An Integrative Approach for Classifying Services

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ABSTRACT

The research literature on the classification of services is plentiful, but the majority of models fall short of providing a framework that allows for the generalization to all types of service firms. After reviewing the prominent research, a new model for classifying services is presented, which integrates the major research streams. The primary service design characteristics of customer contact, customization, and product-mix (intangibles and tangibles) are used for the dimensions in the new model presented. Finally, this article discusses managerial and loyalty implications, in addition to future directions for research in this area.

INTRODUCTION

The research literature on service classifications models or typologies, these terms will be used interchangeably, can be organized in two major streams: 1) those involving operations-oriented service dimensions such as customer contact, and 2) those examining marketing-oriented service dimensions such as tangibility and differentiation (Cook, Goh, and Chung 1999). For purposes of this article, the most prominent research models for classifying services are reviewed within these research streams.

As is pointed out in Becker et al. (2011) 81 classification systems for services were identified spanning from 1923 to 2011. However, comparatively, there has been a lack of interest in this area since the 1990s (Shafti et al. 2007), which makes the extensive literature review by Cook et al. (1999) still very relevant. For a more comprehensive historical perspective and review, one is directed to the following works (Cook et al. 1999, Shafti, Van Der Meer, and Williams 2007, Liu, Wang, and Lee 2008, Becker, Bottcher, and Klingner 2011).

It also should be noted that the majority of past literature reviews of service classification systems integrate works that review the classification of services with those that provide classification of service delivery processes. The difference at first may appear insignificant, but it is not. Zeithaml and Bitner (1996) (as reported in Cook et al. (1999)) defined services in succinct terms as deeds, processes, and performances. And Rowley (2006 p. 341) extended the definition of services to include e-services, defining them as “deeds, efforts or performances whose delivery is mediated by information technology. Such e-services include the service element of e-tailing, customer support, and service delivery.”

The “product” offerings within service firms may consist of tangible consumer goods and intangible services. Hence, lacking from some classification models for “services” are service firms like retail stores, since the “service” component is not perceived to be significant compared to the goods component in the process. Therefore, it is important to note that the model presented herein applies to the classification of services for all service providers, and is not limited to a classification of “services”, where the primary product is intangible.
LITERATURE REVIEW OF CLASSIFICATION MODELS FOR SERVICES

Customer contact is one of the most frequently used service design characteristics to classify services (e.g., Cook et al. 1999, Becker et al. 2011). Chase (1978, 1981, 2010) is the most prominent researcher with regard to the customer contact approach for classifying services. The Service System Design Matrix, as represented by Chase and Aquilano (1989), is shown in Figure 1.

In this matrix they used the service dimension of “degree of customer/service contact” to classify different services. The “buffered core” represents no direct customer contact, some customer contact exists in the “permeable system,” and a high degree of customer contact is present in the “reactive system.” They argued that sales opportunity was higher for high contact services, but that production efficiency was lower. They stated that the opposite was true for services with a low degree of customer contact (buffered core). Mersha (1990) broadened the definition of customer contact and developed a matrix differentiating between active and passive customer contact for services.

Degree of Customer/Server Contact

![Service-System Design Matrix](image)

Kellog and Chase (1995) further defined the “customer contact” construct as being measured by communication time, information richness, and the level of intimacy. However, a primary shortcoming of all customer contact models, relying solely on this dimension, is that they fail to differentiate services based on other service dimensions. In addition, the customer contact model in Chase and Aquilano (1989) implies a correlation between the degree of customization, degree of direct customer contact and sales...
opportunity. Therefore, the targeted online services of firms such as Amazon or Land’s End are not captured within such a classification model; although Chase (2010) notes the importance of virtual or “technology enhanced customer contact” in discussing the future development of the contact theory for service classifications.

