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Adaptive Strategies of Firms in High-Velocity Environments: The Case of B2B Electronic Marketplaces

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Abstract

Electronic marketplaces operate in highly dynamic environments. B2B (Business-to-business) e-Commerce (Electronic Commerce) is expanding rapidly, but Independent Internet based Electronic Marketplaces (IBEM) have passed through periods of boom and bust. In start-up entrepreneurial ventures such as IBEMs, adaptation is critical than at any other stage in the life cycle and hence the ability to learn and adapt becomes a key competency. The research uses the resource-based theory as a means of analyzing the evolution and adaptation of the resources and capabilities of IBEMs and the sustainability of competitive advantage. We use four case studies to trace the pattern of adaptation as well as identify the variables. Based on the inputs from this, we use a comprehensive sample of 135 IBEMs across various geographic regions covering 15 industry segments. The findings of this study provide key managerial insights into various issues that are important to IBEMs in particular and start-up entrepreneurial firms operating in highly dynamic environments in general. These include the stages of evolution and the sources or the lack of competitive advantage at each stage, the type of resources and capabilities, which need to be built, the type of complementary assets, which needs to be leveraged and the degrees of adaptation at various stages.

1. Introduction

The Internet is transforming the nature of interorganizational commerce by enabling various types of business-to-business (B2B) transactions. Internet is also having a major impact on the roles of markets [39] [40]. By reducing the search costs of buyers it is facilitating price competition among sellers Bakos [41] [42]. Independent Business to business Internet based Electronic Marketplaces (IBEMs) leverage Internet technologies and standards to distribute product data and to facilitate online-transactions. IBEMs have undergone rapid changes in terms of their market valuations, customers, lines of businesses, mode of service/product delivery, distribution channels as well as their alliances. In high-velocity environments, changes in demand, competition and technology are rapid and information is inaccurate, unavailable or obsolete. IBEMs operate in an industry characterized by all the above factors. From 1998 to 2000, B2B eCommerce grew more than 1000%, and by the second quarter of 2000, however, there were a few hundred marketplaces remaining. An increasing number of independent IBEMs have either expanded their business models beyond market making, merged with other IBEMs, been acquired, or failed outright. They have also adapted and evolved into new forms. Thus we can see that the IBEMs operate in a highly competitive, dynamic, entrepreneurial and innovative environment and hence their adaptation capabilities will determine which organization will survive. Organisations operating in stable environments can adapt gradually through continuous incremental change whereas those operating in highly dynamics environments such as IBEMs, need to adapt and evolve very fast to create and sustain competitive advantage. Studying the adaptation and evolution of industries, which operate in such environments would give us valuable inputs on current/future industries operating on similar environments. The adaptive behavior of IBEMs is important due to their vulnerability to competition as they have limited cash reserves and debt capacity, over-dependence on a limited product/service line, relatively limited market presence, significant demand fluctuations and aggressive competition.

Adaptation is likely to occur in different degrees and different ways depending on where an organization is in its life cycle. In start-up entrepreneurial ventures (most IBEMs fall in this category), adaptation is critical than at any other stage in the life cycle. In such firms the products/services, customers, and marketing approaches not well established and there is also a high degree of environmental changes. Hence it would be useful to understand the adaptation and evolution of IBEMs. In this paper, we attempt to answer the following questions:

- How do IBEMs evolve and what are the stages in the adaptation of IBEMs?
- What are the key resources, capabilities and complementary assets of IBEMs at each stage of their evolution?
- What are the adaptive strategies pursued by IBEMs to leverage resources and capabilities
- Can IBEMs develop long-term competitive advantage using their internal resources and capabilities?

2. IBEMs: Taxonomy and organizational perspectives

The IBEMs offer services such as buyer/supplier and product/services searching, transactions such as procurement, asset disposal etc. IBEM act as Market Makers whose primary roles are to match buyers and sellers, broker deals, and facilitate transactions. Market

makers perform four basic functions such as price setting, coordinating exchange, market clearing and allocating goods and services [38]. IBEMs differ from the traditional marketplaces as they offer increased personalization and customization of product offerings, and aggregation and disaggregation of information-based product components to match customer needs.

There are various ways of classifying business-to-business marketplaces. For this research we are classifying them into public, private and consortia marketplaces. Our research focuses on public marketplaces.

