Abstract

In an attempt to assist business leaders to overcome their daily challenges, this research targets maximising the efficiency of the core operations of virtual innovative companies. In order to do so, Premium Cola, a 100% virtual organization is taken as a sample. The following trends are the focus of this paper: the efficient management of virtual networks; the efficient management of the company’s transactions; and the efficient management of the company’s core resources. In exploring these considerations, the following threads of literature are employed: the literature of virtual networks management, the literature of Transaction Cost View, and the literature of the Resource Based.
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Chapter 1

Introduction

Introduction

The 21st century is an era of innovation, in which business leaders are able to come up with new and dynamic methods of growing businesses and achieving success in the market. These methods include the introduction of new goods, markets, sources of supplying row materials or half-manufactured goods, and the new organisation of any industry (Schumpeter 1983 edited by Eliot).

Baregheh et al. (2009) in their article “Towards a multidisciplinary definition of innovation” defined innovation within the organisational context as:

"[...] the multi-stage process whereby organisations transform ideas into new/improved products, services or processes, in order to advance, compete and differentiate themselves successfully in their marketplace.” – (In Wikipedia.com)

This research aims to maximise the boundaries of innovation in virtual organisations. It studies Premium Cola, a 100% virtual organisation which, developed as a direct result of the revolution in information technology, represents one of the most innovative operations in today’s market. This research uses Premium Cola (Premium) as a case study through which the efficiency of innovative business processes is examined, and through which the potential to maximise this efficiency is explored. The end of this research presents the principles of efficient management of virtual organisations.
The reason that *Premium* is chosen as a case study is that traditionally cola producers have owned production plants, offices, boardrooms, meeting rooms, vehicles and other tangible resources. *Premium*, however, claims to own nothing except an interactive collaborative website, and as such is an example of a company operating in a new organisational form. While *Premium* can be loosely interpreted as a beverage producer – it supplies cola and beer to the public -, in reality, it is not responsible for the physical production of its commodities; the company does not possess any machinery and does not operate a production plant. In the case of *Premium*, every aspect of their operation, from production to financial management is outsourced, transferred into the hands of various companies with a specialist focus. On its own, *Premium’s* decision to maximally outsource, while unusual for an operation that sits (albeit uncomfortably) in the secondary sector, is not particularly unique if you consider all sectors of the economy. What makes the company an interesting case for analysis is that it claims to function, paradoxically, by maximally in sourcing at the same time. Simply put, this means that all of *Premium’s* outsourced stakeholders can actively participate in the company’s decision making process, and this is achieved through membership to *Premium’s* interactive website. This operational paradox, supported by the strategic deployment of information and communication technology, is the key to *Premium Cola’s* innovation.

In addition, the organisational structure of *Premium Cola* is completely flat. Private individuals (even those without a direct monetary interest in Premium’s operations) may become members simply by connecting with one of the 107 existing members virtually, and logging on to the site. Once they have subscribed, *Premium’s* members then have the freedom to choose the field they want to work in, their workload and time commitment, and they are paid by the company accordingly.
Research question

Due to the ability of *Premium Cola* to manage its organisational structure innovatively through the utilization of information and communication technology, this research asks the question:

“How can organisational structure be used to **maximise** the efficient effects of innovation through the adoption of information and communication technology.”?

In answering this question, the focus is placed on maximizing the efficiency of the core competitive operations of *Premium*. This is explained in detail in the following section.

Expected outcomes

This research provides guidelines for maximising the efficiency of the core competitive competencies of virtual companies. The following trends cover these considerations: the efficient management of virtual networks; the efficient management of the company’s transactions; and the efficient management of the company’s core resources. In exploring these considerations, the following threads of literature are employed:

1. The literature of virtual networks management.

2. The literature of Transaction Cost View. This maintains that any non-production cost is a transaction cost. Thus, it works on minimizing transaction costs accordingly.
The literature of the Resource Based. This involves studying the available resources and utilizing them in the most efficient manner.

The outcomes of this literature review are tested on the Premium in order to maximise its efficiency. This means that a virtual company may operate in the most efficient manner.

The following diagram is a visual representation of the sub-outcomes along with the general expected outcome.

