

business ecosystem



characteristics

author:	Moore, James F.
country:	United States
period:	1993
type:	model
role:	consultant and manager
activity:	analyse, design and reflect
topic:	strategic management, org. design & development and innovation & risk
abstr. level:	environment
perspective:	transformational
status:	under review
module:	innovation
comments:	0

related models

five configurations
pest analysis

description:

A business ecosystem describes the structure and behaviour of a network of high-tech organisations that share a key technological platform and the ways individual firms can flourish in such an environment.

Dr. James F. Moore was a Senior Fellow at Harvard Law School's Berkman Center for Internet and Society where he founded the Open Economies Project. He studied change in large scale social, economic, and technical systems and is the pioneer and originator of biological metaphors of organisation behaviour such as "business ecosystems", "Internet ecosystems" and the ecological approach to alliances and alliance-based competition. His research is primarily based on case studies in the high technology sector where the PC and Internet technologies favoured network based competition. Moore's Harvard Business Review article "Predators and Prey: A New Ecology of Competition" won a McKinsey Award for best Harvard Business Review article in 1993.

The essence of a business ecosystem is that networks between companies need to be analysed from a higher conceptual level rather than from the viewpoint of individual organisations. A business ecosystem's scope is the set of positive sum relationships (symbiosis) between actors who work together around a core technology platform. Irrespective of an organisation's individual strength, all actors in a business ecosystem are connected and share the success or failure of the network as a whole.

One example is the technology platform of MS Windows that induces a synergy between "MS windows compatible" companies delivering hardware, software, services, etc. Another example is Reverse Osmosis whose water treatment technology has an ecosystem of companies involved in membranes, pumps, filters, piping, services, etc.

Aspects of ecosystem are:

- actors (species)
- relations between actors (network)
- performance (health)
- dynamics (evolution)
- strategies and behaviour of actors (roles).

A business ecosystem has seven types of actors:

- customers
- markets
- products
- processes
- organisations
- stakeholders
- government / society.

The health (performance) of an ecosystem is defined by the following four factors:

- value (niche creation)
- critical mass (robustness)
- continuous performance improvement (productivity)
- co-evolution or the joint learning and optimization effects.

The dynamics or evolution of the system is determined by its performance. If one of these 'healthiness' factors is lacking, then the ecosystem will probably not succeed:

1. BIRTH

during the birth and pioneering stage, the focus should be on the acquisition of critical lead customers, key suppliers and important channels. This ensures value creation while simultaneously protecting competitors from doing business within the ecosystem.

2. EXPANSION

Next, the system expands. Critical mass can be reached by increasing scale and scope – with partners – and by standardization in key market segments.

3. LEADERSHIP

The third stage is characterized by "leadership" or "authority". The focus is on the 'red queen effect'; on the one hand, companies should encourage suppliers and customers to work together to continuously improve the complete offer, while on the other hand they will want to maintain their strong bargaining power towards these partners.

4. SELF-RENEWAL

The last stage is "self-renewal" where the implementation of new ideas stands central. Other business ecosystems – with similar new ideas – need to be delayed by means of barriers such as consumers switching costs or competitors' entry costs. The latter is critical since a non-self-renewable ecosystem will lead to the end of the evolution, meaning death.

Moore describes the life and death of 'predators' and 'preys' in the ecosystem. Iansiti and Levien expanded the number of archetypical roles using "keystones", "dominators" and "niche players".

Within the ecosystem, four effective strategic roles can be chosen:

1. KEYSTONE

An effective keystone strategy ensures an organization's survival and prosperity by improving the

An effective keystone strategy insures an organisation's survival and prosperity by improving the health of the ecosystem as a whole; new network members create and share value. Typically, this is achieved by creating a platform whose value increases rapidly when the number of ecosystem members that support the standard goes up. Basically, keystones exercise a system-wide regulator role despite its small part in their ecosystem's mass.

2. PHYSICAL DOMINATOR

aims to integrate horizontally or vertically to directly own and manage a large proportion of a network. Physical dominators – the ultimate aggressor – take over their ecosystem and leave no room for other network members. This behaviour damages the health of the system by reducing diversity, eliminating competition, limiting consumer choice and stifling innovation.

