

Knowledge Management and Competitive Intelligence: A Synergy for Organizational Competitiveness in the K-Economy.

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Abstract

The competitive pressure in business environment has increased tremendously especially in the knowledge based economy. As a result, companies from various industries around the world have invested millions in embarking the Knowledge Management Systems (KMS) and Competitive Intelligence (CI) activities to manage information and knowledge resources in their organizations to be competitive. This paper discusses the similarities, differences and benefits of the two fields to organizations. In addition, it examines the resource-based theory approach to organizations and further highlights the importance of integrating KM and CI processes to generate synergy in order to create and sustain competitive advantages that will lead the organizations to compete strategically in the K-Economy.

1. Introduction

In today's fast-paced, high technology business environment, technological advances, competitor actions and inactions, customer and supplier intentions and behaviors, legislative activity and a host of other activities are among elements that compete for a manager's attention on a daily basis. A manager's ability to master all of the possible consequences of these activities will directly affect the development and quality of a firm's business and corporate level strategies. The key to any successful strategy is the ability to identify, develop and sustain a competitive advantage with reference to their competitors.

Knowledge management (KM) is the process through which corporate knowledge is used to improve organizational performance. Essentially it looks at managing internal knowledge processes, and developing the efficient usage of all information required for corporate decisions. KM is also increasingly becoming an integral business

function for many organizations as they realize that competitiveness hinges on effective management of intellectual resources (Grover and Davenport 5-21)

On the other hand, Competitive intelligence (CI) is a process for gathering usable knowledge about the external business environment. CI focuses on turning external information into the intelligence required for tactical or strategic decisions relating to the business environment. Furthermore, CI is all about 'managing the entire competitive battlefield' (Fleisher and Bensoussan 133). Any organization needs to know its own organization, the competition, and the battlefield, and then be able to analyze and use this information in the decision-making process. The practice of CI has become more critical as competitive intensity in the environment has increased because of technological developments, globalization, product availability and variety, distribution improvements, the Internet, and consumer sophistication.

Definition of Knowledge

Knowledge is often defined as internalized information (Ingwersen 92) and understood as a blend of explicit and tacit elements (Nonaka 14; Polanyi 95). This means that there are many types of knowledge at different levels of the firm. Knowledge lies in human minds and exists only if there is a human mind to do the knowing.

Definition of Knowledge Management (KM)

KM is about managing the knowledge that the individuals have. Organizational KM means supporting people so that they can use what they know. Furthermore, information and knowledge for the organization is highly specific and every

organization must define information and knowledge in the light of their activities and goals (Orna 44).

Additionally, IBM and Lotus used this definition of KM when developing their entry into the KM arena: “a discipline that systematically leverages content and expertise to provide innovation, responsiveness, competency, and efficiency” (Pohs 11). While Microsoft prefers to state that “KM is nothing more than managing information flow; getting the right information to the people who need it so they can act on it quickly” (Gates 19). The American National Standards Institute proposes to define knowledge management as “the production, mediation, and use of knowledge; the management of intellectual capital” (ANSI/GKEC 20). Peter Drucker brings us a more concise definition: “the coordination and exploitation of organizations knowledge resources, in order to create benefit and competitive advantage” (Perseus Publishing 200).

KM has antecedents in corporate libraries, CI, best practices sharing in corporate quality organizations, and knowledge transfer efforts. Its primary focus has been on the capture, sharing and distribution of unstructured textual and graphic information as opposed to the structured, quantitative orientation of business intelligence. KM has also had a technological focus (particularly on web-based, repository, and collaborative technologies), but its adherents also place strong emphasis on the need for human and cultural interventions in order to make knowledge sharing work.

Definition of Competitive intelligence (CI)

In a competitive market, firm success increasingly depends on gaining a good understanding of competitive activities, and leveraging that understanding to distinguish one’s own product offerings in a meaningful manner. To gain this knowledge of competitors, an increasing number of firms have invested in CI, the legal and ethical collection, analysis, and distribution of information regarding the competitive environment and the capabilities, vulnerabilities, and intentions of business competitors. One of the key concerns for CI is to fight blind spots that lead to misunderstandings about how markets function, what competitors are doing, what customers want, or where the future lies (Gilad, Gordon and Sudit 107-13; Gilad 99; Gilad 24).

