

ABSORPTIVE CAPACITY: EMPIRICAL OBSERVATIONS

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Abstract

This paper empirically investigates the concept of absorptive capacity. It follows qualitative case study research design and is based on cross case comparison. This work examines the depth of the concept of absorptive capacity and scrutinizes its current representations. It discusses the significance of all components of absorptive capacity and thus questions the representation of absorptive capacity as potential and realized. It establishes the importance of individual and organizational action and reviews the performance-oriented outcomes of absorptive capacity. It engages the discussion around organizational structure and proposed to re-think that role of formal hierarchies. The paper also put forward a number of implications to consider for the future of the concept.

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1 Introduction

The notion of absorptive capacity was introduced and argued by Cohen and Levinthal (1989; 1990; 1994). The concept has been greatly researched since, but there are a few major weaknesses. First of all, despite numerous developments the idea has remained fairly abstract and has failed to articulate how absorptive capacity derives from organizational daily operations. Thus the concept requires indepth empirical investigations that could shed more light on the practice of knowledge absorption (Lyles et al, 2008; Todorova and Durisin, 2007; Lane *et al.* 2006; Easterby-Smith et al., 2008). Furthermore, at the moment the literature portrays the internal processes of absorptive capacity using an input – transformation – output model where output is a tangible outcome of organizational performance and competitive advantage (Cohen and Levinthal, 1990; Zahra and George, 2002; Todorova and Durisin, 2007). The evaluation of knowledge oriented processes is usually a relatively complex task (Alvesson, 2004); therefore the representation calls for more thorough understanding and re-examination. As a result, this paper aims to empirically investigate and further develop the concept of absorptive capacity.

2 Research design

The work builds upon the analysis of the empirical evidence collected from four participating companies based on the case study research design (Stake, 2000). The study covers four cases: BuildCo, SnackCo TobacCo and ElectronCo. The cases were examined using in-depths qualitative interviews which engaged the middle and top managers. The interviews were also accompanied with informal conversations and observations of some organizational processes. All companies were observed and interviewed at least twice in the span of a year (from April, 2007 until April, 2008).

The cases are located in Belarus. This was a choice underpinned not only by practical issues of finding the suitable companies, but also by the research interests, goals and concerns. Setting my research in Belarus was also an intentional step for its economic and market situation. Currently, the country is rebuilding its economy attempting to balance out the residual elements of Soviet heritage with the new market principles. The environment is highly unstable and constantly changing. It calls for companies to adjust, adopt, learn and develop continuously. Therefore, by choosing Belarus as my research ground I have open up a possibility to learn interesting and untraditional combinations of organizational knowledge practices.

The accumulated data was analysed and contrasted using elements of grounded theory, namely searching of reoccurring themes, processes, metaphors and elements to depict the internal workings of absorptive capacity (Charmaz, 2006). The main unit of analysis in each case was the organization. The cases were identified based on their ability to extend and develop the existing theory through providing comparative and, at times, polar examples (Yin, 2008; Eisenhardt, 1989). It appears each company exercises a certain positions with regards to the knowledge absorption. Their positions can be contrasted and, even though it was not intentional; can be organized in two camps: BuildCo and SnackCo and TobacCo and ElectronCo. It seems that cases within these groups demonstrate similar characteristics with regards to knowledge processes, and as a result, strengthen the explanation power of the data. Noticeably, this research design is neither capable of generalizing the findings to the general population, nor able to establish and verify the relationships between variables. On the contrary, it is equipped to provide in-depth insights which enable us to advance existing and generate new theories (Charmaz, 2006; Eisenhardt, 1989; Corbin and Strauss, 1990).

3 The data

3.1 *The cases: Introduction*

The cases represent four different sectors: construction, engineering and consulting, fast moving consumer goods – snacks, fast moving consumer goods – tobacco. All of them are successful and prosperous in their activities, meaning that they have been able to sustain continuous operations and collect profits for over ten years. BuildCo is a construction company that entered the Belarusian market in 1990 as a cooperative. It initially employed about a dozen of people and now has grown over the 1000 workers mark. BuildCo provides a full spectrum of construction and renovations works; its main areas of expertise are roofing, plumbing and redecoration. It is one of the few companies in the market that provide a full spectrum of building and assembly jobs starting with design and finishing with décor. Over the years it has accumulated an extensive stock of construction machinery releasing itself from being dependent on the third parties.

SnackCo represents a fast moving consumer goods sector (FMCG). It arrived at the market in 1998 with one brand and one product - potato chips. Eventually SnackCo diversified its range and currently is holding a portfolio of 13 products and 10 brands. It includes potato and corn chips, snacks and crackers, nuts and instant foods. The company mainly operates at the Belarusian market and possesses a relatively low export volume (about 10% of the whole product mass).