Schmenner (1986) questioned the usefulness of the earlier customer contact model developed by Chase to adequately classify service systems, and expanded the work of Chase to include the service dimensions of “degree of interaction and customization” and “degree of labor intensity”. The resulting Service Process Matrix (Schmenner 1986) is shown in Figure 2. While Schmenner’s model adds more service design dimensions and provides for a more concrete categorization of services similar to that used for manufacturing (e.g., job shop, batch, assembly line, continuous), it is not without its critics and flaws. Primary criticisms, even acknowledged by Schmenner (2004) himself, are that the degree of interaction and customization do not always move in the same direction and some service organizations do not fall neatly into a given cell.

Degree of Interaction and Customization

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Degree</td>
<td>Service factory</td>
</tr>
<tr>
<td>Labor</td>
<td>• Airlines</td>
</tr>
<tr>
<td>Intensity</td>
<td>• Trucking</td>
</tr>
<tr>
<td>Low</td>
<td>• Hotels</td>
</tr>
<tr>
<td></td>
<td>• Resorts&amp;Recreation</td>
</tr>
<tr>
<td>High Degree</td>
<td>Mass service</td>
</tr>
<tr>
<td>Labor</td>
<td>• Retailing</td>
</tr>
<tr>
<td>Intensity</td>
<td>• Wholesaling</td>
</tr>
<tr>
<td>High</td>
<td>• Schools</td>
</tr>
<tr>
<td></td>
<td>• Retail Aspects of Commercial Banking</td>
</tr>
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</table>

Figure 2: The Service Process Matrix (Schmenner 1986)

Schmenner (2004) tried to address these criticisms by redefining the dimensions used as degree of variation and relative throughput time, but maintaining the same cell names for types of services. However, this model did not address issues related to the product-mix (intangibles and tangibles) within the product offering. And as noted, “intangibility” is continually cited as one of the key service dimensions discussed in the literature (Cook et al. 1999).

Similar to Schmenner, Silvestro, Fitzgerald, and Voss (1992) proposed a classification system including the service design dimensions of contact time and customization (among others), resulting in three service classifications: professional services, service shop and mass services. And Dotchin and Oakland (1994) proposed a fifth category in addition to the ones used by Schmenner. They defined this category as personal services, since these services are directed towards people.

Collier and Meyer (1998) also developed a Service Positioning Matrix that was somewhat analogous to Hayes and Wheelwright’s (1979) product-process matrix for manufacturing organizations. And like Schmenner, the service design dimension of customization was emphasized within their approach. They used two dimensions, which looked at the uniqueness of the service (unique to highly repetitive) and the number of pathways built into the service system design (limited to many). In doing so, they defined three basic service designs: customer-routed (greatest degree of customization), co-routed
and provider-routed (greatest standardization). These service designs tended to fall in a diagonal from unique and many customer pathways to highly repeatable and limited customer pathways, as analogous to the product-process matrix, where the categories ranged from projects and job shops to continuous processes.

Their model is helpful for looking at the variability and control aspects within the service process, and provides a more tailored framework for services than the product-process matrix used for manufacturing. However, it does not account for the nature of the process in terms of product mix (tangibles and intangibles), or actual customer contact, which may highly affect the degree of customization necessary within the service delivery process. The degree of customization was also a key service dimension used by Zemgulie (2009), along with the intangibility of the service in their model for classifying services for purposes of productivity measurement.

As stated by Chase (1981) and mentioned more than two decades later by Lovelock and Gummesson (2004), a common area focused on, especially by marketing specialists, is the classification of services into tangible and intangible components. Lovelock (1983) is considered one of the most influential researchers in developing a comprehensive scheme for services up to 1986 (Bowen 1986). Intangibility of the service was a primary service dimension stressed by Lovelock (1983) in his classification models for services. Intangibility of services is another term that has been used to group research studies in this area together, and it has been noted as one of the primary dimensions used in the literature to classify services (Cook et al. 1999). However, upon closer examination of these studies, the meaning of “intangibility” as it is defined and operationalized in these studies can be very different. For example, Lovelock (1983) defines intangibility with regard to actions, not product offerings.