According to the Society of Competitive Intelligence Professionals (SCIP), CI is the “process of ethically collecting, analyzing and disseminating actionable intelligence regarding the implications of the business

environment, competitors, and the organization itself” (Society of Competitive Intelligence Professional). CI transforms raw information into intelligence to support business decisions. This information can come in a myriad of forms including annual reports of competitors, customer or supplier feedback, industry experts, regulatory filings, and trade show activities.

CI techniques systematically and ethically gather, analyze and disseminate external information that can assist with organizational decision-making and the design of strategic and operational plans (Society of Competitive Intelligence Professional). Examples of CI include benchmarking, background checks, competitor assessments, network analysis, and war gaming and won-loss analysis. Moreover, CI has become a vital part of the emerging knowledge economy. Careful analysis of competitors and the global marketplace allows companies to effectively anticipate market developments and respond proactively.

Definition of Synergy

According to the American Heritage® Dictionary of the English Language, synergy is defined as the interaction of two or more agents or forces so that their combined effect is greater than the sum of their individual effects or cooperative interaction among groups, especially among the acquired subsidiaries or merged parts of a corporation, that creates an enhanced combined effect. In this case, it is expected that the effects produced by combining the KM and CI functions will be greater than the sum of their individual effects (American Heritage® Dictionary of the English Language).

Definition of Competitive Advantage

A competitive advantage can be attained if the current strategy is value-creating, and not currently being implemented by present or possible future competitors (Barney 102). Although a competitive advantage has the ability to become sustained, this is not necessarily the case. A competing firm can enter the market with a resource that has the ability to invalidate the prior firm’s competitive advantage, which results in reduced (read: normal) rents (Barney 658). Sustainability in the context of a sustainable competitive advantage is independent with regards to the time-frame. Rather, a competitive advantage is sustainable when the efforts by competitors to render the competitive advantage redundant have ceased (102; Rumelt 286). When the imitative actions have come to an end without disrupting the firm’s competitive advantage, the firm’s strategy can be called sustainable. This is contrary to other views (e.g. Porter) that a competitive advantage

is sustained when it provides above-average returns in the long run (Porter 149).

1. The Resource-Based Approach to Organizations

One approach to the management of information resources is the resource-based theory, which is one of the current theories enjoying wide acceptance by the scientific community. After a long period of market-oriented theories (e.g., Porter and Millar 149), attention has turned to the internal issues of any organization, the assets and resources, which are of permanent character for the organization - on the contrary to the ever changing external world and market. Internal resources are something with which one must live for a long period and of which one must take advantage. "For managers the challenge is to identify, develop and deploy resources and capabilities in a way that profits the firm with a sustainable competitive advantage and, thereby, a superior return on capital" (Amit and Schoemaker 33).

Clearly we can define labor and information as key resources for any organization. The resource-based theory should give us insights into how to master and foster this resource. One of the weaknesses of the resource-based theory is the complexity of the used concepts. The concepts of capabilities, resources and competences are far from settled (see, for example, Andreau and Ciborra 111). However, the conceptual richness of the theory is its main strength and important and interesting concepts can be summarized as follows (Barney 99):

- Resource mobility and heterogeneity: organizations command over resources of different kinds and qualities. Resources can be very immobile.
- Social complexity: resources may imperfectly be imitable because they are complex social phenomena, beyond the ability of firms to systematically manage and influence.
- Causal ambiguity: causal ambiguity exists when the link between the resources controlled by a firm and a firm's sustained competitive advantage is not understood or understood only very imperfectly.

Interesting too is the discussion on the strategic potential of resources. A capability has strategic potential if (Barney 99):

- it is valuable,

- it takes advantage of opportunities in the environment and neutralizes risks,
- demand is bigger than supply,
- it is difficult to imitate,
- it is difficult to get, and
- it does not have strategically comparable substitutes.

The resource-based theory is very reality oriented. It takes up many concepts of great importance for daily organizational life. The concepts of social complexity and causal ambiguity are particularly relevant in the studies of managing information resources and knowledge sharing in organizations.

2. Brief History of KM and CI

Brief History of KM

KM is the most innovative, creative, and important management concept to come along in the last 25 years. Researchers are calling it the only solution for competitive advantage in the new century (Evans 13; Hedlund 73; Hibbard, 7; Martinez 88; Trussler 16). According to Robert H. Buckman, CEO of Buckman Labs, the purpose of the KM and sharing system at his corporation is to "facilitate communication across all of the organization's boundaries, so that the entire company works together to help everyone to be the best they can be" (Buckman 11).