ElectronCo is an engineering company. It provides servicing in the field of electronic modifications to the engineering tools and machines of various kinds. The company also replaces old machinery and offers advice on the maintenance and care. ElectronCo was established in 1995 in the partnerships with SIEMENS, and since 1998 it has become SIEMENS's main servicing centre in the engineering sphere covering Belarus, Ukraine and parts of Russia. The company also engages in design and development of hand-tailored machine parts and components that fulfil specific functions.

TobacCo is a representative office of a global tobacco brand. It cooperates with and reports to three offices simultaneously: Moscow, Amsterdam and London. The office in Belarus was established in 1996 and today counts about 500 employees. It has a widely branched out structure reaching out to over 20 regional cities in Belarus. Due to some legal regulations on imports, starting in 2005 the company has established a production partnership with the local tobacco factory.

So now let's turn to the in-depth examination of the four cases. They will be discussed in pairs based on the similarities they have exhibited.

3.2 *TobacCo and ElectronCo*

With regards to knowledge absorption TobacCo and ElectronCo are very alike. Both companies are structured in such a way that encourages innovativeness, initiatives and opportunism. In its practice, ElectronCo keeps to the principles of competence-based leadership, social interaction and communication whilst TobacCo exercises mutual substitution and organizational flexibility. These principles allow for organizational members at both companies to continuously shift tasks and roles regardless of their positions and hierarchies. As a result, both organizations continuously re-design and modify their organizational structures and hierarchies which in turn affect overall flexibility, interconnectedness and communication.

Moreover TobacCo possesses a variety of social routines. Both companies possess extended cross departmental cooperation, team based operations and wide individual inclusion. In this way TobacCo internal's functions based on the principle of mutual substitution. This comes about through a number of unified organizational standards in record keeping and task handling enabling any member to step in if required. At the intra-departmental level socialization habits include the weekly meeting of top team members, sector specific business briefings (for example sales, marketing and innovation) and organizational forum. Furthermore, once in three months TobacCo meets together as an organization. On the other hand ElectronCo practices a principle of competence based leadership and team-based project work. The important principle in the organization is the idea of Folksonomy which invites employees to take responsibilities and stay active in defining and creating their work routines.

The diversity of social practices at both companies provides their members with a safe space to innovate and try new ideas, and as a result positively reinforces the search for expansion of organizational tasks and routines. Quite often it is a worker's personal initiative that moves things forward. This can be illustrated with the experience of TobacCo employee, whose innovative ideas about sales and merchandising were originally declined by the management but later, through practical demonstration and individual persistence, dramatically changed organizational functioning. The idea involved a special shelving unit that emphasised TobacCo's products and minimized the visibility of other brands. So the innovator made the unit himself and installed it at one sales location. The increase in sales was obvious and as a result the unit was adopted for the company as the whole as one of its sale strategies.

It seems that TobacCo is highly capable of encouraging creative thinking; so as ElectronCo which has also introduced some revolutionary changes. In this way the idea of ElectronCo's director to become a no paper business² has influenced not only the way organization deals with information, but also effected organizational resource distribution and strategic vision. The core of the plan was to introduce the company to a new centralized communication tool – intranet. It took the company some efforts to adopt its practices to this new technology, but now it is an integral and essential part of organizational functioning. In addition to that ElectronCo not only possesses virtual means of communication, but also provides physical space such as internal newsletters, bulletin boards and even dedicated socialization place such as the kitchen to encourage organizational socialization, communication and information exchange.

Moreover, the features of the work discipline (like organizational principles of mutual substitution and internal development of employees) and division of labour arranges the responsibilities in such a way that knowledge absorption happens naturally as part of organizational functioning. There is no need to call for additional meetings and briefings to assimilate new ideas. The organizational life revolves around information exchange, so dialogues happen naturally and are closely intertwined with daily operations.

Besides, both organizations have an open and constructive dialogue with their environments. So in order for the companies to decide on the absorption of new knowledge, TobacCo and ElectronCo are required to determine where the point of not knowing is, how far outside it is and how it should be penetrated. For example, the deal that ElectronCo originally had with its environment did not look extremely promising. ElectronCo is a rather untraditional business. Its product is engineering knowledge that the company offers within a relatively small industry of not more than a dozen

² No paper business is a business strategy (attitude) that encourages ElectronCo to keep its records in the electronic rather than paper form. It requires employees to keep their working records at the internal portal to facilitate organizational efficiency and communication.

competitors. The clients are predominantly the large state-owned machine-tool plants whose orders for servicing or replacement are rare but incredibly desired by the whole industry. So in order to increase their chances of success ElectronCo has diversified their specialist knowledge and offered not only technological solutions, but also business processes tool as ERP and PM systems. In addition to that they propose to develop tailor made solutions for machine-tools and technologies. In order to secure the deal even firmer they have extended their service offers to Russia and Ukraine covering vast territories of un-serviced machine-tool plants. It took the company over five years to achieve, but currently ElectronCo is perceived as a full spectrum engineering firm with multiple opportunities, solutions, processes and products that operates over the large geographical areas. No other firm has been able to replicate or copy their model yet and it can be presumed that ElectronCo has successfully managed to re-negotiate the status quo with its environment.