Public Marketplace: A public marketplace, also known as neutral marketplace or third-party marketplace brings together buyers and sellers within a particular industry for the purpose of commerce. It provides content, value-added services and transaction capabilities e.g. Freemarkets. *Private Marketplace*: Private marketplaces are owned and operated by a one company to transact with a select group of suppliers. They have the potential to provide high performance and tight integration with current suppliers. Examples of enterprises that have private marketplaces include: Wal-Mart, Dell, Sun Microsystems, Amtrak, and Cisco.

Consortia Marketplace: Consortia marketplaces are jointly owned by several large enterprises that deploy applications and infrastructure to facilitate collaboration and conduct business among trading partners. They are highly customized and integrated with the process of its founders. They also require a large investment and have long implementation schedules.

3. Theoretical Framework

Research on the evolution of firms has been carried out within theoretical streams such as industrial economics, strategic management and organization theory. Some of the studies have identified multiple stages or phases of firm evolution [1] [2] [3] [4] 5] [6]. Other studies have analyzed the impact of internal factors such as resources and capabilities, organizational structure, strategy, top management team characteristics and external factors such as market structure, competition and government regulations on firm growth and survival [7] [8]. There are also studies, which draw parallels to the neo-Darwinian theory of evolution in Biology [9] [10] [11]. Adaptation strategy concerns specific ways in which the firm makes adjustments, as it seeks to survive and capitalize on external circumstances. Such adjustments can be made in a variety of product, market and resource management areas [15] such as a broader product mix, new product development, exploration of new markets and market segments, speed of response, outsourcing and resource leveraging, formation of strategic alliances etc. Organizations operating in highly competitive environments rely on strategies that are more adaptive [12] [13] as the success of a concept and a business is a function of appropriate and timely adaptation of the concept over time. However, the degrees of adaptation that occur, and the outcomes of this adaptation, are likely to vary considerably as a function of a variety of factors [21].

The catalysts of adaptation may be internal or external. The internal catalysts could be short or long term goals. The external catalysts could be structural factors of resource dependence, or industry–based factors. Organizational punctuated equilibrium model can be used to analyse resources changes in growing ventures. We can also integrate this model with the Resource–Based Theory of the firm, by suggesting that each stage of organizational growth can be represented as a distinct configuration of resources being built by the firm to achieve competitive advantage. See *Figure 1* for a diagrammatic representation of the process of resource configurations.

A key aspect of evolution is adaptive capability to the changing environment and adaptation is an important aspect in organizational evolution. Evolution is driven by the process of interactions between organization and the environment, learning behavior, and the survival/growth strategies in different environments. Product Life Cycle models have been used to trace the product as well as organizational evolution [16] [17] [18] [19] [20]. Industries have witnessed an initial large number of competitors and later experienced a shakeout decreasing the producers. This phenomenon is common in manufacturing industries such as automobiles where many often the number of producers reduced by 50% or more during the formative times [16] [21].

The resource-based view of the firm [22] [23] [24] [25] [26] [27] [28] suggests that differences in firm performance are primarily the result of resource heterogeneity across firms. Firms that are able to accumulate resources and capabilities that are rare, valuable, nonsubstitutable, and imperfectly imitable will achieve an advantage over competitors [22] [24] [26]. Resources can be divided into physical, human, and organizational assets [23]. Capabilities are capacities to deploy resources, usually in combination, to effect a desired end [29]. Dynamic capabilities [30] is an extension of RBV approach. It explores how valuable resource positions are built and acquired over time. Dynamic capabilities are rooted in a firm’s managerial and organizational processes, such as those aimed at coordination, integration, reconfiguration, or transformation [43] [44], or learning [45]. Applying the RBV facilitates a better understanding of the nature of competitive threats as it would help to identifying resources critical to gaining and sustaining a competitive advantage.

In many cases a firm's ability to commercialize an innovation may require that its internal resources be utilized in conjunction with the complementary resources of another firm. Complementary resource endowments have been noted as a key factor driving returns from alliances [46] [47] [48] [49] [50]. In the context of IBEMs complementary assets can be defined as assets that are required to gain competitive advantage from the

implementation of best marketplace practices. A new entrant wishing to duplicate them would be facing significant entry barriers including high capital costs, scale economics and learning. New businesses such as IBEMs may not be able to develop all their resources and capabilities internally and therefore it is critical to address the issue of the influence of complementary assets on the adaptation of IBEMs.