Many forward thinking companies are realizing the value in systematically capturing, analyzing, archiving, and distributing knowledge. From Motorola's Six Sigma program to the integrated KM systems of today, firms have derived substantial value from effectively managing their knowledge assets. A survey by Ernst & Young's Center for Business Innovation and Business Intelligence reports 94% of the respondents admit they could better use the knowledge in their companies through more effective management, 40% have KM systems up and running or in development, and 25 % have plans to develop KM strategies in the next year (Hibbard 2; Evans 2).

KM comprises a range of practices used by organizations to identify, create, represent, and distribute knowledge. It has been an established discipline since 1995 with a body of university courses and both professional and academic journals dedicated to it (Stankosky 22). Many large companies have resources dedicated to KM, often as a part of 'Information Technology' or 'Human Resource

Management' departments. KM is a multi-billion dollar world-wide market.

KM programs are typically tied to organizational objectives such as improved performance, competitive advantage, innovation, developmental processes, lessons learnt transfer (for example between projects) and the general development of collaborative practices. KM is frequently linked and related to what has become known as the learning organization, lifelong learning and continuous improvement. KM may be distinguished from Organizational Learning by a greater focus on the management of knowledge as an asset and the development and cultivation of the channels through which knowledge, information and signal flow.

Brief History of CI

Prescott wrote one of the first modern insights into the evolution of CI. He identified three stages of CI development and contended that stage one occurred during the 1960's and 1970s. He defined CI activities at this time as being mostly associated with data gathering, and that they were informal and tactical. He explained that CI was poorly linked to decision-making and involved little analysis (71-90).

Prescott's second stage of CI Development was defined as CI activities in the 1980s when competitor and industry analysis became popular. According to him, competitive intelligence personnel switched from library functions to marketing and planning functions. He explained that competitive intelligence activities remained tactically oriented whereby the spy image began to evolve, and there was very little by way of quantitative data analysis (Prescott and Gibbons 71).

The third stage of Prescott's CI Development that began in the 1990s, showed CI contributing to strategic decision-making that was built into dedicated formal units, either on their own or within their marketing or planning. Since then, competitive intelligence activities have been oriented to both tactical and strategic decision-making and include qualitative and quantitative analysis. Competitive intelligence receives moderate attention from top management and is often a valuable contributor to strategic decision-making (Prescott and Gibbons 71).

3. Benefits of KM and CI Functions to Organizations

Benefits of KM

Knowledge is certainly the best resource and the only sustainable competitive advantage to individuals and organizations. There are numerous benefits of the KM

programs to organizations from various industries. The Australian Standards Authority provides the following list of ways a KM strategy can tailor particular kinds of benefits to the core business of an organization (Rollo and Clarke 13):

- Industries based on innovation can use KM to accelerate the process of research and development, and to manage intellectual property.
- Companies offering professional services can use KM to enhance (by broadening or deepening) their expertise.
- Industries founded on creation of intangibles (such as entertainment and publishing) can employ KM to develop creative skills and networks, and to protect intellectual capital.
- Industries relying on relationships (such as retail) can use KM to enhance customer service and offer greater product and service depth and quality.
- Companies dependent on the value of brands (such as fashion) can use KM to improve their market intelligence.
- Companies requiring good coordination of complex activities (such as manufacturing) can use KM to increase control.

Unfortunately, all of the benefits can only be achieved by having all the strategic elements in KM that are human, technology and culture. KM is highly dependent on the quality of human capital or intellectual capital, in terms of creativity, insight, entrepreneurship, and innovation as the most critical source of an organization's or a country's competitive advantage. Knowledge is power, since the main asset which determines the employability of individuals is their knowledge. Meanwhile, (Davidson and Voss 32) stated that "Computers are fast, accurate but dumb; on the other hand, human are slow and sloppy but smart!" Therefore, it is very crucial to focus on the most critical element that is human which include the education and training for the knowledge worker.