It is worth mentioning that never at no point in going through this turbulence was ElectronCo positively confident about the outcomes of the plan. Neither was TobacCo's innovator positively sure of the effects of his innovation. The question for both cases never was, and still is not about the confidence and accuracy of the decision; but it is concerned with trying and doing. What is interesting is that organizations have placed practicing over deliberations, thus it seems that TobacCo and ElectronCo are highly interested in structuring the new knowledge in such a way that it would lead to the development of new capabilities and actions.

In addition to that both companies retain a very friendly working climate; but informality of working relationships does not get in the way of carrying out the work tasks. TobacCo and ElectronCo possess clear role divisions and responsibilities, and straightforward organizational processes. However these divisions are created there for the people and by the people and are a subject for transformation, change and improvement. They help organizing the work flow at both companies, and when complimented by social routines and communication channels serve as an effective framework for organizational operations. Moreover, both leaders exercise very open and liberal styles of managing, though the Electron leader is more engaged in daily organizational operations than the TobacCo one, who mainly deals with the more strategic organizational issues.

It seems that TobacCo and ElectronCo prioritise social decision making and participation; they advocate initiative and cross-departmental cooperation. They emphasise the value of practice, action and reflection as means of claiming to have learnt something. The companies continuously scan the environment for new information and ideas to change and challenge their existing assumptions. As a result, TobacCo and ElectronCo knowledge operations are formed by various social and technological means of accumulating and disseminating new information (social routines, networking, intranet, information boards, electronic library and electronic newspapers). Their knowledge is embedded in integrated practice which is based on systematic inputs from the environment.

3.3 *SnackCo and BuildCo*

On the other hand, SnackCo and BuildCo have developed a different set of attitudes towards the value of the external knowledge. Both cases demonstrate rather low interest in external knowledge, and infrequently venture outside. Furthermore, on the contrary to a previous pair which is relatively harmonious, BuildCo and SnackCo often vary in their practices and therefore at times they will be discussed separately.

BuildCo is a highly centralized, rigid and controlled system. It possesses a clear hierarchy which channels all organizational activities. It is based on the relationships of obedience, subordination and

regulation leaving little room for employees' initiatives, opinions and ideas. Moreover, the division of roles separates the employees into the managerial and construction staff which results in different organizational statuses. These statuses are somewhat incommensurable at the level of their involvement and ability to influence organizational operations. The situation can be demonstrated through BuildCo's example of technology transfer from a partnering organization. The company has delegated its mediation to the managers rather than to the construction workers despite the fact that it is the latter who are the end users.

The company is a tight community which is founded on traditional Soviet principles of centralism, one-man rule and unquestionable execution. The decision making authority is placed in the hands of one person, the director, who exercises wide task delegation and influence. Because of this arrangement, organizational members seem to be deprived of any ability to make individual choices or initiate changes. Moreover, the tradition of unquestionable subordination and total trust in the almighty leader has suppressed critical insights and independent evaluation amongst the people producing uniformity of thoughts and actions.

The organizational boundaries are clearly drawn and are hard to penetrate. It appears that the company holds high regard and pride in its internal knowledge, sometimes even to the extent of rivalry and competition. This can be illustrated with the example of knowledge absorption from foreign experts who unfortunately left BuildCo with an impression of being treated as uneducated communists. This reinforced the company's beliefs in Soviet knowledge and reassured BuildCo in its potential. As a result the company has devalued the outside knowledge, demarcated its organizational territory and concentrated on the internal potential.

It seems that BuildCo's overbound, tight system of operations with the formal structure of the social relationships has triggered organizational apathy and indifference towards the external knowledge. The prior related experiences that company has accumulated have led it to diminish the external inputs and minimize their own attempts of exploration. The low creativity on the employees' part has caused the homogeneity in task and thought. It appears that the relationship of delegation limits the company's ability to break the repetitiveness of the behavioural loop and further reinforces the existing routines; as does the decision making structure that discourages employees to go beyond their job duties.

Furthermore BuildCo's communication system funnels its ability to 'see' and 'understand' even with greater perseverance. On top of deficient social conduct, there is no other central system, such as technology or office arrangement, that could provide information support to the organization. This constrains the opportunities for individuals to have extended discussions and exchange their views. This can be illustrated by the BuildCo's experience of considering the development of organizational intranet. The initiative was put forwards by few employees, but was considered to be a waste of time and resources. It seems that all these issues combined have led the company to undervalue the new knowledge and resulted in rare and infrequent self-driven knowledge absorption campaigns.