4. Research Design and Methodology

The study adopted two methodologies across two phases. First phase involves the usage of the case study method and the second phase adopts the case survey methodology.

4.1 Case Study

Adaptation is a dynamic activity that unfolds over time and hence we have adopted a case research methodology, aimed to more accurately capture the nature and degree of specific changes as they are made. Moreover the factors influencing organizational processes often include path dependencies that are cumulative and historically conditioned. Hence the research design was longitudinal in nature and was designed to enable the multiplicity of factors that may have shaped the processes. The case study strategy is particularly helpful in situations of a "phenomenon in the making" to gain novel and rich insights [73]. These are situations where there are few theoretical foundations and exact measures for the key variables. In-depth interviews were conducted and the study adopted a multi case design to allow for replication logic. To over come the weaknesses of this approach such as the difficulty of generalizing individual case studies, multiple case studies were used.

A non-probabilistic sampling method was favoured as generalization in a statistical sense was not one of the objectives. We chose a sample from which the maximum can be learned. The following criteria were used to choose firms for case study:

- Firm is a business-to-business market maker
- Derive at least 30% of their revenues through transactions facilitated through the Internet
- Use the Internet as a key mode of delivery of their services

We chose four Indian IBEMs, which met the above criteria. (See *Table 1* for a brief description of the firms).

4.1.1 Data and Analysis

Data was collected through semi-structured interviews with the CEOs, CIOs, CFOs, Vice Presidents, as well as the Managers of the IBEMs. Interviews lasted from one to four hours and an interview guide was used to avoid losing focus and to ensure that all relevant questions were asked. Questions were both closed and open-ended. Respondents were thus given the opportunity to express their thoughts on the topic of interest as freely as possible. Based on the responses, the resources and capabilities were classified under various categories and their adaptation measures were identified (See *Table 2*).

4.2 Case Survey

Based on the variables captured through the above method, we conducted a Case Survey [74] [75] [76] [77] of firms based in the US, Europe, South America, Canada and Asia Pacific. Case surveys bridge the gap between surveys and case studies to combine their respective benefits of generalizable, cross-sectional analysis and in-depth, processual analysis [77].

The criteria used to choose firms for the case survey was the same as that used for the case study. For our case survey, we had a list of 135 IBEMs from across the world and data coding was carried out based on information from sources such as information from company annual reports, SEC filings, research reports, published cases, academic papers and various other sources. In addition we extensively used the WayBack Machine of The Internet Archive (www.archive.org). Questions were closed ended to facilitate statistical analysis. Diverse sources of data were used as they offer multiple points of analysis into the phenomenon of interest. In addition to this, the questionnaires were emailed all the IBEMs used for the case survey. We received 37 responses and they were used to test the validity of the methodology.

4.2.1 Data and Analysis

The closed-ended questionnaire had 32 questions across sections such as Business Model, Customers, Environmental Characteristics, Resources and Capabilities, Alliances & Complementary Assets and Products and Services. Two raters were used to fill the questionnaire for two random samples of 25 firms across the years. Both the raters were trained in management (MBA and above). The correlation of the scores between the author's ratings and the first rater was found to be .9 and the second rater was found to be .93. Since the inter-rater correlations were high, the reliability of the author's ratings was judged to be good. Ratings were identical for 1035 out of 1150 responses between the author's and the first rater and 1070 out of 1150 between the author's and the second rater. The correlation between the author's ratings and the responses from the firm responses was found to be .94 and was also judged good. In this case the ratings were identical for 1600 out of 1702 between the author's and the firms. Based on all the responses and the ratings of the raters, the adaptation scores were calculated for all the factors (See *Figure 2*).

From the figure we can see that for almost all the factors, the adaptation scores are increasing over the years. Adaptation scores for factors such as Strategy and Vision seems to be decreasing for the year 2002, which can be attributed to the reduction in competition.

5. Proposed Framework

The three-stage framework proposes that firms rely on continuous adaptation to regenerate competitive advantage under conditions of rapid change. This is achieved by adapting their existing resources and capabilities, acquiring new resources and capabilities and accessing complementary resources and capabilities through alliances. Firms change what they are and what they offer through the continuous adaptation process and hence they need to regenerate competitive advantage relative to the new competitors they encounter in these domains. The adaptation and evolution of IBEMs could be described in terms of the following 3 stages: *Aggregation*, *Dynamic Transactions & VAS* and *Integration & Collaboration* (See *Figure 3* for the proposed framework).