Benefits of CI

The impacts that a CI programs may provide will depend most upon the organization needs. Among the most significant impacts of CI practices that have been highlighted by the Global Intelligence Alliance (GIA) in their study entitled Competitive Intelligence in Large Companies - Global Study in 2005, are as the followings (Global Intelligence Alliance 12):

- Increased quality of information
- Accelerated decision-making
- Improved organizational processes systematically

- Improved organizational effectiveness
- Decreased costs
- Increased organizational awareness
- Improved information dissemination
- Improved threats and opportunity identification
- Time savings

4. KM Process and CI Process

KM Process

To understand the KM process, we can refer to Figure 1. The discovery of existing knowledge involves locating internal knowledge within the organization. This process addresses the oft-quoted phrase, "if only we knew what we know". Large, non-hierarchical or geographically dispersed organizations find this knowledge gathering process especially helpful as one part of the organization may not be aware of the knowledge existing in its other parts. Acquisition involves bringing knowledge into an organization from external sources. The creation of new knowledge may be accomplished in several ways.

- First, internal knowledge may be combined with other internal knowledge to create new knowledge.
- And secondly, information may be analyzed to create new knowledge. This is adding value to information so that it is able to produce action. One example of this knowledge creation process is competitive intelligence. Technologies are useful at this stage because they can facilitate the creation of new knowledge through the synthesis of data and information captured from diverse sources (Oluic-Vukovic 54).

After knowledge has been gathered, it must be stored and shared. Knowledge sharing involves the transfer of knowledge from one (or more) person to another one (or more). Knowledge sharing is often a major preoccupation with knowledge management and is frequently addressed in the literature. Not only most organizations abandon the idea that all knowledge should be documented, but they should also be ready to implement different methods for sharing different types of knowledge (Snowden 52)

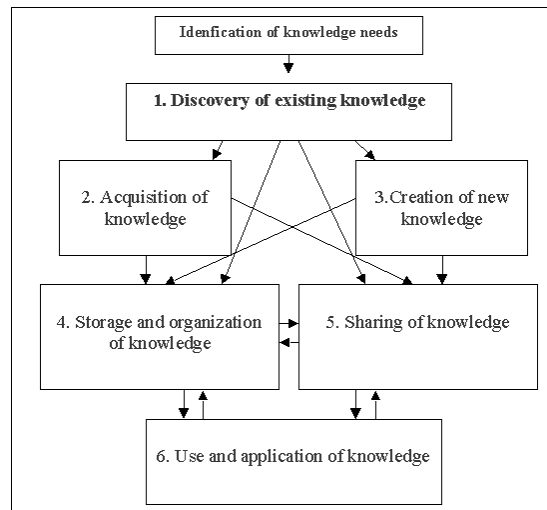


Fig. 1 Conceptual framework: knowledge management processes

The CI process

The goal of CI is to provide “actionable intelligence” (Fahey et al. 32), namely, information that has been synthesized, analyzed, evaluated and conceptualized. It is part of the strategic information management that is aligned with an organization’s strategy (Bergeron 263; Kennedy 120). To be successful, businesses must create a culture within their organizations that promotes a culture of competitiveness and of exchanging knowledge and ideas among individuals and departments. Achieving this requires embracing the new 21st century information-age model (where wealth is built on gathering information about new ways of satisfying customer needs).

Unfortunately, too many businesses today still look internally like the old industrial, or “smokestack”, industries where the “smokestacks” are the isolated “silos” that make up individual departments within their organizations such as marketing, engineering, or human resources. These departments act independently, without sharing information or ideas, whether strategic, tactical, or technological. As a result, the entire organization suffers (Dent 169). Intelligence works best when viewed as a process comprising a number of activities (Kahaner 39). Expert CI practitioners refer to a cyclic process called the CI process or cycle consisting of various steps or construct that should follow one another without any of the steps of actions being overlooked. From previous studies, there appears to be support for distinct stages in the CI process. Key constructs or stages that emerge in the literature are as follows:

Intelligence is viewed as a process comprising a number of activities, steps or constructs that should follow on from one another without any of the steps of actions being overlooked (Kahaner 18). Key constructs or stages that emerge in the literature are as shown in Figure 2:

- (1) planning and focus, i.e. focusing on issues of highest importance to senior management (Daft et al. 284; Gilad 29);
- (2) collection, i.e. the focused collection of information from a variety of sources internal or external to the company (Collins, 3);
- (3) analysis, i.e. converting information into “actionable intelligence” on which strategic and tactical decisions may be made (Gilad and Gilad 5; Kahaner 2; Calof and Miller 213);
- (4) communication, i.e. packaging and communicating the results of the CI process or project to those with the authority and responsibility to act on the findings;
- (5) process and structure, i.e. those structures that ensure effective CI can be performed; and
- (6) organizational awareness and culture, i.e. to ensure that CI is well executed and that all should participate, there must be the right competitive culture and information gathering (i.e. it should be on everyone’s mind) (Kahaner 4).