Though the situation is different when knowledge absorption is triggered by some external or internal factors. An example can be provided by discussing BuildCo's adoption of ISO standards. When the legal requirements about the need for ISO certification in construction industry were confirmed, the director held a board meeting. At that meeting he determined that there were no current employees suitable for the task and decided to recruit a new candidate. In the span of a week, the person was identified and hired, and in half a year period BuildCo was certified with ISO-9001. The ISO officer was publicly granted full director's support which loosened the hierarchical barriers and assisted in

efficient and resourceful task fulfilment. However, yet again the formal arrangement revealed itself and this time appeared in the form of employee segregation and exclusion. During the adoption of ISO standards, it did not occur to BuildCo management to engage shop floor employees and as a result they rebelled against the changes imposed by new system (such as additional quality checks and financial penalties). It required additional efforts on the part of BuildCo management to settle the concerns, but it could have been avoided if the organization was more integrated and inclusive.

SnackCo, on the other hand, seems to be a very liberal and flexible organization. Having a friendly environment and relaxed atmosphere the company perceives itself as a big family, but in spite of this it possesses a strong father figure at the top. On paper, SnackCo has a clear departmental division with the general director at the top, but in practice these boundaries dissolve within the highly individualistic culture. As a result the organization has a great number of opinionated and dynamic individuals who play an important role in its everyday life. Here an example about new head of the Sales department can serve as an illustration. In general, SnackCo questions the rationale behind training and learning. It holds a view that people tend to leave after they have learnt. Despite this wider belief the Sales director decided to share his personal knowledge and experience with the employees of his department and discuss how it can serve SnackCo. This has instigated a series of internal Sales seminars where employees would brainstorm and exchange ideas. Thus the effects of his efforts were undoubtedly helpful, although they do leave me wondering how far the company could reach if it was to extend these practices.

Moreover, the SnackCo's family-like environment suppresses the development of a professional business conduct and promotes informal communication. As a result, at the group level the company suffers the deficit in organizational awareness, communication and memory. It lacks the backbone behind its process of organizing and, considering that the director has far too many different engagements, it is left unaided in arranging its operations. In addition to that the existing communication channels also impede development of centralized organizational routines. Most of the company's negotiations and discussions take place on personal, one-on-one basis and are rarely formally recorded. This can be illustrated by an example of the recipe search conducted by a production engineer where he failed to get a straightforward answer right after the Tasting Committee meeting. The committee is a central decision making body on organizational products and their alterations, but because no records are kept its discussions are hard to reconstruct and retrieve. It took the engineer three phone calls to reconstruct the conversation that had taken place less than two hour prior to his search. The lack of proper communication obstructs SnackCo's ability to have dialogues at the organizational level and as a result impedes the development of the collective ways for seeing. SnackCo fails to build up comprehensive social mechanisms of sharing and involvement. As a result SnackCo possesses no evidence of social systems that could enable the self-designing processes to take place, as in the case of TobacCo and ElectronCo, nor does it have clear hierarchical hubs, as those at BuildCo.

It seems that at SnackCo the multiplicity of individual opinions in conjunction with lack of proper communication leads to deficiency in communal agreement on what needs to be absorbed and how the organization should go about it. The knowledge is being evaluated and acquired on basis of specific personal needs and tasks. It is absorbed also individually amplifying organizational resources and duplicating the efforts. And most of all, it results in low added learning value since the knowledge is not properly shared or even perhaps a learning loss if a person chooses to leave. Furthermore, the perception of the organizational boundaries exists only for these individual agents who actually venture outside once in a while and attempt to negotiate with the environment. It is only them who know what the organizational is capable of and where it stands with regards to its competitors. Most of

the SnackCo members repeat and reproduces their daily tasks and routines relying solely on the internal capabilities and passively observing the initiatives of others.

BuildCo and SnackCo are exploitation-driven companies which place emphasis on the internal potential and rely on their people. They choose to react to their environments rather than to actively penetrate it. Organizational activities are regulated in such a way that employees are left with fulfilling their job duties as opposed to participating in creation of organizational practices. At BuildCo cross-functional interaction does not exceed the boundaries of business related topics and unavailability of virtual or social space for communication leaves any new idea at its entry point, namely at specific individual. SnackCo, on the other hand, is very relaxed and informal about its communication, but most of it takes place through personal interaction and is rarely recorded. Consequently, both firms have developed very scant, ad hoc, sporadic and individually driven knowledge absorption practices. They acquire new knowledge only when faced with a problem and concentrate on recycling and reusing old ideas, which evidently provide minimal new learning and change. The overall summary of all four cases illustrating their similarities and differences is presented in Table 1.