5.1 Stage 1: Aggregation

In this stage, the main purpose of IBEMs is to reduce transaction costs, bring together buyers and sellers as well as facilitate price discovery. They brought together buyers and sellers over a static transaction platform and there were no dynamic transactions. They had limited financial resources and limited organizational, technological as well as managerial capabilities. The key resources identified in this stage are technological resources, information based resources and financial resources. The key capabilities during this stage were technological and managerial (Sales and marketing, Strategic relationships with Venture Capitalists). Technological capabilities were difficult to obtain as there was a mismatch between the supply of capable people with the required technological capabilities and their demand. Hence all the firms had an ongoing recruitment program. Technological development activities for the web site and the new version of the technology were also considered important by all the firms. Sales and marketing abilities were considered important as this was a new business opportunity and the awareness levels of the customers was very low. Development and maintenance of critical strategic relationships with Venture Capitalists was a key capability and they considered the degree of interest of the Venture Capitalists could make or break their firms. All the firms considered the competition at this stage to be extremely high. (See *Table 3* for the Resource Changes across the stages). Propositions one to six can be arrived from the above discussion.

P_1 *In the aggregation stage, IBEMs are at a competitive disadvantage as there are no factors, which differentiate them from the competition*

P_2 *The technological resources and capabilities of IBEMs built in the aggregation stage offers only short-term competitive advantage and are prone to imitation and substitution*

P_3 *In the aggregation stage, first mover IBEMs have marginal competitive advantage*

P_4 *In IBEMs, technological resources alone do not explain the significant performance variation among firms*

P_5 *For IBEMs, managerial, technological and organizational capabilities satisfy the resource-based criteria for being valuable, rare, inimitable and non-substitutable as they are strongly firm specific and path-dependent*

P_6 *In IBEMs, managerial, technological and organizational capabilities complementary to technological resources explain the significant performance variation between them*

5.2 Stage 2: Dynamic Transactions and Value Added Services (VAS)

Between Stage 1 and 2, there was a high degree of adaptation (D=4). A new way of delivering the services was being explored and strategic initiatives were started to access complementary assets. The IBEMs were in the process of delivering dynamic transactions and value added services. Most important characteristic of Stage 2 was the low transaction volume and the inability to achieve the critical mass of transactions (the number transactions required to achieve break-even). "We were a long way from the number of transactions required to achieve critical mass and we were running out of cash", acknowledged the CFO of Company 3. The companies were also increasing Organizational capabilities around their core technology. For example, the dynamic transactions required an entirely new set of capabilities.

The IBEMs started facilitating dynamic transactions through mechanisms such as auctions and reverse auctions. They entered into alliances with partner firms to access complementary assets. Value added services (VAS) are defined as services, which supplement the actual transaction, cataloguing and search capability. The main VAS includes financial services, logistics services, analytics services, inspection, and settlement of disputes. Among these, the two most important services are credit & payment and logistics services. The IBEMs also considered order fulfillment and financial settlement as two key areas of differentiation. The importance of having financial services arises from the fact that B2B marketplaces must offer a trusted environment, because the parties do not necessarily have previous relationships and have therefore not built up any trust between them. This brings us to propositions seven and eight.

P_7 *In the dynamic transaction & value added services stages, first movers IBEMs have marginal competitive advantage*

P_8 *IBEMs access complementary assets, as the time window during which they need to succeed in commercializing their products and services is very short*

5.3 Stage 3: Integration & Collaboration

A major punctuated shift (the dot com bust) occurred between Stage 2 and 3. In this stage, the degree of adaptation was very high (D=5). Most of the firms at this stage were putting on hold their expansion plans and were restructuring, downsizing and retrenching. In all the companies a number of people were laid off and the basic orientation of the company was redesigned. After that, the resources that emerge remained constant through the following three data collection phases. In Stages 2 and 3, long term contracting and service delivery became salient, in contrast to the previous focus on sales and marketing. The companies were also shifting towards services, which assured more returns such as Consulting. The knowledge base in the companies went through a lot of changes due to the lay offs as most of the firms lost about a quarter of their employees. Also as the new consulting contracts expanded, the planning and strategy formation functions became more formal. Development and maintenance of critical strategic relationships with key partners and customers was a key capability as most of the IBEMs had still not achieved the critical mass of transactions.

