

MASS CUSTOMIZATION

An Emerging Model for Emerging Markets

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B. Joseph Pine II is the founder and president of Ridgefield, Connecticut-based Strategic Horizons, Inc., a management consulting firm specializing in helping companies envision and then realize their futures. Mr. Pine is the author of the highly acclaimed book *Mass Customization: The New Frontier in Business Competition*, which *The Financial Times* named one of the top business books of 1993. In it he details the historic shift from mass production to mass customization—the low-cost, high-quality creation of individually customized goods and services. He has also written articles for a number of magazines and journals, including the *Harvard Business Review*, *The Wall Street Journal*, *Planning Review*, the *IBM Systems Journal*, *Chief Executive*, and *CIO*.

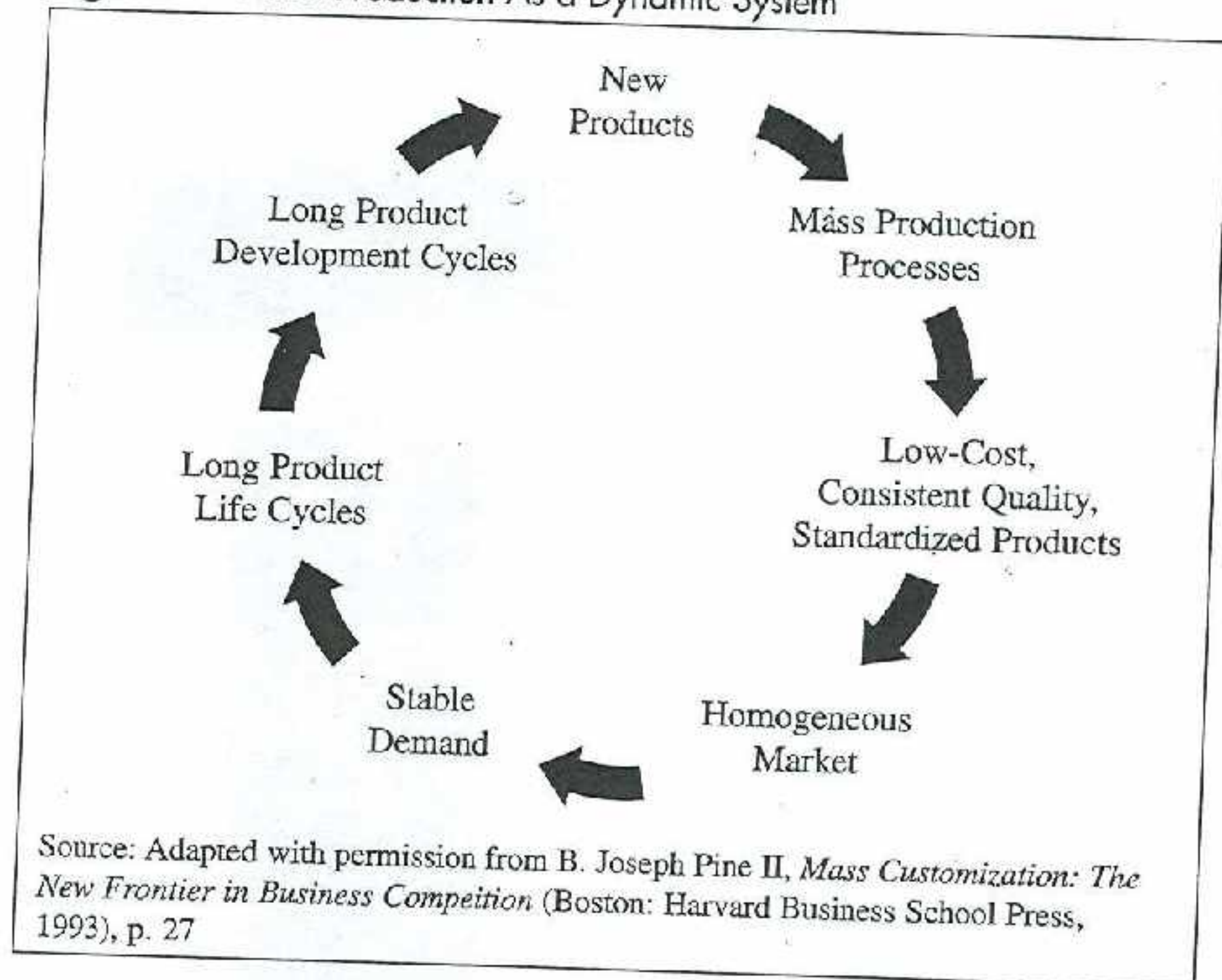
As a business model, mass production was tremendously successful throughout most of the 20th century. As depicted in Figure 1, mass production revolved around a company taking a new product and finding the one best way to produce it, yielding standardized products at a low cost and generally of consistent quality. These were sold into large, homogeneous markets (and often helped create those markets), which provided the company with stable demand levels and afforded it long product life cycles and long development cycles. Every once in a while, a new product would emerge that would be worth the high changeover costs, and the cycle would repeat. (Although manufacturing terms are used, the same basic process holds true for many service industries, particularly insurance and other financial services.)