Lovelock (1983) defined “tangible actions” as services aimed at people’s physical body (e.g., healthcare) or property (e.g., cleaning), and “intangible actions” were defined as services aimed at people’s minds (e.g., education) and services aimed at information (e.g., legal). In doing so, Lovelock used a 2X2 classification of services, which included the nature of the service act (tangible or intangible) and direct recipient of the service (people or property). Nowhere in Lovelock’s (1983) or Bowen’s (1986) models (extended Lovelock’s work) exists examples of service organizations that primarily offer tangible consumer goods (e.g., retailing). Bowen (1986) provided a classification system for services where the selected services were in health services (hospital stay, medical center), entertainment (movie theater, visit to a theme park), photographic (consumer film processing), food service (cafeteria, full service restaurant, fast food meal) and lodging (budget hotel, full service hotel).

Other classification systems used the service dimension of intangibility to refer to the nature of the product-mix offered, from pure service (intangible) to including a goods (tangible) component. (e.g., Cunningham, Young, Ulaga, and Lee 2004). In the empirical study by Cunningham et al. (2004) comparing consumer views of service classifications in the USA and France they found that 78 to 82 percent of the total variance in service perceptions and classifications was explained by two service dimensions: degree of tangibility (physical product component) and the degree of customer-employee contact. The degree of contact relates to the personalization of the service; however, there are services that can be customized where the degree of customization is not correlated with the degree of direct contact with the service provider (for example, in the case of some e-businesses).

In summary, emerging from the research literature are three primary service design dimensions that when taken together can be used to provide a robust classification model for services. The three service dimensions used in the new classification model, which is presented in the next section, are degree of customer contact, degree of customization, and degree of tangibility of the product offering.
A NEW CLASSIFICATION MODEL FOR SERVICE FIRMS

The model presented here for classifying services for service providers is called the Service Classification Matrix, and is shown in Figure 3. The Service Classification Matrix integrates the service dimensions used within the classification schemes of Chase and Aquilano (1989) and Schmenner (1986), in addition to the service dimension of product-mix, specifically referring to the degree of intangibility/tangibility of the product offering (Cunningham et al. 2004).

In terms of customer contact, “None to Low” in this Matrix represents either no direct contact with the customer, or contact primarily limited to mail or online, which may include “live chats” with customers, or even an occasional phone call (though typically absent) for assistance. Services with “Moderate” customer contact represent ones where there is phone or limited face-to-face contact with the customer. The area of “High” contact services defines services with a significant amount of customer-server face-to-face contact.

### Degree of Customer Contact

<table>
<thead>
<tr>
<th>None to Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>With Tangibles</td>
<td>1 Amazon, Land’s End, L.L. Bean</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>2 Expedia, Turbo Tax, Online Banking</td>
</tr>
<tr>
<td>Low</td>
<td>With Tangibles</td>
<td>3 ATM, Online Retailers, “transparent customization”</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>4 Morningstar, University of Phoenix Online MBA, Automatic Car Wash</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>None to Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>With Tangibles</td>
<td>5 Auto Repair, Nice Restaurants</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>6 Support Call Centers, Personal Banking, Insurance Agents</td>
</tr>
<tr>
<td>Low</td>
<td>With Tangibles</td>
<td>7 Super Markets, Wal-Mart, Fast Food Restaurants</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>8 Theme Parks, Airlines, Hotels, Movie Theaters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>None to Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>With Tangibles</td>
<td>9 Cardiac Surgeons, Orthopedic Surgeons, Catering</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>10 Doctors, Tax Accountants, Hair Stylists, Lawyers, Architects, Financial Advisors</td>
</tr>
<tr>
<td>Low</td>
<td>With Tangibles</td>
<td>11 Specialty Shops</td>
</tr>
<tr>
<td></td>
<td>Without Tangibles (or complimentary)</td>
<td>12 Education, Massage Shops</td>
</tr>
</tbody>
</table>

The dimension of customization represents the degree to which the service is customized for the customer (Schmenner 1986). In this matrix, “high” customization represents a primary emphasis on customization, including personalization and customization of the services provided through the included product offerings. However, firms may fall in a range on this service dimension; therefore, the degree to which the service is customized may range from high to total customization within this area in the Service Classification Matrix. Likewise, low customization represents a lack of, or very little, customization in the service provider’s service or goods offerings.