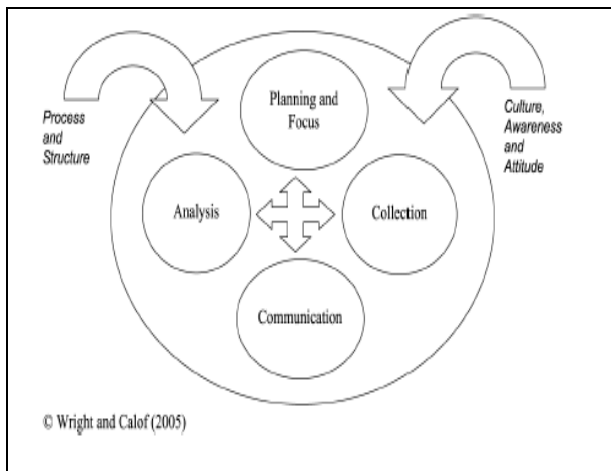


Fig. 2 The CI process

5. The Similarities and Differences between KM and CI

The fields of CI and KM have a number of similarities. Few scholars or practitioners span both disciplines, but potential exists for each field to contribute to the other. CI generally focuses on gathering competitive information from all conceivable sources, analyzing that data, and making decisions. KM concerns identifying, collecting, codifying, and sharing the

knowledge assets of the organization. At their core, both fields are concerned with gaining competitive advantage from better applications of information or knowledge. Moreover, both of the fields depended on the same resources that are human resources, financial resources, technological resources; and informational resources (Cook, M. and Cook, C. 19-21).

Table 1: A Comparison between Knowledge Management and Competitive Intelligence

Knowledge Management	Competitive Intelligence
-Internal	-External
-Reactive	-Proactive
-Technology-based	-Source-based
-Dependent on employee willingness to contribute	-Environment driven (Political, Economical, Sociological and Technological)

As shown in Table 1, there are significant differences in the focus and activities of KM and CI (Shelfer 419), the core differences between the two fields are:

1. KM focuses on the internal information and knowledge resources. Whereas, CI focuses on the internal information and knowledge resources.
2. KM tends to be more reactive in nature. On the other hand, CI tends to be more proactive especially in predicting the movement of the competitors and changes in the market.
3. KM is more concern on technological resources or IT facilities such as groupware application, knowledge portal, database, related hardware and software. On the other hand, CI is more concern on the information sources such as primary sources, secondary sources or tertiary sources in order to make strategic decisions.
4. KM is more incline to be dependent on employees’ willingness to contribute their knowledge, expertise or experience regardless of the technological facilities provided by the organization. While CI is more dependent on broader scope that consist of Political, Economical, Sociological and Technological environment.

6. The KMCI Relationship

The KM and CI (KMCI) strategy combines effective (KM) and appropriate (CI) to provide the right mix of the right information to the right decision maker at the right time. The right decision still rests with the decision maker, but this integrated approach makes beneficial outcomes more likely than the use of either KM or CI alone.

As shown in the model in Figure 3, KM and CI functions support each other. Information obtained through the CI process and the firm identifies its CI priorities through its KM efforts. There is considerable value gained by developing an integrated approach since only the combination of KM and CI can provide all of the information needed by the decision makers, and neither KM nor CI operates “in a vacuum”. This KMCI Model clearly demonstrates this relationship. In Spitzer’s 1998 keynote address to the Society of Competitive Intelligence Professionals, he pointed out six key factors that impede effective CI: 1) lag between the decision and its implementation (decision drag); 2) data overload; 3) outsourcing the “thinking”; 4) teams that do not understand the critical thinking process; 5) lack of context (organizational values); and 6) lack of creativity and innovation. Adding KM components to the CI process can help to resolve many of these problems (Dysart 8).