3. VALUE DOMINATOR

By contrast, the value dominator has little direct control. It creates little value while extracting as much as possible. It leaves too little value to sustain the ecosystem which ultimately collapses and brings the value dominator down with it.

4. NICHE PLAYERS

When allowed to thrive, niche players represent the bulk of the ecosystem and are responsible for most of the value creation and innovation. Niche players aim to develop specialized capabilities that differentiate them from other companies in the network. By leveraging complementary resources from other niche players or from an ecosystem keystone, niche players can focus all their energies on enhancing their narrow domain of expertise. Niche players naturally come into conflict with other niche players, keystones and especially dominators. They may get swallowed up if they do not move away. Innovation – at the core of their strategy of specialisation and differentiation – is critical to a niche player's success in these 'battles'.

assets:



business ecosystem actors

ProvenModels • editor PM • version 0.1 • 46 KB



business ecosystem stages

ProvenModels • editor PM • version 0.1 • 39 KB



business ecosystem strategies

ProvenModels • editor PM • version 0.1 • 49 KB

pros:

- The model helps with the identification of sustainable strategic positions in situations where the production and distribution of a firm's own products and services depend on a loose network of suppliers, distributors and other organisations that transcend the traditional boundaries of the industry. Most companies analyse competitors and suppliers, but forget to do the same with their complementors because common interests are overestimated, the potential for conflict and the investment needed to achieve strategic alignment underestimated.
- Moore provided tools to measure a business ecosystem's health. The inclusion of network dimensions allows a higher-level analysis than just one-on-one connections between firms. Network analysis needs to include a linear or structural component as well longitudinal or temporal effects. Researchers can study topics such as co-evolution only when time is included as a variable.
- The model incorporated insights from evolutionary economics and complexity theory and made them accessible to managers and consultants. The metaphor of an ecosystem was smartly chosen in a decade characterised by the rise of the personal computer and the Internet supporting the acceptance of the model.

cons:

- Where Moore's definition of business ecosystem is indeed at a higher conceptual level, the model's strategic analysis is from the perspective of a singular company. It sticks to the classical firm-centric view of competition and cooperation.
- One may argue that this model is nothing but an excellent reframe of Hughes' 1983 Large Technical System theory characterised by the four stages: invention, transfer, system growth and momentum with the sole addition that business ecosystems need to evolve continuously.
- Iansiti and Levien's study downplayed the importance of longitudinal co-evolution. Moore regarded this variable as a key factor of healthiness. The two authors stated in their conclusions that roles in an ecosystem aren't static allowing companies the option to evolve. The scientific question remains whether a firm can choose its role or whether a position is the result of an adaptation process. Does the technology determine the network's make-up or are the firms the main force of change?
- Business community might be a better metaphor than business ecosystem. The famous scientist and founder of the modern evolutionary theory, Charles Darwin, defined an ecosystem as an island lacking inter-action with other islands. However, actors in business ecosystems are typically members of multiple technology platforms. The probably positive effect of interactions between different ecosystems has not been researched in depth.

references:

- Harvard Law School's Berkman Center for Internet and Society
<http://cyber.law.harvard.edu>
United States
- Predators and Prey: A new ecology of competition
<http://www.amazon.com/gp/product/B00005RZ44?ie=UTF8&tag=provenmodels-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B000>

James F. Moore • 1993 • Harvard Business Review • United States

• **Strategy as Ecology**
http://harvardbusinessonline.hbsp.harvard.edu/hbsp/hbr/articles/article.jsp;jsessionid=SDBY2G00QWYXWAKRGWDSLELQBKE0YIISW?ml_action=get
Roy Levien and Marco Lansiti • 2004 • Harvard Business Review • United States

• **The death of competition: leadership and strategy in the age of business ecosystems**
<http://www.amazon.com/gp/product/0471968102?ie=UTF8&tag=provenmodels-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0471968102>
James F. Moore • 1996 • Wiley • United States • ISBN 0471968102

• **The Keystone Advantage**
<http://www.amazon.com/gp/product/1591393078?ie=UTF8&tag=provenmodels-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1591393078>
Roy Levien and Marco Lansiti • 2004 • Harvard Business School Press • United States • ISBN 1591393078