Finally, tangibles represent physical consumer goods, so this dimension differentiates between services where tangible product offerings exist and are ordinarily included as part of the service, and those services that have product offerings which are primarily intangible (e.g., any tangibles are considered complimentary to the primary service). Examples of services found in each cell are discussed below.
Cell 1. None to Low Customer Contact, High Customization, Tangibles

Organizations whose service offerings fall into this category include online retailers like Amazon, Land’s End and L.L. Bean. These retailers make extensive use of “transparent customization” (Meredith and Shaffer 2010), whereby product offerings, suggestions and purchase history are customized for every customer. There are also an increasing number of online e-businesses that offer real-time help (e.g., through live chats), to assist customers in making a purchase decision.

Cell 2. None to Low Customer Contact, High Customization, w/o Tangibles

Similar to the category above, the internet and advances in technology have made it possible for e-businesses like Expedia and Turbo Tax to customize product offerings for different individual needs and situations, but in an online service environment.

Cell 3. None to Low Customer Contact, Low Customization, Tangibles

Examples here would include banks’ ATMs and online retailers who do not use sophisticated software that helps to customize the buying experience. While efficiency is very high, these types of services lack personalization that makes any type of emotional bond with a customer possible. However, for companies that utilize these types of services as ancillary to other services they offer, they can help to create higher customer satisfaction with the service organization while improving the efficiency of operations.

Cell 4. None to Low Customer Contact, Low Customization, w/o Tangibles

The services in this cell are similar to the ones above, except that the “product” offering is intangible (or mostly so), and usually involves the dissemination of some type of information (e.g., Morningstar). And given the proliferation of e-services offered through the internet (e.g., see Pearson 2012), this is another area that is expected to grow in the future.

Cell 5. Moderate Customer Contact, High Customization, Tangibles

These types of services involve some contact with the customer (e.g., phone and/or face-to-face contact), but customer contact is not as significant a part of the service process as for services with “high” customer contact and interaction. In addition, while customization does exist, the customization present may not be to the degree of being “totally customized” as is typical for many “high” contact services. Examples here include auto repair shops that install new breaks on your car, or a nice restaurant. In these cases, the typical output of the service includes a tangible product (e.g., brakes or food); therefore, customer satisfaction is not only based on the level of service experienced, but also the quality of the tangibles.

Cell 6. Moderate Customer Contact, High Customization, w/o Tangibles

Here, as in the previous case, there is a moderate degree of contact with the service provider, but the product is primarily intangible. Some call centers that specialize in customer support and insurance agents would be examples falling into this category. For example, insurance agents may offer customers some degree of choice and flexibility for different insurance policies, but the degree of customization offered is often limited to the types of policies carried, and also does not reach the threshold for the characteristics pertaining to totally customized product offerings found for some high customer contact services.
Cell 7. Moderate Customer Contact, Low Customization, Tangibles

Many large retailers such as Wal-Mart and Costco fall into this cell. The tangible product offerings are mostly commodity-like products, and the selection and price of offerings are stressed. While there are some supporting services (e.g., sales help) these are often limited in nature and scope. Another category of service firms falling into this category would be fast food (e.g., McDonald’s). The choice of product offerings is limited, and while there is contact with the employees of the service organization, it is limited to the transaction process, and little customization of the service is present.