The IBEMs started integrating their products/services with those of their customers and thereby build switching costs. This is the stage wherein managerial, organizational or technological capabilities give the firm scope to create competitive advantage. To facilitate integration and collaboration, the IBEMs were developing competencies such as data mapping repositories including XML document exchange formats and trading partner agreements which will allow the customers to switch from one market to the other at any time. Integration also involves modeling, automating, and integrating business processes and trading relationships between partners. Integration of information refers to the sharing of information among participants of the IBEM such as buyers and suppliers. This includes data such as inventory data, demand data, capacity plans, production schedules, promotion plans, and shipment schedules. What characterizes this stage is their ability to achieve sustained competitive advantage by exploiting stage 1 and stage 2 activities. Whereas stage 2 activities involve the ability to invent and enter into alliances and exploit the same, stage 3 activities involves the ability to create interorganizational processes.
This brings us to proposition nine.

P_9 *In the integration and collaboration stage, IBEMs have scope to create sustainable competitive advantage as they are able generate lock-in effects by integrating with the processes of its partners*

6. Conclusion & Future Research Directions

Figures and tables should be placed as close as possible to where they are cited. Captions should be Times 10-point boldface. Figures and tables must be numbered separately. Figure's captions should be centered below the figures, and Table captions should be centered above the table body. Initially capitalize only the first word of each caption.

The framework aims to capture the types of resources and capabilities as well as complementary assets, which were leveraged by IBEMs at various stages and their adaptation. The framework has the advantage that its sequential mode of analysis allows to identify precisely where and at what stage the firm has built its resources and capabilities and what is their adaptation process. It is not necessary that all IBEMs must pass through all stages or must pass through the stages one at a time. Many firms do not reach stage 3 or even stage 2, and most firms contain activities that are at more than one stage. The activities at the three different stages of development of the firm are supported by different types of internal and external resources and capabilities. Thus, resources that support the stage 3 activities may be different from the type of resources that support stage 1 or 2 activities. Whereas important stage 2 resources may be complementary assets, the important stage 3 resources are managerial, organizational or technological capabilities. Moreover managerial and organizational capabilities may better satisfy the basic resource-based criteria for being rare, valuable, costly to imitate, etc. This is so because they are more likely to be strongly firm specific and hence difficult to imitate. This is due to them being internally accumulated through path-dependent processes of change. Thus, in this way the analysis of firm adaptation, the analysis of resources and capabilities as well as the analysis of sustainability of competitive advantage are merged. In order to survive and maximize economic gains, an IBEM has to reach the Integration stage. Although the IBEMs in the value added services stage have marginal competitive advantage, they can rarely demand premium for their services. On the other hand, IBEMs in the Integration stage maximize economic gains by creating stable interorganisational processes. This research contributes to a growing body of research seeking to understand the determinants of organizational ability to adapt and gain competitive advantage in new competitive and high-velocity environments by leveraging the right resources and capabilities and complementary assets. One of the important implications of our framework is that competitive advantage is associated with a process of ongoing renewal and access to resources and capabilities rather than with a favorable position in an attractive industry. Future research could be in terms of the context in which these IBEMs are operating and whether IBEMs operating in different countries or IBEMs targeting different industries show a distinct pattern of adaptation and evolution.

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Figure 1: Process of Resource Configurations