| TOBACCO | ELECTRONCO | ORGANIZATIONAL FEATURES | BUILDCO | SNACKCO |
|---|--|--------------------------------------|---|--|
| Liberal, open, participatory, often shifting and competence-based | | LEADERSHIP | Formal, one man rule, centralized | |
| Participation, mutual substitution, initiative, integration, equality | Folksonomy, participation, integration, initiative, equality | VALUES PRINCIPLES CULTURE | Subordination, delegation, power of authority, segregation | Individualistic, Informal, power of authority |
| Flexible, changing, formal and informal | | STRUCTURE | Formal, rigid, hierarchical | Loose, fluid, individualistic, informal |
| Formal and informal communication, cross-departmental cooperation and team-based work | | SOCIAL ROUTINES | Bound by structure; submissive | Informal, unrecorded, unstructured; disintegrated |
| Open dialogue, belief in active penetration | | RELATIONSHIP WITH ENVIRONMENT | Closed boundaries; relationship of adoption and subordination | Environment is a given and is dealt with at the individual level |
| Open, interested, enquiring, improvement-driven | | POSITION ON CHANGE | Closed, problem-driven | |
| Empowered, involved, motivated | | INDIVIDUAL AGENCY | Delegated, coordinated, managed | Delegated, uncoordinated |

Table 1

4 Theoretical implications and discussion

The cases are successful and prosperous companies; but as the previous section has illustrated their organizational practices and routines are quite different. Let's now discuss how these practices influence organizational ability to absorb knowledge.

4.1 *Implications for knowledge absorption: TobacCo and ElectronCo*

It appears that TobacCo and ElectronCo possess open working climates and liberal leaders who, whilst demanding high performance, allow organization members much room for individual flexibility and creativity. Such flexibility positively reflects on development and diversification of individual worldviews and as a result increases a spectrum of interests that individual agents might have in the environments. Thus the companies find themselves in the midst of multiple experiences that contribute towards expanding organizational knowledge through diversifying the cognitive structures of organizational members. Furthermore, by the means of their dynamic communication systems both companies are able to build on and maintain organizational frames of reference. These frames dictate and focus the individual knowledge exploration and serve as guideposts of the organizational needs. As a result both companies have a high regard for the external knowledge and are active in acquiring it.

Furthermore, TobacCo and ElectronCo perform relatively well with organizing and sharing their newly acquired knowledge. This process is mediated by multiple factors. Both companies stipulate communal and social practices. These routines help in clarifying and reifying organizational frames and furthermore force them out into the public domain. On top of that both companies benefit from their virtual and media systems. Organizational intranet, newsletters or even bulletin boards provide the physical space for the interpretation process. They are up-to-date, efficient and fast in distributing messages across the organizations. On top of that they contain vast amounts of easy to access codified organizational knowledge. These features at TobacCo and ElectronCo maintain a continuous supply of the prior related knowledge and therefore assist in assimilating the incoming message. It seems that the technical infrastructure provides a functional framework for recording and communication so that the social and structural mechanisms could extract cues and assimilate the message of the newly acquired knowledge. It demonstrates how social and technical infrastructure affects knowledge absorption and highlights the need for the process continuity and integration.

In addition to that both organizations hold clear purpose and understanding of why the knowledge is being absorbed and how it can benefit organizational operations. This helps to guide the process of acquisition through the regulated application of resources and human efforts. Moreover TobacCo and ElectronCo possess flexible organizational boundaries that allow knowledge to permeate inside with no severe obstructions or delays. All these factors combined create a smooth pathway into the organizations and positively affects speed and intensity of knowledge acquisition. It seems that the purpose of knowledge absorption and high interest in the value that the external knowledge encourages organizations to stay receptive towards their environments. As a result, organizations develop flexible and open boundaries for new external knowledge to enter.

Moreover, organizational leaders assist this process by setting the example, and ensuring that suitable organizational functions exist for the process of absorption. In this way when the intranet was introduced to ElectronCo members, the director did not miss a chance to mention it. He used every opportunity to discuss with employees its use and application as well as answer their queries. He was one of the first to start using the intranet, and in so doing set a path for others to follow. The director also set up educational initiatives and training so to facilitate smooth adjustment to and appropriation of the new system. It demonstrates that ElectronCo possesses a high regard towards organizational action. The organization promotes practice-based approach which positively affects knowledge absorption as it encourages vigorous exploitation and establishes paths for further exploration.

