

The Potential for Mass Service Delivery In the Modern Economy

Introduction

“[P]roducts produced in the factory are generally more uniform in features and quality than the services produced...or delivered in the field. One cannot as easily control one's agents or their performance out there in the field. Besides, different customers want different things. The result is that service and service industries, in comparison with manufacturing industries, are widely and correctly viewed as being primitive, sluggish, and inefficient.”¹

This was how Ted Levitt summarized the American service sector in 1972. And now, more than thirty years later, service firms are increasingly looking to the manufacturing sector's mass production techniques to increase their own productivity and profitability.

Henry Ford described mass production as “the modern method by which great quantities of a standardized commodity are manufactured...[It] is the focusing upon a manufacturing project of the principles of power, accuracy, economy, system, continuity, speed, and repetition.”² In a mass production facility, “the recurrent mental load is shifted from men in production to men in designing.”³ Service firms are beginning to change the designs of their operations to take advantage of some of the benefits offered by mass production methodology through what I term “mass service delivery.”

This paper identifies the factors that are currently driving firms toward mass delivery of service. Then, it takes a stab at describing what mass delivery of service looks like, the characteristics that set it apart from traditional thinking about service delivery. Next, it lays out a framework of important considerations in evaluating the mass service potential of a given firm. Finally, as an example, this framework is applied to a category of service firms to predict how well suited that type is for mass service delivery.

What Is Driving Mass Service Delivery?

There is no doubt that services now account for a large and increasing share of economic production across industries. Indeed, many firms are deriving an increasing percentage of revenue from services as opposed to products. However, these same firms are seeing some of the limitations of building a business around services. Just as mass production arose in response

1 Levitt (1972)

2 Ford (1998)

3 Ibid.

to the limits of traditional manufacturing, four business needs are now driving firms to look towards mass service delivery.

First, as with many other areas, firms are facing an imperative to lower the costs of service delivery. There is increasing competition amongst service providers as advances in information technology make it easier to setup or improve back stage operations. More importantly, though, profit margins on many service activities in the last ten years have not improved at the same rate as products. This can drag down firms' profitability projections and, ultimately, stock prices.⁴

The next factor leading to mass service delivery is a need for increased capacity. Because services are co-produced with the customer at the time of delivery, they cannot be stored in inventory. This perishability leaves most service providers ill equipped to deal with fluctuations in demand. In addition, the people-intensive nature of most service delivery prevents it from scaling as well as product manufacturing.

Firms are also struggling to achieve standardized quality as they try to scale service operations across more employees in more places. Service quality is affected by employee performance and training as well as customer participation. These inputs can vary widely for each employee, each customer, and even each interaction. Ensuring consistent quality has often meant hiring more expensive front stage employees, but this is changing as services get commoditized and outsourced.

Finally, changing customer expectations are enabling a transition to mass delivery of services. People are simply getting used to less personalized, more standardized services. Examples include bank ATMs, and e-commerce websites. These services are often technology mediated and can, in fact, benefit customers with added convenience.

What Does Mass Service Look Like?

In response to these factors, service providers are borrowing principles and techniques from the world of mass manufacturing. Levitt calls the result a “production-line approach” and focuses on cost and efficiency. In response to critics, later commentators expand this approach to incorporate the flexibility of “lean manufacturing.”⁵ While some aspects of mass production translate easily to the service sector, others have to be reinvented. Thus, mass service is marked by four main characteristics: limited and standardized offerings, division of labor, increased use of technology, and reduced employee autonomy.⁶

To provide consistent quality and reduce costs, firms offer a limited menu of standardized services. Standardized offerings lead to more consistent quality because standard processes can

4 Wood (2006)

5 See, for example, Bowen and Youngdahl (1998)

6 These characteristics are adapted from Bowen and Youngdahl (1998), Levitt (1972), and Ford (1998)

be easily followed by workers and defects can be easily identified.⁷ By limiting the variety of customer requests that have to be serviced, firms can often reduce their back stage complexity and simplify their inventory of raw materials and tools. Employees can make do with less training and those in the front stage, in particular, can be paid less because their jobs require less skilled improvisation.