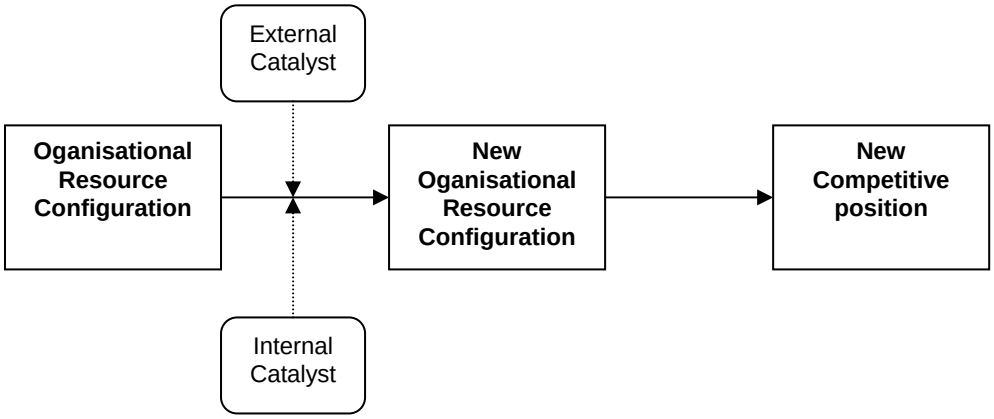

Table 1: Brief Description of the firms used for case study

Company description	State of adaptation	Degree of adaptation (D)
Company 1 Business-to-business auction site targeted at industrial assets. Service launched in August 1999 No. Of employees: 40	Aggregation & static transactions (Mid to late 1999) Dynamic Transactions & VAS (2000) Integration & Collaboration (2001)	High (D=4) Between #1 & #2 Very High (D = 5) Between #2 & #3 Medium (D = 4) Current Stage
Company 2 e-Procurement Services provider, also offers market-making services. Service launched in September 2000 No. Of employees: 63	Aggregation & static transactions (End 2000 to mid 2001) Dynamic Transactions & VAS (II half of 2001 to present) Integration & Collaboration (2001 to present)	High (D = 4) Between #1 & #2 Very High (D=5) Between #2 & #3 High (D=4) Current Stage
Company 3 Business-to-business marketplace offering company specific Private Marketplaces The service was launched in 2000 No. Of employees: 25	Aggregation & static transactions (End of 1999 onwards) Dynamic Transactions & VAS (End of 1999 onwards)	High (D = 4) Between #1 & #2 Medium (D = 3)
Company 4 Procurement and Asset Disposal Exchange The service was launched in 1998 No. Of employees: 70	Aggregation (End of 1999 onwards) Dynamic Transactions & VAS (2000 Onwards) Integration & Collaboration (2001 onwards)	High (D = 4) Between #1 & #2 Very High (D=5) Between #2 & #3 High (D=4)

Table 2: Type of Resources and Capabilities and their Adaptation measures

Resource & Capabilities	Example	Adaptation measures
IT Infrastructure	Web servers, PCs, System software, Databases, Data Mining, Data Warehousing, Routers etc.	▪ Has the firm developed or added to the existing IT Infrastructure?
Information based resources	Buyer and seller databases, catalogs etc.	▪ Has the firm developed or added to the existing Information based resources?
Financial Resources	Firm's ability to generate internal funds, borrowing capacity and its market value	▪ Has the firm accessed new sources of capital?
Brick & Mortar Assets	Land, buildings and location	▪ Has the firm developed or added to the existing B&M assets?
Intellectual Property Rights	Patents, trademarks, copyrights etc.	▪ Has the firm developed or added to the existing IPR?
Reputation	Reputation with customers, suppliers, government agencies, competitors and partners	▪ Has the firm made investments to improve its reputation?
Trust	Confidence in the firm's quality of service, privacy and security policies	▪ Has the firm made initiatives to improve trust?
Brand	Distinctive product, service, or concept	▪ Has the firm made investments to promote its brand?
Complementary Assets	Logistics, insurance, credit, payment, rating etc.	▪ Has the firm developed or added to the existing Complementary Assets?
Managerial Capabilities	Knowledge, experience, account and transaction management, end user training, domain knowledge, marketing capabilities	▪ Has the firm recruited/retrenched personnel, made changes to its key personnel etc.?
Technological capabilities	Software design, development, testing, working across multiple platforms, integration, customisation, and database management	▪ Has the firm introduced a new product /service or a new version of the existing product/service, developed new technological capabilities etc. ?
Organisational capabilities	Reporting structures, organization culture, innovation, responsiveness, management of alliances, training programs, R&D, knowledge creation, innovation and organizational learning	▪ Has the firm made changes to its organizational structure, entered into alliances, invested in new R&D projects etc?