The purpose of KM is to add value of information already held by the firm, resulting in knowledge that will be of strategic use to the firm. Although specifics vary, KM generally deals with 1) expertise or human capital; 2) general and financial management; 3) customers, operations, marketing and sales; and 4) intellectual property, technical processes, and products. Another important aspect of knowledge is the integration of the firm’s existing CI into the knowledge base. CI, on the other hand, has an external focus. CI is defined as the legal collection and analysis of information regarding the capabilities, vulnerabilities, and intentions of competitors by using “open sources and ethical inquiry.” When KM attempts to lever internal information and expertise, CI works to filter information, develop an understanding of the multidimensional nature of the competitive arena, spot trends, and articulate changes in advance of the market (Dysart 8).

According to Bensoussan (56), the keys to a company’s future are not found in forecasts, predictions or media gurus, but through patiently, carefully and strategically turning a company’s knowledge into competitive intelligence”. She

identifies the components of CI as available data and expert judgment, and calls for intelligence to be “future-oriented, accurate, objective, relevant, useful, and timely” (11). In other words, each drives the other. As shown earlier in Table 1, although there are significant differences in the focus and activities of KM and CI, the results of both processes must reach the desktops of those who are charged with making strategic decisions that change the course of corporate and economic history. This is the point at which KM and CI intersect-the fulcrum. The actual point of intersection will vary depending on the type of decision to be made and the action/reaction that results.

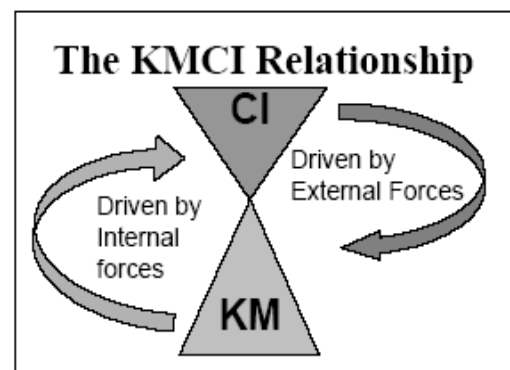


Fig. 3 The KMCI Relationship. Source: Katherine Shelfer, Drexel University, 2004.

7. Conclusion

As discussed above, KM and CI have similarities, differences and many benefits to offer regardless of the size and industry of a particular organization. Furthermore, in today's turbulent and uncertain business environment, knowledge has become a key ingredient to give strategic direction to any firm. KM and CI are in this regard two important strategies or practices through which organizations could foster insight in order to ease the complexities of strategic decision-making. A number of authors have strong views on the role and boundaries of each of these concepts (Senge 10; Gilad 21; Liebowitz 16; Rothberg and Erickson 6).

Besides, the integration of KM and CI processes provide the appropriate model for identifying and prioritizing the information needs of an organization because it is able to recognize and reflect changes in the market and compete in the market. The organizations should never focus on just one of the fields but rather must always focus on both of them in order to create and sustain competitive advantage in

their organizations. Each of the field should not be treated as separate entity rather they are complementing each other as KM focuses more on managing the internal knowledge resources; whereas CI focuses more on managing the external knowledge resources. The organizations can leverage on the resources that they have invested for KM or CI because both of the fields depended on the same resources that are human resources, financial resources, technological resources; and informational resources (Cook, M. and Cook, C. 19-21).

Furthermore, KM and CI are ongoing functions and should never be considered a project with a completion date. Senior management and overall organizational support are essential to have effective KM and CI programs. Expectations must be defined to ensure that the work being done is providing value and is a positive addition to the organization's bottom-line. Data is data. Analysis of the data needs to be completed and reported to enable the user to apply its relevancy to the organization's business.

Hence, without an effective KM process, gathered CI is likely to collect dust because there is no proper process to turn the information into something usable. Even if immediate actions are taken based on collected CI, it must be integrated into the internal knowledge systems to develop any long-term learning. This learning is a crucial element to enable companies to become skilled at spotting trends and adapting to business change. In this context, we can refer to Charles Darwin theory. Darwin's focus was on the survival of the fittest and not the survival of the biggest or the cleverest or the fastest. Survival of the fittest refers to a species' ability to adapt to its external environment, and change as the environment changes. Exactly the same principles apply in business. Businesses with effective processes for collecting intelligence on their external environment, integrating it with internal information, and then using both external and internal knowledge to take advantage of opportunities while guarding against threats will be those that survive in the long-term and thus be able to compete strategically in the K-Economy.

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