![Diagram showing sub-outcomes and general expected outcome]

**Figure1.1:** A Visual Representation of the Sub-Outcomes Along with the General Expected Outcome of the Research

**Research methodology**

Research is carried out in a systematic manner. First, in Chapter 2, a literature review is conducted on the three threads of literature outlined above: Virtual Networks Management (VNM); Transactions Cost View (TCV); and Resource-Based View (RBV). The literature
review on TCV and RBV contains an analysis of the effectiveness of these theories in the current era of information and communication technology (ICT) revolution.

In Chapter 2, the key areas where research is conducted include books, online resources, journals and published articles on TCV and RBV and their effects on the ICT revolution.

After reviewing the theories in Chapter 2, Chapter 3 deals with the case study *Premium Cola* and explores its methodologies and operating systems.

In Chapter 3, the documents of *Premium Cola* are explored. These documents were originally written in German and an obstacle when conducted the research was ensuring they were translated accurately into English.¹

By reviewing the theories and exploring the case study, Chapter 4 identifies the variables of analysis, and a framework of analysis and an interview guide is formed.

Chapter 5 is a presentation of the analysis, and Chapter 6 shows the recommended courses of action in order to manage the targeted virtual organisation’s efficiency.

One of the guiding principles of this research was to select those articles that are professional, have a lot of unbiased yet qualitative information.

The following is a visual representation that maps out the dissertation outline.

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¹ To make sure that the translation is perfect, the founder of Premium Cola was contacted several times to explain and check these documents.
As the above visual diagrams shows, the research starts with an introduction in Chapter 1 that briefly details the literature review and case study that is used, thus triggering the desire to explore them. In Chapter 2 the literature review is explored in depth, and in Chapter 3 the case study *Premium Cola*, is examined. The outcomes of Chapter 2 and 3 together inform the framework of analysis in Chapter 4. Finally, this framework itself is analysed in Chapter 5. The conclusion of this research is presented in Chapter 6.

**Conclusion**

The primary focus of this research is discerning how to hasten innovation in one of the most innovative virtual companies by maximizing its efficiency. Trends related to efficiency
management in virtual companies are studied, including the efficient management of virtual networks, transaction cost and resources. Chapter 2 deals with the literature review in relation to these aspects. It explores the application of these theories on Premium Cola.
Chapter 2

Literature Review

Introduction

The global economy has been transformed by the great information and communication technology (ICT) revolution, along with re-deployment and re-structuring by the business sector. One result of this is that methods of efficiency creation and supply-on-demand management are no longer the same (Timmer, 2002). Furthermore, the value chain of business management has experienced different phases of intermediation, disintermediation, and re-intermediation (Anderson, 2010); companies are competing to establish new forms of value creation. Consequently, new business literature has emerged such as managing virtual networks, and previous business theories, such as the Transaction Cost View (TCV) and the Resource-Based View (RBV) have been reshaped to allow for the maximum creation of efficiency using ICT.

This chapter explores these business theories and examines their engagement with the ICT revolution. It also presents arguments related to these theories, for example, the positive and negative effects of TCV and RBV on business operations.
A. Virtual networks forms and purposes:

During the last decades the world has seen enormous change in the form of the ICT revolution. In his article, “Myths and Realities of the High Tech Economy”, Brian Arthur describes the recent advancements in ICT and argues that the past few years have witnessed the evolution of a powerful web economy that operates by rules that are different from the manufacturing economy (Arthur 2000). The best examples that describe these are the “dot com boom”, the price competition, and the incremental innovations that the world has experienced.

Thus, in the current competitive era, companies race to play various roles by participating in virtual networks - networks that connect parties via the internet for a specific reason, i.e. commercial or social. Through utilising virtual networks, a single company can be a supplier, a customer, and a distributor simultaneously (Timonen and Ylitalo, 2007; Caswell and Biem, 2008). Timonen and Ylitalo (2007) assert that, in attempting to maximise the value of virtual networks and minimize uncertainty and risks, these networks can be split into various categories that include industrial networks, R&D networks, strategic networks, network organisations and supply networks.

*Premium* is a mixture of all the above networks because it supplies goods and services, serves the strategic objectives of other businesses, and publishes all the research done on its products and services on its collaborative website. However, according to Timmer (2002) the most popular electronic networks in terms of value creation are the virtual value network and the virtual dynamic market configuration. These chains will be identified and studied in order to assess *Premium Cola’s* participation in the virtual environment.