Another mass service characteristic adopted directly from mass production is division of labor. This is especially appropriate in the back stage. Once a service delivery process is standardized, it can be broken into routine tasks and divided amongst the most efficient and specialized employees. In this way, firms can hope to improve productivity and lower costs. Front stage employees cannot as easily be divided, however, since customers usually want to interact with a single person for their whole service experience. Here, service firms can hope to achieve economies of scope by training front stage employees to handle a variety of interactions, but still save on costs by shifting much of the work to the back stage.

Technology also plays an important role in the delivery of mass service. It can replace or assist employees in the back stage to increase efficiency and quality. It can also transform the front stage to accommodate self service, lowering costs and enforcing the standardization of customer requests. Self-service technologies can be plugged into primary services, like web-based financial management for bank customers, or ancillary ones, like email scheduling of a car maintenance appointment.

While the previous characteristics are similar to mass production manufacturing, mass service delivery must pay particular attention to front stage employees. As firms take advantage of lower paid and less trained employees to deliver services and as they expand the number and diversity of employees delivering those services, it becomes difficult maintain quality standards. One way to accomplish this is by limiting their autonomy to respond to customers. Call center workers who carefully follow scripts and business consultants who simply apply approved methodologies are moving in this direction.

How to Evaluate Mass Service Potential?

Of course, not all service firms will be able to adapt to these characteristics. Mass service delivery is not a good fit for every provider. It may not make sense for a particular business model or organizational structure. Based on the drivers and characteristics discussed above, I have identified six important dimensions that a firm should consider in evaluating the appropriateness of a move to mass service delivery.

Diversity and novelty of customer requests. Firms that already have a small number of services or where a few services account for the majority of requests are better positioned to adopt mass service principles. If customers can be discouraged or prevented from requesting

⁷ For more on standardized processes and quality control in services, see Davenport (2005)

novel or customized services, employees need less autonomy to improvise. Once the relevant services are identified, they can be documented and routinized. This allows back stage operations to be optimized in production-line fashion. Firms can also implement standard scripts for their routine processes that can be refined and quality controlled. These routines also make it easier to implement self-service technology in the front stage.

An example is the “lube and oil change” center that takes advantage of its limited car maintenance menu to provide services faster and cheaper than full service garages. If a firm is geared towards customization work, however, it may have more difficulty standardizing on processes and reaping the benefits of mass service.

Divisibility of delivery steps. Standardized service patterns may be divisible into smaller tasks. These can be executed by different employees who have developed the necessary specialized skills. Firms that create this kind of service assembly line, whether for physical or informational inputs, are better able to deliver mass service. However, this productivity comes at the cost of flexibility.

A tax preparation company, for instance, can benefit from hiring specialized employees to perform each step of a tax filing – from collecting customer information, to analyzing tax options, to the final filing of paperwork. Costs can be reduced as some steps are outsourced and productivity increased through the application of information technology. Personal attention to customers need not suffer because well trained front stage staff are part of the process. But that company will be ill equipped to adjust to changes in regulations, technology, or market demand. Accommodating a new electronic filing system or a spike in the popularity of stock options will require a significant redesign of at least one tightly integrated step.

Modularity of service offerings. One way to avoid the flexibility problems associated with standardization and divided labor is to design service offerings into modules that customers can mix and match. In manufacturing, this “mass customization” approach “gives customers what they want, when they want it, and at a cost comparable to that of mass produced goods.”⁸ Managing this flexibility requires a discussion of organization skills that is outside the scope of this paper. Nonetheless, if a firm can conceive of the standard services it provides in a modular way and organize the back stages for those modules into independent service assembly lines, it can offer customers more variety and an approximation of customization without sacrificing the productivity and cost improvements described above.