Even more so, the culture at TobacCo favours proactive behaviours and demonstrates that through its attitude towards mistakes. The principle of TobacCo is that the person does not work if she does not make mistakes; however the efforts must be put into the learning process so as not to repeat the same mistake twice. This organizational climate encourages experimentation and dynamic implementation of the new knowledge; it encourages creative fits and inventive designs of new organizational routines. The organizational practices reinforce organizational knowing in action and help its knowledge to be exploited. Moreover, both cases are interested in multiple exploitations in order to deliver untraditional, diverse and innovative resource combinations. It seems that the importance of knowledge application is central for operations at TobacCo and ElectronCo.

Furthermore, TobacCo and ElectronCo possess high tolerance to change. The quest for improvement, search and development is deeply embedded in organizational practices, and positively reinforced by the leaders. Even though the director of ElectronCo is more proactive as a change agent than his TobacCo colleague, both managers encourage inventive behaviours. The director of ElectronCo is himself a committed activist, who participates in and helps with various organization projects. So speaks a sign on his door that reads *Ask me how!* and it is demonstrated by actions when he personally scanned a dozen management books to promote the use of online library.

All these practices and examples not only encourage organizations to use their knowledge, they also contribute to general organizational understanding and experience which in turn influences the next cycle of knowledge absorption. They positively reinforce and diversify organizational expectations of what the environment can potentially bring. Thus the organizations are no longer silent observers that interface with their environments, but are active intruders that continuously transfer the knowledge from the outside. It seems that the more experience organizations acquire, the better use they can gain out of the new knowledge.

4.2 *Implications for knowledge absorption: BuildCo and SnackCo*

On the other hand BuildCo and SnackCo exercise very modest environmental interest and explore external potential only if triggered. The companies differ in some of their features, like the rigidity of organizational structure and communication, but are similar in the organizational values, system homogeneity and the role of individual agency. Both cases are trapped in the single loop routines and are relatively short sighted in terms of recognizing the value of external knowledge. The relationship with the environment is based on the premise that it creates problems but, as it is a given, it has to be dealt with only when necessary. As a result, BuildCo and SnackCo control organizational boundaries and concentrate on exploiting the internal potential. Thus both companies try to avoid reaching outside and rarely engage in knowledge exploration and absorption.

Their value systems and organizational rigidity (or exaggerated flexibility) compiled with the high dependency on the individual agency lead to reinforced continuity and homogeneity in organizational routines, operations and interests. The need to break through these continuous loops appears rarely and is usually problem-driven. Therefore, BuildCo and SnackCo mostly exhibit reactive behaviour with regards to their environments and underestimate the potential of the external knowledge. As a result, SnackCo and BuildCo find themselves muddling through their organizational lives without consciously noticing of numerous external learning experiences around them. Both companies happen to be unsuccessful in harvesting the knowledge of its members, and thus fail to change the way they do things. Besides, the organizational values of traditionalism reinforce these sightless practices as they presume the constancy of routines and never question the opinions of authority. The situation is intensified by the lack of critical and reflexive routines, which deprives organizations of the possibility

to further improve their operations. Thus the organizational practices interfere with the socialization and coordination of individual efforts, and as a result lead to disjointed and unsuccessful attempts to initiate knowledge acquisition.

Both organizations are extremely regulated and controlled in their acquisition attempts. In this way, BuildCo always depends on the director to start off the process, and SnackCo depends on the availability of individual agents to carry out the acquisition. Interestingly, BuildCo puts most of its decisions through a mechanism of multiple coordination which lies in the hierarchical dissemination of tasks. At times direct delegation can actually expedite the process of acquisition and cut straight to the executor, but regrettably the speed slows down again for the lack of ownership of the acquired ideas amongst the actual users. Furthermore, BuildCo's disbelief in western knowledge also negatively reflects on the process of acquisition as it creates unnecessary scepticism towards knowledge that might prove useful.

The fact that SnackCo employs individual agents for its knowledge absorption suggests that the actual acquisitions can take place rather quickly and efficiently provided that organizational members are interested in the knowledge in the first place. However, the problems appear when the organization collectively attempts to make sense of this knowledge. Failed by the existing structural arrangements, departmental rivalry and informal communication, SnackCo finds it hard to gather acquisition agents together and inspire them to share. On top of that the individualistic culture also limits the potential that could be harvested from the acquired knowledge and obscures further sense making. It seems that the examples from both organizations demonstrate that BuildCo and SnackCo are capable of instigating the knowledge acquisition, however due to either rigidity or negligence are not able of sustaining its intensity and speed.

Speaking of BuildCo and SnackCo, it is apparent that both companies are relatively traditional in their style of operations and prefer internal process and routines to remain unchanged. Their perception of new things is relatively sceptical which is illustrated by their attitude towards possibility of implementing the internal portal and intranet. Even though there are individual champions in both companies, the organizational hierarchy and decision making traditions refrain them from breaking through the top management disbelief and doubt. The main belief behind both companies' operations is that if existing routines still function, then there is no need to explore, change or diversify them. As a result, BuildCo's and SnackCo's simply reinforce what the cases already do and how they do it.