Timmer (2002) and Timonen and Ylitalo (2007) demonstrated that, while the advantages of virtual value networks appear to be quantitative at the beginning, they offer many qualitative advantages in the long run, such as customer loyalty and security.

What makes virtual value networks better than the traditional value chain model is that in the former, value creation is accomplished through the exchange of tangibles and intangibles such as sense of community and knowledge (Allee 2000, 2002 cit. Timonen and Ylitalo, 2007), while in the latter value creation is only accomplished by exchanging tangible goods and services (Porter 1985 cit. Timonen and Ylitalo, 2007).

The reason that Timmer (2002) distinguishes between virtual value network and another type of virtual network is the ICT revolution. This is called “Dynamic Market Configuration”, “a market-mediated set of relationships focused on increasing flexibility and opportunity for strategic business objectives” (p. 183).

These two categories of virtual networks do not perform independently; instead both work together in harmony to enhance innovation (Timmer, 2000).

The question arises: is *Premium* operating efficiently in these virtual networks? The following section represents the characteristics of efficient value networks and Dynamic
Market Configurations identified by Timmer (2002). These characteristics are treated in later chapters as variables to be tested on Premium.

Characteristics of virtual value networks are as follows:

- Value networks require a high level of standardisation of business processes among partners. There should be a common agreement on semantics among partners in terms of inputs, outputs and internal flow, plus there should be a common understanding of the business objectives that are related to these processes, including resources (Timmer, 2002). This is achieved by the standardisation of a set of tools. Examples of these tools are electronic data interchange (EDI), product data modelling (PDM), and standards for the exchange of product data. These are important to ensure a smooth business process. (Timmer, 2002) Thus, this research tests how adaptable Premium is when operating with partners.

- Virtual value networks are characterized by various levels of complexity. Snow et al (1992) classified the virtual value network as: stable networks in which long-term relations exist; internal networks in which a loose association of business units depend on markets forces; and dynamic networks whether they participate in them or not (Timmer, 2002).

- Previously, companies used to gain power by acquiring integration vertically or horizontally. With virtual value network companys no longer intending to create
ownership, they have shifted their emphasis to building and maintaining a network of relationships, instead of horizontal or vertical integration. What type of integration does *Premium* use with partners? Is it a vertical and horizontal ownership, or a network relationship?

Now that the characteristics of virtual value network have been identified, the following is a representation of the main characteristics of Dynamic Market Configuration. These characteristics will be used as variables to assess the participation of *Premium* in Dynamic Market Configuration:²

- Operating in Dynamic Market Configuration involves trading off current relationships and opportunities in order to get the advantage of new ones. To what degree is *Premium* able to give up current relationships for future opportunities?

- In Dynamic Market Configuration, the creation of customisable products is hard to realise and may take longer. Does *Premium* produce customisable or standard products?

- Operating in Dynamic Market Configuration means a higher degree of exposure to financial risks, as contracts and written agreements are usually eliminated due to their high cost. So if *Premium* manages this, what is its degree of exposure to financial risk?

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² This is based on characteristics set up by Timmer (2002).
This research evaluates *Premium Cola’s* participation in virtual networks by analyzing the above mentioned characteristics of virtual value network and Dynamic Market Configuration, and then provides general recommendations for virtual organisations.

Historically, companies believed that it was better to “make”, that is, it was better to produce in-house rather than to buy outsourcing, in terms of cost-efficiency. Though participating in virtual networks seems to be sufficient to maintain efficiency, these networks have put the paradoxical decision “to buy or make” back into the spotlight (Timmer, 2002). These tactics mean that the ICT revolution has heavily minimised production cost and information acquisition, which has resulted in the creation of new opportunities that encouraged outsourcing rather than in-house production (Timmer, 2002).

The contradiction that is driven by the ICT revolution brought back the importance of transaction cost theory. Transaction cost theory focuses on defining and assessing organisational boundaries, assessing “whether to buy or to make” decisions in terms of efficiency. Taking *Premium* as a case study, this research provides an analysis designed to assist the decision “to make or to buy”.