A current real world example of this comes from the telecommunications industry where cable and phone operators are offering television, telephone, and internet services. They would prefer that customers subscribe to them all as a bundle, but each is a separate module in the front and back stages.

8 From Peters, L. and H. Saidin (2000)

Availability of appropriate technology. Technology was a cornerstone of Ford's mass production revolution, allowing for the replacement of skilled labor and increasing efficiency throughout the process. Integrating technology into service delivery is key to cost-effective scalability. In the back stage, this often translates to automating routine tasks and hiring lower skilled employees. In the front stage, information technology can be used to provide more flexibility in response to customer requests and enable greater self service.

Southwest airlines makes good use of front-stage information technology. Agents in call centers and at gates have real-time access to flight information in case of last minute changes. The airline has also implemented a number of self-service technologies like flight check in from home. A particularly interesting example is the “Ding” computer application that notifies customers of limited time discount offers by playing a recognizable sound.⁹ This interaction creates an engaging experience around searching for and purchasing airfare in a front stage that has largely shifted to self-service.

Potential for self-service. By their nature, services are co-produced with the customer. If a firm can substitute self-service for some employee interactions, it can dramatically lower costs.¹⁰ Most self-service opportunities are mediated by information technology. As a result, it is easier to implement self-service in information-intensive services like job searching than, say, car repair. Still, the potential for any self-service depends on the ability to educate customers well enough about the subject and tools. Furthermore, increasing exposure to technology and satisfactory experiences are leading to greater customer acceptance of the impersonal and standardized nature of self-service.¹¹

Very complex or critical services, like legal or emergency health care are best left to professionals because the likelihood or consequence of self-service failure is too high to tolerate. Even services like architecture are unlikely to migrate to self-service because the effort required to educate customers about architectural principles and CAD tools is not justified by cost savings on the provider's side. Software-as-a-service firms like Salesforce.com are changing the equation by introducing very simple tools that help non-expert customers create their own programs and customized applications.¹² And at the far end of the spectrum, ATMs provide self-service for banking services that are simple and well understood by customers.

Customer price sensitivity. One significant reason that firms transition to mass service delivery is to lower prices in response to competition without sacrificing profit or quality standards.¹³ Services have not traditionally been thought of as commodities, but adopting a mass production

9 See <http://www.smartertravel.com/travel-advice/Southwest-Ding-fares-Worth.html?id=13918> and <http://www.southwest.com/ding/> for more on the Southwest Airlines “Ding” program

10 Rich (2004)

11 Edwards (2005)

12 See http://www.infoworld.com/article/06/01/13/73922_HNsalesforceappexchange_1.html for more on Salesforce.com tools like appexchange.

13 Bowen and Youngdahl (1998)

approach to services requires a desire to compete in a commodity market. This is an important decision with far-reaching organization consequences.

If a cost-leadership strategy does not fit with a company's business model – imagine a luxury hotel – it may not want to pursue mass service. If, however, a firm's customer base is sensitive primarily to price and there is strong competition, adopting mass service may be a good option. A car rental agency might fit well into this second category and try to transform itself to reflect the mass service characteristics identified above.

Applying the Framework

There are a number of different ways to categorize service firms. These include firms that deliver producer services, personal services, distributed services, and non-marketed services. In addition, there are people business and knowledge businesses, as well as firms that provide services in support of products. There is a distinction between support service firms and professional services firms, as well as between those that deal in bits and those that deal in atoms.

As an example, the mass service potential framework described above can be applied to the category of people businesses. A people business has high overall employee costs, especially as compared to capital costs, and limited spending on future revenue generation activities, like R&D. These businesses “span industries ranging from IT consulting to facilities management, from insurance brokering to telecommunications services.”¹⁴ So, as a class, how well suited for mass service deliver are people businesses likely to be? While there are likely to be significant differences between different people businesses, these high level characteristics will let us draw a first approximation.

