more recent theoretical reconciliation, of which the diffusion of the concept of the "goods-services continuum" is emblematic.

On the basis of such considerations, we have developed a proposal and a hypothesis concerning several fundamental concepts that can be summarized as follows:

a) *it is necessary to adopt a logical category that, on the one hand, is more general than "goods" and "services". On the other hand, this category must become a solid basis on which to develop an identification, description, and interpretation of the variety of production results*. For us, this logical category is the product, understood as the output of any production process regardless of its technological nature, an output that is demanded and supplied, or supplied and then demanded

(i.e., exchanged) because of its ability to satisfy the needs expressed by single economic agents of production and/or consumption The concept we adopt is configured as an abstract product (category of economic science) that, in order to be employed in the analysis of economic and productive phenomena, must have a double meaning: 1) to be a medium of interaction and, at the same time, of separation; 2) to be a "shell";

b) *the product as a medium allows us to connect (interaction effect) and, at the same time, to distinguish (separation effect) two or more economic agents in the analysis of production and consumption processes;*

c) *the product as a "shell" opens the way to a trajectory that allows us to move from the abstract product towards concrete products by adopting a multidimensional approach - that* is, by identifying specific sets of attributes and characteristics (descriptive variables) that, even if belonging to diverse analytic perspectives and categories, must be used to combine specific concrete products (single items).

In conclusion, with respect to the propositions recalled above and the methodological proposals we have posited, it appears completely acceptable to us *to abandon any initial distinction between "goods" and "services" as a necessary precondition of any kind of economic-managerial analysis; and to adopt instead the concept of product as a medium* (of interaction and distinction) *to move toward applying a multidimensional approach,* as much more effective in our opinion.

References

BERRY L. (1980), "Service Marketing is Different", *Business*, n. 30, May-June, pp. 24-29.

CERCOLA R. (1990), *La gestione della qualità nell'impresa di servizi*, Cedam, Padova.

CHASE R.B., ERIKSON W.J. (1988), "The Service Factory", *Academy of management executive*, August, vol. 2, n. 3, pp. 191-196.

CHERUBINI S. (1981), *Il marketing dei servizi*, Angeli, Milano.

COASE R., (1937) "The Nature or the Firm", *Economica*, vol. 4, n. 16, pp. 386-405.

COMMONS I.R. (1934), *Institutional Economics*, University of Wisconsin Press, Madison.

COPELAND M.T. (1923), "The Relation of Consumers" Buying Habits to Marketing Methods", *Harvard Business Review*, April.

COSTA G. (1987), "Industria e terziario. L'unione fa la forza", *Mondo Economico*, n. 11.

CROZIER M., NORMANN R. (1982), *L'innovation dans les services*, Mission a l'Innovation, Paris.

DI BERNARDO B. (1991), "Dal terziario al neo-industriale", *Economia e diritto del terziario,* n. 2, pp. 271-320.

DI BERNARDO B., RULLANI E. (1985), *Transizione tecnologica e strategie evolutive. L'impresa industriale verso l'automazione*, Cedam, Padova.

DI BERNARDO B., RULLANI E. (1990), *Il management e le macchine. Teoria evolutiva dell'impresa*, Il Mulino, Bologna.

EIGLIER P., LANGEARD E., DAGEVILLE C. (1989), "La qualité des services", *Revue Française du Marketing*, n. 121, pp. 93-100.

EIGLIER P., LANGEARD E. (1987), *Servuction. Le marketing des services. Stratégie et Management*, McGraw-Hill, Paris.

EIGLIER P., LANGEARD E. (1988), *Il marketing strategico nei servizi*, McGraw-Hill, Milano.

FACCIPIERI S. (1989), "L'analisi strategica", in Rispoli M. (a cura di), *L'impresa industriale. Economia, tecnologia, management*, Il Mulino, Bologna.

FLIPO I.P. (1989), "Marketing des services: un mix d'intangible et de tangible", *Revue Française du Marketing*, n. 121, pp. 29-37.

FREEMAN C., CARLOTA P. (1986), "The Diffusion of Technical Innovations and Changes in the Techno-Economic Paradigm", *Paper presented at the Venice conference on innovation diffusion* (Venice, March 17-22).

FREY L. (1987), "Appunti in margine ad una discussione sul lavoro nel terziario avanzato", *Economia del Lavoro*, n. 1, pp. 43-48.

HARRIS N. (1989), *Service operations management*, Cassell Educational Ltd, Alden Press, Oxford.

HESKETT J.L. (1986), *Managing in the Service Economy*, Harvard Business Press.

LANCASTER K. (1979), *Variety, Equity and Efficiency*, Basil Blackwell, Oxford.

LAZONICK W. (1987), "The Social Determinants of Technological Change: Innovation and Adaptation in Three Industrial Revolutions", paper presented at the *"2nd International Week of Business History and Studies"* (Terni, Italy, October 1-4, 1987).

LEJEUNE M. (1989), "Un regarde d'ensemble sur le marketing des services", *Revue Française du Marketing*, n. 121.