Thus the following section delves deeper to investigate transaction cost theory. It also gives empirical examples of how TCV interacts with and adds value to the current ICT revolution.
B. Transaction cost theory:

Williamson (1981) defined the transaction as “when a good or service is transferred across technologically separable entities. One stage of activity terminates and the other begins” p. 552. What is expected in a well-operating interface is that transfers happen smoothly. However, in real life there are malfunctions that may lead to delays, misunderstandings and conflicts, the resulting costs of these malfunctions are referred to as “Transaction Cost” (Williamson, 1981).

In the article, “The Economics of Organization: The Transaction Cost Approach”, Williamson (1981) asserted that John R Commons was the first person to identify the transaction as the basic unit of economic analysis in 1934. In 1937 however, Coase brought transactions into sharp focus, a different direction from other theorists, as he focused on the boundary of the company as a parameter of analysis. Coase stated that the market itself determines the business decision of whether to internalize or externalize business activities (Williamson, 1981). Furthermore, as an attempt to build efficiency and internal organisational operations, the concept of transaction cost was employed in the price-theoretical apparatus. At that time, Coase’s opinions represented the comprehensive picture of an efficient organisational operation by internalizing them and avoiding the high transaction cost of the market (Foss, 1993). Thus it may be asked: is this view of maintaining efficiency through internalizing business operations valid within the current ICT revolution? This will be explored in later sections.
Coase demonstrated that through ownership, a company could heavily reduce the transaction cost by skipping the costly price mechanisms that include the cost of looking up the available market prices, comparing and negotiating them, and then finally the cost of implementing contracts. Coase emphasised that this happens in each and every market transaction, resulting in plenty of short-term contracts instead of one long-term contracts in which costs are multiplied several times (Frank Sendler, 2002).

However, the theory of transaction cost developed by Coase was ignored until 1972, when Alchian and Demsetz (1972) and Williamson (1975) brought the theory into a new dimension (Foss, 1993).

Alchian and Demsetz recognised what might happen as a result of having a production team involved in asymmetrical information (Foss, 1993). They explained that avoidance of those complications could be achieved by the creation of an institutional structure in which the contribution of each input owner is recorded in contracts through a Monitor-residual claimant. They called this structure “Classical Capitalist Company” (Foss, 1993).

On the other hand, Williamson asserts that the history of the TCV falls into three categories:

1. Economic literature: the theory focuses on economising business activities.

2. Organizations’ theory literature: internal organization and structural governance is a focus in this theory.
3. Contract law literature: the least obvious thread of literature. However, Williamson put a special focus on it.

Based on Karl Llewellyn’s essay (1931), Williamson found out that transactions come in a variety of ways, and that highly legalistic strategies might sometimes complicate operations instead of smoothing them. This is especially important when transactions happen between parties on a continuous and high value basis (Williamson). Williamson (1981) suggests that other types of obligatory forms of market exchange, such as arbitration and collective contracting must be considered instead of contracts; these forms are referred to as “Relational Contracting”.

Williamson (1981) focuses on human nature in the analysis of those costly contracts and the reasons behind enforcing them. Two behavioural assumptions push humans to enforce these contracts: human agents are subject to bounded rationality, and they might engage in opportunism as well.

In terms of bounded rationality, Williamson asserted that, unlike the “Economic Man”, “Organisation Man” is characterized by less powerful analytical and data processing competences. Thus, it is best for them to organise complex economic transactions by contract. However, having a huge number of complex economic transactions along with the bounded rationality of the “Organisation Man” makes it impossible to manage these contracts. Thus, Williamson concluded that incomplete contracting is the best solution.
At the same time, opportunistic behaviour\(^3\), which characterizes the human being, limits the feasibility of incomplete contracting. In real life not all humans are assumed to be trustworthy, that is, when unexpected events occur, no one is 100% sure that the human being will behave in a certain way. However, Williamson (1981) asserts that what really breaks the contract is not the opportunistic behaviour and the bounded rationality, it is the nature of the transaction itself and its characteristics. This reveals the importance of what Williamson called “Dimensionalizing” (Williamson, 1979).

Williamson (1986) brought the theory into the three dimensions that play a role in managing transaction cost: the degree of asset specificity; frequency of the transaction; and uncertainty of the transaction which is affected by the uncertainty of the buyer (Cit. Sendler, 2002, Williamson 1979).

