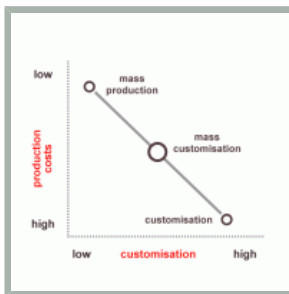


## mass customisation



### characteristics

author:	Pine II, B. Joseph
country:	United States
period:	1993
type:	theory
role:	consultant, change agent and manager
activity:	analyse, design and implement
topic:	strategic management, technology & operations and marketing & sales
abstr. level:	environment
perspective:	transformational
status:	for review
module:	innovation
comments:	1

### related models

three generic strategies

### description:

Mass customisation is an economic production paradigm as well as on an organisational level a strategic response to fragmenting markets. Mass customisation explains how affordable goods and services can be delivered to satisfy the needs of the individual by combining the efficiency of mass production and the customisation level of craftsmanship.

In 1993, B. Joseph Pine II was the most influential researcher behind the development and promotion of mass customisation. He received a Master of Science degree in Management of Technology at the MIT Sloan School of Management and went on to occupy various technical and managerial positions at IBM.

Pine described the paradigm shift of companies from mass production to mass customisation by observing nine industries. He noted that during the second half of the industrial revolution in the early 20th century, U.S. dominated mass production systems replaced the British led system of craftsmanship as the principal global production system. He argued that the capitalistic system of the early 21st century would again change form. Mass customisation would become the new dominant economic production system serving increasingly fragmented markets.

Mass production systems satisfy customer needs through the efficient production of goods and services on a mass scale that lowers unit costs. Organisational efficiency is achieved by stabilising and controlling an organisation's production inputs, processes, technologies and outputs. Stability and control become increasingly difficult to maintain the more frequently changes occur. Changes arise from input instabilities, shifting customer needs and desires, saturated markets, altering demographics and more rapid movements in economic cycles.

The competitive advantage of mass customisation is driven by economies of scope -- using a small set of standardised modular components to produce a large variety of customised goods and services.




The driving force behind the adoption of mass customisation is a self reinforcing feedback loop where those companies with enhanced capabilities to satisfy customers' individual demands will generate more sales and increase their market share. Higher profits and better understanding of the customer enables companies to provide even more variety and customisation. This in turn leads to the further fragmentation of a given market. This logic may be expanded to a dynamic system of reinforcing factors:

1. Demand fragmentation leads to >>
  2. Heterogeneous markets lead to >>
  3. Low-cost, high quality, customised products lead to >>
  4. Mass customisation processes lead to >>
  5. New products lead to >>
  6. Shorter product development cycles lead to >>
  7. Shorter product life cycles lead to >>
- (1) More demand fragmentation, etc.

Companies must be flexible and adapt to market changes to realise product variety and customisation. Managerial approaches such as just-in-time delivery and cross-functional teams in production processes become essential to enhance organisational flexibility. Responsiveness can also be enhanced by technological innovations such as computer-aided design and manufacturing. These innovations are prerequisites in reducing product development and production time.

Mass customisation can provide companies with a competitive edge in fragmented markets when mass production is no longer capable of meeting fast changing consumer demand at affordable price levels.

### assets:

	<b>customising products and services</b> ProvenModels • editor PM • version 1.3 • 81 KB
	<b>defining mass customisation</b> ProvenModels • editor PM • version 1.3 • 94 KB
	<b>market turbulence map</b> ProvenModels • editor PM • version 1.1 • 47 KB

### pros:

- Companies can overcome the natural trade-off between the level of customisation versus the price level of products and services when organisational processes are successfully transformed to allow mass customisation. Companies that combine the specificity of customisation with the low manufacturing costs of mass production realise the 'best of both worlds'. In fragmenting markets, such companies gain a competitive edge over their competitors.
- The concept of mass customisation provides managers new manufacturing and management practices for their organisations to weather the turbulence of fragmenting markets. Individual customer demands can be met rather than relying on 'average' customer demand.