Mass production is the search for efficiency through stability and control. As long as markets are stable and inputs, processes, and outputs can be controlled, then it can work effectively. However, when companies find that what they began developing years ago and produced weeks or months ago can no longer be reliably sold today—when markets are uncertain, unstable and unpredictable—then mass production simply no longer works. No amount of microtargeting or micro-positioning will provide any lasting advantage when the rest of the organization acts anything like the model shown in Figure 1.

Rather, companies have to take this feedback loop and reverse it, as depicted in Figure 2. Instead of reinforcing on longer cycle times, greater standardization, and more homogeneity—which no longer exists—the opposite occurs. Increasingly heterogeneous markets demand not only low cost and high quality but also increasing customization. This requires the firm to develop new mass-customization processes, out of which flow new products that must be rapidly developed,

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Mass customization is the low-cost, high-quality delivery of individually customized goods and services. It is a new business model that makes identifying and fulfilling individual customer wants and needs paramount within the organization. Mass customization is emerging today but will be in full force in many industries by the year 2000. Mass customization is not microsegmentation, niche marketing, micro-marketing, database marketing, or any other technique that targets messages and positionings to individuals. These techniques can be usefully employed by mass customizers, but usually these techniques are the dying gasps of mass producers finding it impossible to compete in increasingly turbulent markets.