The most important dimension is asset specificity. If the asset is not specific then there is no need to internalise and outsourcing is the best solution, regardless of the frequency and the uncertainty (Williamson 1981). Thus, when dimensionalizing *Premium*, the first thing to be tested is the specificity of the transactions. Then, if the transactions are specific, both frequency and uncertainty are tested. Otherwise, *Premium* is advised to outsource. This analysis could then be used with other virtual organisations.

\(^3\) Opportunistic behaviour defined as, “The art or practice of taking advantage of opportunities or circumstances, or of seeking immediate advantage with little regard for ultimate consequences”- *(Answers.com)*
According to Williamson, asset specificity does not mean mass fixed investments. Important is the extent to which these investments are specialized, whether they are: a site asset specificity;\(^4\) human asset specificity;\(^5\) or a physical asset specificity.\(^6\) This is because the more specialized the investment, the harder it is for the partner to convert to another supplier, thus the creation of lock-in.\(^7\) Unspecialized assets can be easily acquired, thus weakening partner commitment to the investments (Williamson, 1981).

Williamson (1981) explained that the decision to in-source or outsource the production of physical assets is mainly affected by how specific these assets are. He pointed out that the specificity of the assets is first determined by how valuable they are. This is not determined by the value itself but rather by the demand of the assets in terms of design and performance – the higher the demand the more valuable the asset is. Thus, measuring the demand depends mainly on measuring an asset’s expenses. Furthermore, governance cost also contributes to asset specificity, that is, the more specific the asset, the higher the cost. Hence, governance cost should be considered in the calculation.

Thus, when measuring physical asset specificity, the following steps are followed:

- The differences in external and internal production costs for the organisation should be measured. The production cost will be assigned to the variable \(C\), where \(C_1 = \)

\(^4\) This means the site of the investments is nearby, thus, economizing inventory and transportation expenses (Williamson, 1981).
\(^5\) Physical asset specificity means specialized assets that are hard to be copied (Williamson, 1981).
\(^6\) Human assets specificity referred to human assets that are characterized by unique competences that are developed over time (Williamson, 1981).
\(^7\) Lock-in is strategy that aims to get customers stick to a certain technological solution, and as a result find it hard to switch to another technological solution during the same technological evolution (Dajani, 2010).
internal production and C2 = external production. Thus C1—C2 = \Delta C = f (C) (the difference in the production cost).

- Then the differences in the costs of internal and external governance of production are measured. The governance cost will be assigned to the variable G. In which G1 = the governance cost of internal production and G2 = the governance cost of external production. Thus G1—G2 = \Delta G = f (G) (the difference in the governance cost).

- Assuming the governance cost function f (G) and the production cost function f (C) have the shape and the relative location represented in the following graph:

![Figure 2.1: Visual Representation of the Net Production and Cost differences](image)

Figure 2.1: Visual Representation of the Net Production and Cost differences

(Williamson 1981)
So, as the sum $\Delta C + \Delta G$ is above zero, the market enjoys the advantage and it is beneficial to outsource. However, when the sum of $\Delta C + \Delta G = 0$ which is point $\bar{A}$ in the graph or below the point, internalized processing is preferred (Williamson, 1981).

The figure below explains how to assess the decision of whether to adopt Market Contract, Bilateral Contract or fully internalize the production of physical assets (based on Williamson article “The Economics of Organization: Transaction Cost Approach”).

![Figure 2.2: Physical Asset specificity and the decision of market contracting.](image)

As Figure 2.2 shows, it is always better to outsource non-specific assets because the market can enjoy the benefits of minimising both the production cost and the governance cost through static economies of scale. Furthermore, un-met demands can be collected, thus utilising risk pooling benefits. Finally, the hazards that accompany in-sourcing governance are avoided in the outsourcing strategy (Williamson, 1981).
Conversely, as the non-specificity of the physical assets increase, bilateral or obligatory market contracting becomes a solution. This is because common partnerships minimise the motive to sub-optimise. Furthermore, costly negotiation is avoided when the partners know each other and are not operating autonomously. Finally, when negotiation is required, the internal organisation would have full access to the relevant information (Williamson, 1981).

It is important to note that as the company internalises its business activities, the cost of the accompanied government structure might become higher (Williamson, 1981).