Cell 8. Moderate Customer Contact, Low Customization, w/o Tangibles

Organizations falling in this cell are primarily offering an intangible product or experience, and include companies like Disney. Tangible products, such as the gift shop at Disney World are ancillary and complementary to the core mission, which is to create a lasting impression (the wow factor), for everyone who visits their theme parks. It should be noted that not all service organizations that fall into this category have the same competitive strategy. A budget hotel (e.g., Motel 6), or even moderate one (e.g., Holiday Inn) is going to have rather low customization, and compete more on cost, rather than attempt to create a “wow” experience”.

Cell 9. High Customer Contact, High Customization, Tangibles

Organizations in this cell offer services that are highly customized to one’s individual needs. In order to understand customer needs, these services usually require a high degree of customer contact. Examples here include surgeons installing pacemakers or artificial hips, and catering services (e.g., wedding reception). It is important to note that for services falling into this category the resulting tangible product is the core output of the service.

Cell 10. High Customer Contact, High Customization, w/o Tangibles

The service firms falling into this cell also offer services that are highly customized with high customer contact, but the primary (or only) service offering is intangible. Examples here include organizations offering personal services such as hairstylists, tax accountants, lawyers, and architects. Schmenner (1986) would have considered cells 9 and 10 here both to be included under professional services. An even finer distinction can be made among services falling in cells 9 and 10, this being, among personal services (to one’s person, e.g., hairstylist), and other professional services (primarily dealing with things), rather than the person (e.g., architect). In fact, this very distinction was suggested by Lovelock (1983) and Dotchin and Oakland (1994).

Cell 11. High Customer Contact, Low Customization, Tangibles

Services in this cell include small specialty shops, like bakeries, where customer contact is high, through offering samples, and packing of the products, but the service provided is standard. An example would be Great Harvest Bread.

Cells 12. High Customer Contact, Low Customization, w/o Tangibles

Example of services in this category includes educational institutions where teacher-student interactions are high, but course contents are not customized for students. Another example would be massage shops in the airports or shopping malls that offer shoulder and neck massage to tired shoppers or travellers. In these facilities there is a high degree of customer-sever contact, with no, or very little, customization.
CONTRIBUTIONS AND IMPLICATIONS OF THE MODEL

A major contribution of this model is its treatment of online services that typically have little or no customer contact. Many brick and mortar businesses (e.g., banks, retailers, travel agencies and CPA firms) are increasingly offering their services online. In addition, more and more organizations offer services exclusively online. Examples include Amazon, and University of Phoenix, which now competes for MBA students who traditionally would have entered an educational institution offering an on-campus MBA program. In a recent book by Pearson (2012), he reports that 65% of service transactions are expected to take place online [in 2012].

The Service Classification Matrix allows for the classification and examination of e-services along the dimensions of customization and product mix (e.g., online organizations in cells 1-4). It used to be thought that in order to have efficiency of operations one had to forgo flexibility and customization of the product offering, and therefore e-services were classified as offering standardized services. However, today, e-businesses such as online retailers (or e-tailers) can have customized service offerings without the need for face-to-face contact, and without sacrificing efficiency of operations. Examples include companies like Amazon and L.L. Bean; both companies operate within an online business environment, yet both offer online assistance in order to better customize the buying experience. Amazon’s customers regularly receive email notices based on their search history. And, while searching, they also receive recommendations about different competing or complementary products. A service that Amazon offers, which parallels the services of some full service retailers with skilled employees, is product review and customer ratings along with detailed description of products.

Another advantage of this model compared to other classification models is that it can be used to easily classify different firms and industries, such as banks and restaurants, as well as different processes within the same organization, such as ATM, mortgage department, and online banking processes within a bank. These processes fit in different cells in the model. This is especially important in today’s highly competitive markets, since many organizations attempt to be as efficient as possible while still maintaining their responsiveness to customer needs and their ability to customize their service. For instance, this requires designing different processes within banks with a focus on different strategic advantages; making some of their processes as efficient as possible (ATM) while other processes as customized as possible (financial advice). When multiple services are offered by the same company, the customer may decide to “bundle” their service needs, and rely on the same company for these needs. Many organizations from insurance companies (e.g., bundling of car, house, life policies) and cable companies (internet, phone, TV) employ this type of strategy. Switching costs (e.g., investment in time, effort and emotion) become higher the more bundled services one has with an organization.