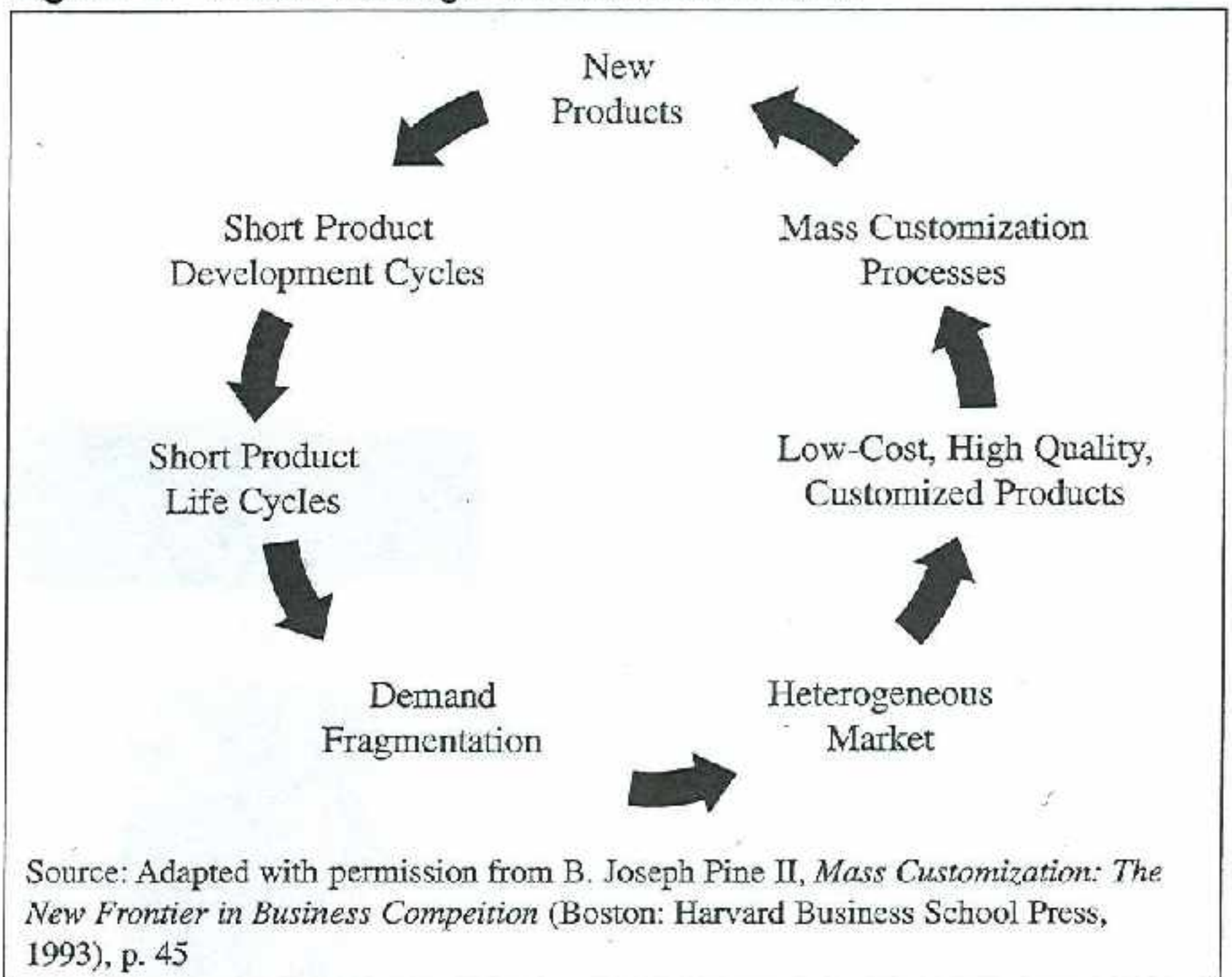
Figure 1 Mass Production As a Dynamic System

for they will have short product life cycles, which helps to further fragment demand, leading to even greater heterogeneity, and so on.

The end result? An entire organization geared around the fulfillment of individual customer wants and needs. An organization where not only messages are targeted to individuals, but also products are tailored and made to order. An organization where everyone is responsible for marketing in its truest sense: creating customers and fulfilling their desires. But also an organization that realizes the competitive and customer imperatives for low cost and high quality.

Although no one has embraced mass customization in the same sense that first Ford and then General Motors can be said to have perfected mass production, many companies are coming close. Perhaps the closest is Motorola, and its Paging Products Group in particular. The company's sales reps go into a customer's office with a laptop computer, and together they design the set of pagers that exactly meet that customer's needs (out of 29 million possibilities). The pager designs are then immediately transmitted through to the factory floor, where an almost fully automated, lot-size-of-one flexible manufacturing system can produce them in a matter of hours for shipment that day or the next.

One of the premier service companies to embrace mass customization is the United Services Automobile Association. Based on events that happen in each

Figure 2 A New Paradigm of Mass Customization

member's life, USAA customizes its growing portfolio of services. Typically for a mass customizer, it has expanded beyond insurance to other financial services and even to consumer goods. Whether customers are getting married, having a baby, or buying a car, USAA is determined to have the exact set of products and services each of its members needs during those major life events.

Mass customization is not an oxymoron. As Motorola, USAA, and many other companies have discovered, it is a completely new way of doing business that may be the only means of achieving sustained success in increasingly turbulent markets.