The formality of structure at BuildCo requires the company to arrange special discussion meetings when there is a need to absorb knowledge. Most often these meetings include only top team members, leaving the bulk of employees out of the loop. The segregation places shop floor employees further down the line in the sense-making mechanism and the meaning that is being developed. Furthermore, the limited authority of employees' de-motivates them even further when they are considering participating. On the other hand at SnackCo the structure prompts the organization to meet weekly to discuss events, ideas and concerns. However, similar to BuildCo, these meeting are also exclusive for the top team members, and more so are incapable of retaining the message. As a result, at SnackCo additional interpretations arise on top of what should be regarded as a collective meaning and lead to fuzziness and confusion around the form of the original meaning.

It seems that both organizations are more inclined to maintain the present day functioning (in the view that it provides moderate, but stable outcomes) more willingly than take a risk with new initiatives. Organizational members, with some rare exceptions, are reluctant to take actions themselves, but would follow the lead especially if it comes from the person with authority. What is especially

interesting is that, for example, in BuildCo the agents of knowledge absorption are often different from those who actually implement it. This creates additional hurdles in exploiting the acquired knowledge as it requires clarifying the meaning and rectifying possible acquisition oversights. Here the example of BuildCo's knowledge absorption through managers, instead of actual construction specialists, can serve as an illustration. It also shows the segregation of organizational members and lack of individual motivation which incapacitates the human power behind the process of knowledge absorption.

Moreover, both companies endure the consequences of their organizational arrangements with regards to the knowledge codification and dissemination. There are no systems that would enable holistic informing and provide organized access to the acquired or already possessed knowledge. As a result the organizational knowledge base is dispersed, scattered and individualized which makes the process of building new processes and capabilities relatively problematic. It also affects BuildCo and SnackCo ability to develop consolidated knowledge base which could mediate organizational foresight. It seems that the companies rarely relate their individual experiences to one another and, as a result, have low added value from their knowledge initiatives.

4.3 Summary: Implications for theories of absorptive capacity

The cases have demonstrated the way organizational practices predispose companies towards certain behaviours with regards to knowledge absorption. In order to summarize and illustrate the implications from these two pairs let's use some well known learning continuums:

- (a) Exploitation and exploration (March, 1991)
- (b) Knowledge and knowing with regards to the value of action and practice (Cook and Brown, 1999)
- (c) Egalitarianism and segregation of employees (Dixon, 1999)
- (d) Hallway learning (social) and office learning (individual) (Dixon, 1999)
- (e) Reactive and proactive penetration of the environment (Hedberg *et al.*, 1976)

It seems that the first pair of cases exhibits the practice of knowledge absorption which is a part of the general organizational functioning. It is embedded and reinforced by operational, everyday routines, whilst the knowledge practices of the other pair are relatively disjointed and unintegrated. It appears that at TobacCo and ElectronCo these embedded practices are supported by active exploration. Moreover, the first pair has also exhibited rather diverse and dynamic exploitation routines which reside in organizational emphasis on practice and action taking. As a result TobacCo and ElectronCo find themselves in the realm of knowing, that is to say that organizational knowledge surfaces through the ability to apply and act on it.

Alternatively, BuildCo and SnackCo exhibit exploitative practices and prefer when possible to avoid action, especially if it might lead to organizational change. Organizational operations reinforce existing routines and reside in recycling of single loop learning. Moreover, both companies fail to integrate their employees and routines into one coherent organizational system. This seems to disable the backbone behind the knowledge absorption that is proactive and enquiring behaviour of individual members. Furthermore, the division interferes with socialization and as a result affects organizational informing and communication. Let's summarized the practices of both pairs of companies in the following diagram:

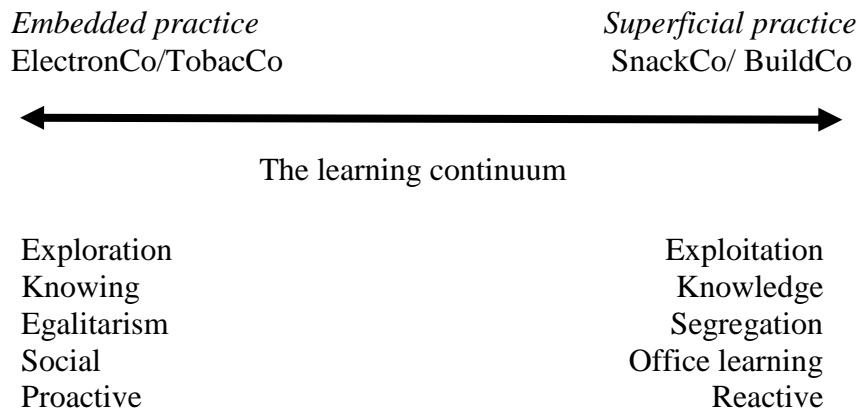


Diagram 1

These observations of organizational practices and behaviours have a number of implications for the theories of absorptive capacity. In their representation, Zahra and George (2002) argue that the process of knowledge absorption follows the sequence of acquire-assimilate-transform-exploit and is aimed at delivering the competitive outcomes. In order to explain organizational competitiveness Zahra and George (2002) put forward an efficiency factor that resides in an essential divide of absorptive capacity into the potential and realized, where the latter plays more significant role. It seems that the evidence from this research questions this model of absorptive capacity on multiple levels. It also scrutinizes the claims made by other authors with regards to the concept.

First of all, the evidence demonstrates the need for reciprocity and continuity in all four stages for organizational knowledge absorption. It seems that in order to efficiently harvest the fruits of absorptive capacity organizations ought to balance out the development of all elements of absorptive capacity. For example, BuildCo has exhibited very active behaviour in acquiring and assimilating new knowledge with regards to ISO certification, but has not succeeded in identifying the knowledge in the first place and its efficient exploitation. It seems that all four components play equally important roles in making the knowledge absorption a success. It suggests that from an empirical angle the definition of absorptive capacity should engage all four elements and grant them equal weight.

Secondly, the research points out that efficient absorptive capacity may not be a sound indicator of competitive advantage as proposed by Zahra and George (2002). The cases of this particular research are all successful and highly performing organizations. However two companies seem to conform to the idea that knowledge absorption mediates higher performance whilst the other pair happens to break the pattern. This suggests that perhaps the concept of absorptive capacity itself, as it is currently perceived and defined, needs further investigation.

At this point two elements revealed in this research can prove helpful. First of all, this work has detected that companies which are efficient with knowledge absorption actively engage in individual and organizational action. It appears that action-taking signifies organizational predisposition towards the process of knowledge absorption and it emphasises that going through its stages is a valuable learning journey in itself. A high value attributed to the collective and individual action along with a pragmatic, process-oriented approach suggests continuity in the process of knowledge absorption and calls forward the approaches that account for such orientation. Therefore, it seems that models based

on self-reinforcing, continuous and even cyclical loops, such as experiential, practice-based learning, should be further explored to explain the knowledge absorption.

Furthermore, the observations around organizational structure and its influence over the socialization mechanisms can prove constructive. Even though Zahra and George (2002) do not go into the details about the ways structure affects the process of socialization, they do indicate that informal systems enhance exchange of ideas whilst formal ones are more systematic. This idea is further explored by the work of Tsai (2002) which has proposed that formal hierarchies negatively affect the knowledge sharing. On the other hand, Jansen et al. (2005) point out that amongst three types of organizational capabilities systems influence over knowledge absorption is more contradictory than the affects of coordination and socialization. These remarks suggest that so far the role of organizational structure in influencing the knowledge flow has been rather ambiguous.

This research has supported the premise that liberal and information organizational hierarchies positively reinforce knowledge processes. However, it has also established that formal hierarchies serve the process of knowledge absorption much better than having no systems at all, especially with regards to single knowledge absorption attempts. The formal structures are capable of boosting the knowledge absorption process through the principles of task delegation and employee subordination, but they suffer from disintegration and low ownership of the process. It seems that organizations with formal hierarchical structures experience difficulties in going back and forth between the knowledge and as a result are less capable in establishing continuous knowledge absorption practices. These observations once again put forward the need to empirically investigate the structural antecedents of absorptive capacity and their impact on the concept.

The insights acquired through this research suggest that theories of absorptive capacity should be revisited. The evidence has questioned the existing model of absorptive capacity and once again raised the questions of how the knowledge absorption takes place. It seems that the internal workings of absorptive capacity need further research, exploring possibilities of experiential learning. Furthermore, the evidence also scrutinies the effects that absorptive capacity might possess over the organizational performance, further questioning its outcome oriented representation. It appears that it is no longer clear the way absorptive capacity takes place and what kind of outcomes it is capable to deliver, therefore these questions require further investigation through the in-depth empirical research techniques.

5 Conclusion

The paper has empirically investigated the concept of absorptive capacity. It has produced an in-depth cross case comparison which has described the way daily organizational practices affect knowledge absorption. The evidence has disclosed significance of valuing all components of absorptive capacity equally and questioned the representation of absorptive capacity as potential and realized. It also exposed the importance of individual and organizational action and questioned the performance-oriented outcomes of absorptive capacity. It has engaged the discussion around organizational structure and proposed to re-think that role of formal hierarchies. Based on data gathered, the work has put forward a number of implications to consider if we are to advance the theories of absorptive capacity.

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