In terms of human asset specificity, it is important here to distinguish between what is meant by specific and non-specific human assets. Lawyers, engineers, physicians and many other professionals have valuable skills, and these skills are, in general, easy to substitute. What is meant by human asset specificity is how specific these skills are to the organisation in question. For example, the knowledge of a particular system of the company might be highly specific. The challenge lies in the governance of these company-specific skills (Williamson, 1981).

**Measuring human asset specificity**

As mentioned earlier, two factors will be considered when measuring human asset specificity:

1. The degree of how company-specific the human assets are. Where

   H1: represents low-company specific human assets.
H2: represent high-company specific human assets.

2. The degree of the ease of metering human asset productivity. Where

M1: easy metering conditions.

M2: hard metering conditions.

Hence, the following four qualifications of internal governance inspired by Williamson’s (1981) article “The Economics of Organization: Transaction Cost Approach” will be tested on *Premium Cola*. These classifications of hypothesis are:

1. When H1, M1 is the case, this is defined as **Internal Spot Market**, or non-specific human assets with easy productivity metering. This means that the relationship between human assets and the employer could be replaced easily whenever one of the parties is dissatisfied and no governance structure is needed (Williamson, 1981).

2. When H1, M2 is the case, this is defined as **Primitive Team**, where human assets are non-specific but productivity cannot be metered easily. This case was the focus of Alchain and Demsetez (1972) who mention that in Primitive Teams the membership could be changed without losing productivity. However, on an individual basis it is hard determining each compensation\(^8\) (Williamson, 1981).

3. When H2, M1 is the case, this is defined as **Obligational Market**. Company-specific learning exists, but productivity is easy to meter. An example of this is idiosyncratic

\(^8\) Assuming that the outcomes are joint products and it is hard to determine the input differences.
organisational experience, including accounting, data processing and complex rules of internalisation. In this case companies follow strategies that ensure employment continuity (Williamson, 1981).

4. When H2, M2 is the case, this is reflective of a **Relational Team**. Here the human assets are specific and their productivity is very difficult to meter. This matches the organisational form called “clan” explained by Ouchi (1980), where the company seeks the assurance of employment dedication to support it through engaging in considerable social conditioning. In order to gain assurance against exploitation, the company provides employees with considerable job security (Cit. Williamson, 1981).

Figure 2 is a visual representation that explains the classification of human asset organisation according to the mentioned hypothesis.

![Figure 2.3: Governance of internal organizations of Human Assets (Williamson, 1981).](image-url)
Williamson (1981), in contributing to the transaction cost theory, analysed the factors that determine the boundaries of organisations. It is asserted that the producing or outsourcing decision depends on costs of planning, monitoring, adopting and finalising tasks (Foss, 1993).

However, how does transaction cost theory interact with the recent ICT revolution? Do they positively affect each other? The following section tries to address these questions by representing relative arguments with empirical examples. This helps in building up a framework of the variables to be tested on *Premium*.

**C. Transaction cost theory, information and communication technology revolution**

As ICT offers huge amounts of information at lower cost, it appears independently as a powerful instrument to boost the economic system. Andersen (2010) explains that ICT can reduce transaction costs by smoothing the process through external skill acquisition, enhancing internal business governance, and offering superior and faster methods of production and global delivery – all simultaneously – thereby resulting in a lower overall cost.

In contrast, Ciborra (1993) argues that the application of ICT in business transactions may have positive effects on transaction cost and boost the rewards for all involved stakeholders only if the price of the required resources for this ICT application is lower than the transaction cost itself (Cordella, 2007).
Sendler (2002) supports this argument in his study “From Value Chain to Virtual Value Network: a transaction Cost Perspective on the Case of Charles Tyrwhitt”, presenting a case that describes the effects of the application of ICT equipment on the total transaction cost of selling T-shirts in Charles Tyrwhitt’s concern (a T-shirt retailer). Initially, Charles Tyrwhitt had a mail order system that took telephone orders. However, recently Charles Tyrwhitt started applying ICT to its ordering system; it developed a website for this purpose. Surprisingly, adopting ICT equipment added redundant costs. This occurred because the orders taken through the website were saved in an external server, and then employees had to download these orders twice daily, a process that added unnecessary costs they did not experience before adopting ICT. Hence, companies should sensibly conduct a cost–benefit analysis prior to applying ICT in their operations.