Another important trend is the increased focus on creating memorable customer experiences. For some organizations, the experience created determines customer satisfaction and loyalty (e.g., Disney, cell 8). However, in certain cases it is hard to know which is more important, the “experience” (intangibles as in cell 8) or the tangibles (cell 7). Take for instance a company like Starbucks, they combine a tangible product (as vanilla as coffee!) with an experience. So what are they really selling? Some would argue that first and foremost, it is an experience, and coffee is an ancillary tangible product. As stated by Voss, Roth and Chase (2008) Starbucks exemplifies companies that create “experience-enhanced” products and services. So where does Starbucks fit in this matrix, do they fit in cell 7 with tangibles, or cell 8 with tangibles being complimentary (and almost secondary) to the experience? Therefore, organizations can potentially move from one cell to another in this matrix when the tangible
product becomes complimentary to the experience created, thus having strong implications for an organization’s competitive strategy.

Service provider loyalty is the Holy Grail for service organizations, and those that have product offerings, which are differentiated from their competitors (cells in top half of the Service Classification Matrix in Figure 3), may benefit by having repeat customers. Customization has been identified as a “relationship-building strategy” and “product uniqueness” has been discussed as a strategy to attract and create high product involvement in consumers (Martin 1998). Product involvement refers to the perceived personal relevance of a product category, and involves an ongoing commitment of a consumer with regard to their thoughts, feelings and behavior to a product category (e.g., see Quester and Lim 2003; Suh and Yi 2006). Salegna and Fazel (2011) also developed a matrix for examining the degree of product involvement and degree of product customization across different service offerings.

Over time, increased customer contact with an organization (and employees within), combined with a highly customized service design (cells 5, 6, 9 and 10), may lead to the development of service provider loyalty. For example, an insurance agent (cell 6) or tax accounting firm (cell 10) may acquire customers through their personalized service and/or differentiated service and product offerings, resulting in high brand image. Same may be true for insurance or auto repair companies falling in cells 5 and 6, respectively, if their product offerings are uniquely differentiated from their competitors. In these situations, brand image is also important in creating differentiation and the perception of high value.

The classification scheme presented here allows for analysis of determinants of competitiveness and customer loyalty for each cell in the matrix, based on the degree of customization, customer contact, and inclusion of tangibles in the service package. As noted, some organizations, like McDonalds and Wal-Mart who offer tangible and standardized services, compete more on cost and efficiency, while other organizations like Disney and Starbucks, compete more on creating memorable experiences. Therefore, competitive strategy is intricately linked to determinants of customer satisfaction and loyalty.

CONCLUSION

The service classification research is reviewed, and a new model is presented to classify services. This new model, the Service Classification Matrix, is based on integrating the primary service design characteristics of degree of customer contact, customization, and tangibility/intangibility of the service package. Unlike previous models for classifying service firms (e.g., customer contact model or those based on utilizing two service dimensions in a 2x2 matrix), the Service Classification Matrix can be generalized to all types of service organizations as well as different operations within the same organization (e.g., online banking, personal banking, and financial planning services offered by a bank). It also provides for classifying e-services, a continually growing and important part of the service sector that has been traditionally looked at as low contact and standardized.

This model also provides a framework for examining marketing issues within the different service classifications by integrating a marketing-oriented dimension such as product-mix (tangible/intangible) with operations-oriented dimensions (customer contact and customization). For example, future research could examine the influence and relevance of the loyalty components (e.g., product, brand, personal and service provider) for different service classifications, and how customers would be expected to respond to different loyalty incentives implemented by an organization. Studies integrating effective customer loyalty programs (e.g., incorporating rewards) within different service classifications are lacking in the literature, and this is another area that warrants more attention.
REFERENCES