**cons:**

- Increased product or service variety is not always a desired objective. Variety can overwhelm customers. The purchasing decision requires too much information processing. Additionally, retailers might have trouble dealing with a high variety of products from limited shelf space.
- Mass customisation is not necessarily the strategy of choice in a fragmented market as illustrated by Kotha in the soda industry. Coca Cola & Pepsi, the two largest sellers, thrive using a mass production strategy. Kotha argued that, from a customer's perspective, companies seek to find a unique edge as a basis for competitive advantage. Finding a unique edge may be compared to Porter's (1980) differentiation strategy. Coca Cola & Pepsi have developed unique status and product differentiation unrelated to product variety or customisation level. This allows these companies to successfully exploit their markets through a mass production strategy. The case showed that mass customisation is a viable strategy only when customers demand customised goods against mass production prices and not another form of uniqueness.
- Contrary to the potential gains of mass customisation, companies may lose some capabilities when embracing mass customisation - depending on their current strategy. A company inevitably loses some of its economies of scale when transforming its organisational processes from mass production to mass customisation. When transforming the organisational processes from true customisation (i.e. craftsmanship) to mass customisation, a company partly reduces the degree of customisation it can provide its customers. Companies must be fully aware of these reduced capabilities to avoid a mismatch between production strategy and customer demand.
- Pine described mass customisation and mass production as incompatible strategies. However, Kotha concluded from a case-study of the Japanese National Bicycle Industrial Company, that companies can pursue both strategies simultaneously in related industry segments. The fact that a company's main source of revenue is derived from a market served through a mass production strategy does not mean it cannot pursue a mass customisation strategy in a worthwhile related market.

**references:**

- Barry Schwartz: The paradox of choice (video)  
[http://www.ted.com/index.php/talks/barry\\_schwartz\\_on\\_the\\_paradox\\_of\\_choice.html](http://www.ted.com/index.php/talks/barry_schwartz_on_the_paradox_of_choice.html)  
2005 • TED • United States
- Customization blog  
<http://mass-customization.blogs.com>  
Frank T. Piller • Germany
- Future Perfect: Tenth Anniversary Edition  
<http://www.amazon.com/dp/0201327953?tag=provenmodels-20&camp=14573&creative=327641&linkCode=as1&creativeASIN=0201327953&adid=1>  
Stan Davis • 1997 • Basic Books • United States • ISBN 978-0201327953
- Malcolm Gladwell: What we can learn from spaghetti sauce (video)  
[http://www.ted.com/index.php/talks/malcolm\\_gladwell\\_on\\_spaghetti\\_sauce.html](http://www.ted.com/index.php/talks/malcolm_gladwell_on_spaghetti_sauce.html)  
2004 • TED • United States
- Mass Customization: Conceptual Underpinnings, Opportunities, and Limits  
<http://www.emeraldinsight.com/Insight/viewContentItem.do?contentType=Article&hdAction=lnkhtml&contentId=851573&ini=xref&history=false>  
Christopher W.L. Hart • 1995 • International Journal of Service Industry Management ( ISSN 1757-5818 )  
• United States
- Mass Customization: Implementing the Emerging Paradigm for Competitive Advantage  
<http://www3.interscience.wiley.com/journal/114124268/abstract?CRETRY=1&SRETRY=0>  
Suresh Kotha • 1995 • Strategic Management Journal ( ISSN 0143-2095 ) • Wiley • United States
- Mass Customization: The New Frontier in Business Competition  
<http://www.amazon.com/dp/0875843727?tag=provenmodels-20&camp=14573&creative=327641&linkCode=as1&creativeASIN=0875843727&adid=0>  
B. Joseph Pine II • 1992 • Harvard Business School Press • United States • ISBN 978-0875843728
- Online personal preference configurators  
<http://www.configurator-database.com>  
Austria
- The Customer Centric Enterprise: Advances in Mass Customization and Personalization  
<http://www.amazon.com/dp/3540024921?tag=provenmodels-20&camp=14573&creative=327641&linkCode=as1&creativeASIN=3540024921&adid=0>  
Frank T. Piller and Mitchell M. Tseng • 2003 • Springer Verlag • Germany • ISBN 978-3540024927