The first point in the framework is to assess the diversity and novelty of customer requests. The high ratio of employee costs to capital costs indicates that people businesses need flexibility to deal with a variety of customer requests or that similar requests can require different procedures to complete. It is unlikely that this diversity of needs can be boiled down to a few routine patterns for easy back stage optimization.

Divisibility of delivery steps is the second point to investigate. People businesses will likely be able to divide their service delivery processes into functional steps that can be performed by specialized employees. There is likely to be a problem analysis stage at the beginning of a service interaction, then a set of transformational steps depending on the analysis, a quality control function, and a follow up after delivery. The transformational function is interesting because of the potential to employ reconfigurable teams of specialists to fit any particular need.¹⁵

14 From Barber and Strack (2005)

15 This type of “lean” production-line method in service is discussed further in Bowen and Youngdahl (1998)

Can service offerings be divided into modules that can be combined into tailored solutions for customers? This is not a great strength of people businesses, but there is some possibility. A menu of services is easier to create when firms have a few routine patterns. Further, while the lack of R&D makes it unlikely that these firms will be regularly rolling out new services, the high intensity nature of their interactions means they potentially have a lot of information about customer needs and frustrations. Some creativity can turn this insight into a suite of smaller services that better fit their customers.

The next consideration is about technology. Because this type of firm employs and relies on people to perform its important service functions, it will be difficult to replace them with technology without moving to a different category entirely. Yet, some technology may be appropriate for improving efficiency. Knowledge management systems, for example, seem like a good fit for the back stage. They can enable employees to share solutions that worked for a particular situation, document some of the tacit and organization knowledge, and better coordinate those reconfigurable teams of specialists.

In the front stage, technology often serves to enable customer self-service. Again, this seems to go against the grain of what makes a “people business” in the first place. Self-service is appropriate, though, to the extent that it makes the customer interaction more rich and efficient. For instance, a website questionnaire for capturing deep customer information prior to (and after) the service production or a voice-response system for customers to schedule their own appointments.

The final dimension of the framework is customer price sensitivity. This is difficult to gauge across a diverse category like people businesses, but services in many of these industries do not yet behave like commodities. Perhaps because so many people are involved, there seems to be competition in other service aspects besides price, like quality and location. However, the limited R&D investment of this category is more typical of commodity businesses.

In sum, as a category of service firms, people businesses do not have great potential to adopt mass service delivery. They are well matched to just one point of the framework, divisibility of tasks. They have mixed or limited success along most of the framework dimensions: service modularity, availability of technology, potential for self service, and price sensitivity. And they are poorly positioned to routinize and standardize their service processes. People businesses, in general, would do well to consider integrating some of the mass service techniques to improve productivity and lower costs, but should be wary about transforming their entire operations.

Conclusion

Service sector firms are increasingly looking to apply Ford's mass production principles their own businesses. The result is “mass service delivery.”

There are four factors driving firms to design for mass service: increasing competition and low profit margins require firms to lower their costs in delivering services; a desire to scale service delivery capacity in a cost effective way; a need to ensure standard quality of services as costs are lowered and delivery capacity is increased; and growing customer acceptance of the consequences of mass service.

There are also four main characteristics that describe mass service delivery in a firm. These are: a limited menu of standardized services; increased division of labor; use of technology to replace workers and improve efficiency; and limited autonomy of employees, especially in the front stage.

From these driving factors and characteristics, there are six chief dimensions along which a firm can be evaluated for its potential to adopt mass service delivery. These are: the diversity and novelty of customer requests; the divisibility of service delivery tasks; modularity of service offerings; availability of appropriate technology; potential for self-service; and customer price sensitivity.

This framework can be applied to a firm or even a category of firms in order to understand how well suited it is to become a mass service provider. As an example, the category of “people businesses” has been evaluated and given a recommendation to investigate some mass service techniques, but to be wary of wholesale adoption of mass service. There are a number of other salient categories that could be evaluated for insight into the mass nature of the service sector. More profitable, though, would be to evaluate individual firms that are considering a change in business strategy towards a more mass production approach to service delivery.

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