Figure 2: Adaptation Scores

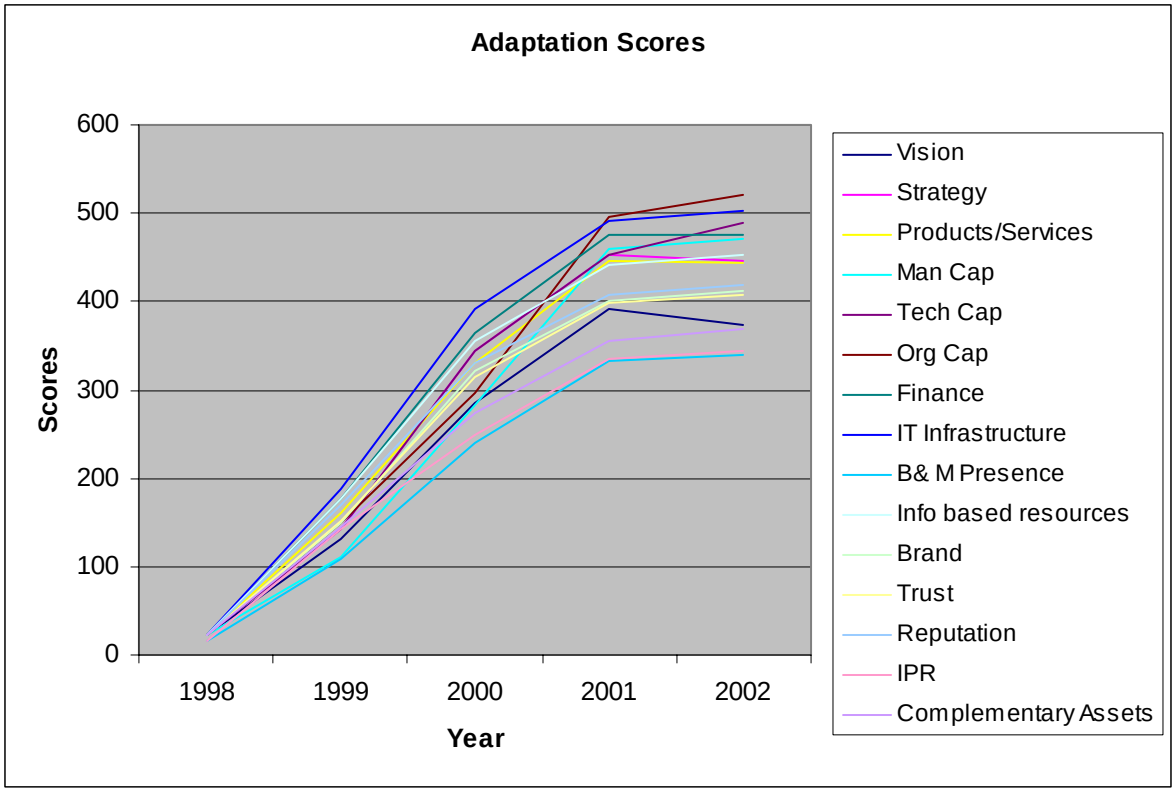

Figure 3: Proposed Framework

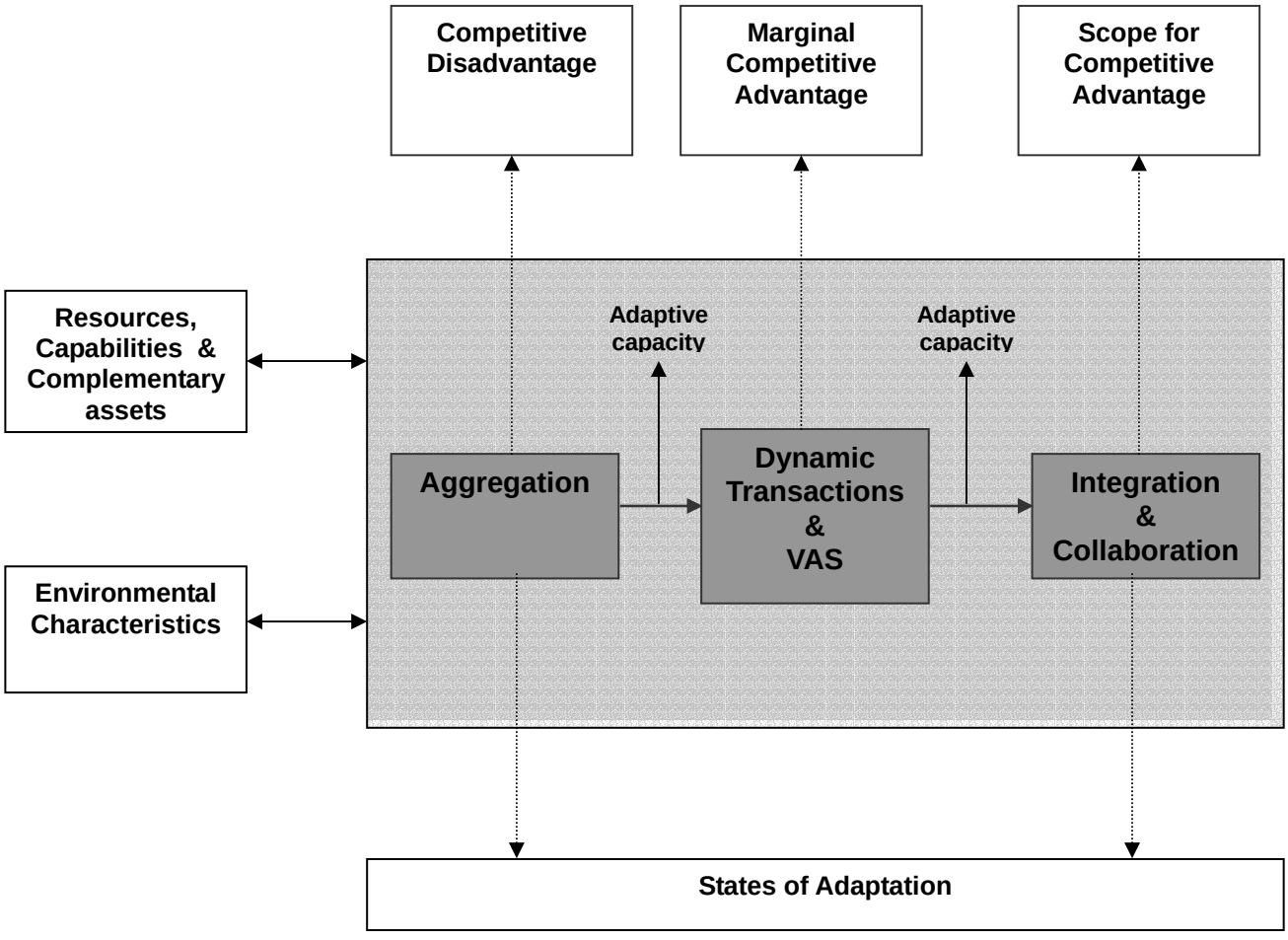

Table 3: Resource Changes across the stages

Stage 1 Aggregation	Stage 2 Dynamic Transactions & Value Added Services	Stage 3 Integration & Collaboration
Managerial Capabilities ▪ Sales & Marketing ▪ Strategic relationship with VCs **Organisational Capabilities** ▪ Recruitment **Technological Capabilities** ▪ Web site development ▪ Cataloguing **Financial resources** ▪ Start-up capital **IT Infrastructure** ▪ Servers ▪ Databases **Information based resources** ▪ Transaction data **Brick & Mortar Assets** ▪ Development centre **Trust**	**Managerial Capabilities** ▪ Transaction Management **Organisational Capabilities** ▪ Recruitment ▪ Training ▪ Responsiveness **Technological Capabilities** ▪ Transaction management **Financial resources** ▪ Free cash flow **IT Infrastructure** ▪ Data mining ▪ Data Warehousing **Information based resources** ▪ Transaction data **Complementary Assets** ▪ Logistics ▪ Authentication & verification ▪ Escrow **Brick & Mortar Assets** ▪ Offices at key locations **Intellectual Property Rights** ▪ Trademarks **Brand** **Trust** **Reputation**	**Managerial Capabilities** ▪ Strategic relationship with partners and customers **Organisational Capabilities** ▪ Organisational structure ▪ Innovation ▪ Planning ▪ Learning ▪ Processes **Technological Capabilities** ▪ Integration ▪ Customisation **Financial resources** ▪ Free cash flow **Information based resources** ▪ Collaborative Planning, Forecasting, Replenishment **Complementary Assets** ▪ Insurance ▪ Payment **Intellectual Property Rights** ▪ Copyrights **Brand** **Trust** **Reputation**