LEVITT T. (1972), "Production-line approach to the service", *Harvard Business Review*, September-October.

LEVITT T. (1976), "The industrialization of service", *Harvard Business Review,* September-October.

LOVELOCK C.H. (1983), "Classifying services to gain strategic marketing insights", *Journal of Marketing*, vol. 47, Summer, pp. 9-20.

NORMANN R. (1984), *Service management, strategy and leadership in service businesses*, John Wiley & Sons, Hoboken, N.J.

NORMANN R., RAMIREZ R. (1991), A *Theory of the Offering: Toward a Neo-Industrial Business Strategy,* paper presented in Venice, May 1991.

PARASURAMAN A., ZEITHAML V.A., BERRY L. (1985), "A conceptual model of service quality and its implication for future research", *Journal of Marketing*, vol. 49, Fall, pp. 41-50.

PIVATO S. (1982), "Il marketing dei servizi", in AA. VV., *Il marketing dei servizi,* Giuffrè, Milano.

PORTER, M. (1985), *Competitive advantage : creating and sustaining superior performance,* The Free Press , Collier Macmillan Publ., London.

PRANDSTRALLER G.P. (1989), "Servizi e professioni", in Prandstraller G.P. (a cura di), *Le nuove professioni nel terziario*, Franco Angeli, Milano.

QUINN J.B., DOORLEY PAQUETTE P.C. (1990), "Technology in services: creating organizational revolutions", *Sloan Management Review*, Winter.

RISPOLI M. (1991), "Unitarietà e separazione nello studio dell'economia delle aziende di produzione", in *Continuità e rinnovamento negli studi economico-aziendali*, Clueb, Bologna, 1991.

RISPOLI M. (1991), "I servizi innovativi per le aziende di produzione", in *Servizi innovativi in provincia di Venezia, Associazione Industriali di Venezia,* July 1991.

RISPOLI M. (1992), "Il prodotto fra marketing e strategia", *Micro and Macro Marketing*, n. 2, pp. 207-224.
RISPOLI M., TAMMA M. (1991), *Le imprese alberghiere*, Cedam, Padova.
RULLANI E. (1988), "Industriale e post-industriale. I problemi sommersi della terziarizzazione", *Kybernetes*, n. 18 and n. 19.
RULLANI E. (1992), "Divisione del lavoro e reti di imprese: il governo della complessità", in Belussi, F. (a cura di), *Nuovi modelli di impresa, gerarchie organizzative e imprese rete*, Angeli, Milano.
RUSHTON AM., CARSON DJ. (1985), "The marketing of services: managing the intangibles", *European Journal of Marketing,* vol. 19, n. 3, pp. 19-40.
SARACENO P. (1970), *L'economia dei paesi industrializzati. Introduzione allo studio delle imprese,* Etas Kompas, Milano.
SASSER E.W. (1976), "Match Supply and Demand in Service Industries", *Harvard Business Review*, November-December.
SASSER E.W., OLSEN P.R., WYCKOFF D.D. (1978), *Management of Service Operations*, Alleyn & Bacon, Boston.
SHOSTACK G.L (1982), "How to design service", *European Journal of Marketing*, n. l.
SCHLESINGER L.A., HESKETT J.L (1991), "The Service-Driven Service Company" *Harvard Business Review,* September-October.
TAMMA M. (1990), "I servizi alla produzione. Un'indagine empirica tra ambiguità teoriche e concettuali", *Economia e diritto del terziario*, n. l, pp. 47-71.
THOMAS D.R.E. (1978), "Strategy is different in service business", *Harvard Business Review,* July-August.
VACCÀ S. (1980), "Un nuovo terziario per trasformare l'industrializzazione", *Economia e politica industriale*, n. 25, p. 11.
VICARI S. (1983), *Imprese di servizi e politiche di mercato. Le dimensioni del processo competitivo,* Giuffrè, Milano.
VOLPATO G. (1989a), "L'analisi di settore", in Rispoli M. (a cura di), *L'impresa industriale. Economia, tecnologia, management*, Il Mulino, Bologna.
VOLPATO G. (1989b), "Per una corretta lettura delle problematiche strategiche", introduction to the Italian edition of Hax A.C., *Alla guida del futuro*, IPSOA. Milano.
WILLIAMSON O.E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*, The Free Press, New York.
WILLIAMSON O.E. (1986), *Economy Organization*, Wheatsheaf Books, Brighton.
ZEITHAML V.A., PARASURAMAN A., BERRY L. (1990), *Delivering Quality Service: Balancing Customer Perceptions and Expectations*, The Free Press, New York.

Academic or professional position and contacts

Maurizio Rispoli
Full Professor of Industrial and Business Economics (1937-2016)
Ca' Foscari University of Venice - Italy

Michele Tamma
Associate Professor of Management
Ca' Foscari University of Venice - Italy
e-mail: tamma@unive.it

sinergie
italian journal of management

ISSN 0393-5108
DOI 10.7433/s100.2016.12
pp. 203-219

CUEIM