Cordilla (2007) furthers the argument by claiming that participating in value networks adds to not only the cost of the ICT application and equipment, but also to the cost of training workers. This contradicts Timmer (2002) who asserts that participating in a virtual value network minimises cost by offering efficient management of supply and demand, and thus avoids the storage of extra stock. Timmer verifies that by the example of Marshall Industry’s Partner Net as a valued network that offers suppliers the ability to view sales data, and allows the customers access to view products’ characteristics and select their preferences, thus improving the management of supply and demand. As a result, the cost of managing extra stock is saved (Timmer, 2002).
Furthermore, Cordilla (2007) confronts the advantages of exchanging information over the web. What Williamson (1975) refers to as the conditions of “Information Impactedness” in which changing the distribution of information between economic actors leads to change in information symmetry. This, in turn, may result in dealing with the possibilities of opportunistic behaviour.

One of the most contradictory issues is cutting out the transaction cost of intermediaries in the value chain (Sendler, 2002). It is generally accepted that cutting out the intermediaries from the value chain results in having the same products and services at a lower cost (Lee and Clark, 1996 cit. Chircu and Kauffman, 1998; Lee, 1997, 1998;). Conversely, Timmer (2002) demonstrates that the short-term removal of this transaction cost of intermediaries might look efficient, but long term could have negative results, as the distributors are essential for the marketing and sales of goods and services.

This argument is supported by Chircu and Kauffman (1998) who claim that generally intermediaries fight to re-intermediate after disintermediation. They termed it the IDR Cycle (Intermediation⁹ - Disintermediation¹⁰ – Re-intermediation¹¹).

Furthermore, Chircu and Kauffman’s claim is supported by Bakos (1998) who states that virtual market places and physical market places have similar characteristics in which they both require that the prices of transaction processing to be fixed, inventories to be managed,

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⁹ An agent acting as a middleman between parties that may disagree. It acts as a link to facilitate the merchandise of goods and services (Wiktionary.com)
¹⁰ When intermediaries are cut out (Businessdictionary.com)
¹¹ When the middleman re-emerges in the supply chain after being disintermediated (Wikipedia.com)
quality to be guaranteed, and transaction processes to be monitored. All of that triggers the need for new intermediaries. Has *Premium* followed the strategy of cutting intermediaries or does it still need them in managing sales and marketing? A question that will be answered in this research.

Finally, Cordilla (2007) argues that the tremendous amount of information in virtual networks in this globalised digital economy triggered the need to enforce contractual agreements, hence managing complexity and uncertainty. Anglov and Grefen (2003) add that, as a consequence, this led to the creation of an enormous number of contracts created by those companies operating in virtual life, resulting in a phenomenon called “Contract Overload”. Allen and Widdison (1996) and Merz et al. mention that controlling this enormous number of contracts and managing its increased complexity will trigger the need to install a contract transactions system, which, in other words, means higher transaction costs (1998 cit. Cordilla, 2007). How did *Premium* manage its contracts during the past decade, and is *Premium* managing them efficiently? These are characteristics that are explored in this research.

The following questions summarise the above arguments and address and analyse whether *Premium Cola* is managing the transaction costs in an efficient manner:

1. The degree of *Premium’s* asset specificity is tested. Then, if the assets are specific to the frequency of the transactions, uncertainty of the transactions, which may be affected by the uncertainty of the buyer, are examined.
2. If adopting ICT to carry out operations is cost-efficient, does it result in a redundant transaction cost?

3. Does the participation in virtual value network enable Premium to match supply and demand in a more efficient manner?

4. Does the ICT revolution lead to the production of opportunistic behaviour?

5. Did Premium Cola succeed in getting rid of the old value chain and redundant intermediaries, or it is struggling in the IDR cycle (intermediation, disintermediation, re-intermediation)?

6. How are Premium’s contracts carried out and managed?

Having covered the theories and the arguments of TCV and the literature of managing virtual networks, the following section targets the last thread of literature in this research - the resource-based view (RBV), which explores the management of the available resources in the most efficient manner.

D. Resource-based view

The resource-based view focuses on resources as the basis of profit and defines them as “core”, “competence” or “distinctive” (Parhald and Hamel 1990 cit. Foss, 1993). In 1934, Schumpeter demonstrated that the role of the entrepreneurial team lies in its ability to organise and utilize available resources in a way that allows it to create disruption in the
static nature of the market in what was known as the “Creative Destruction”. For example, *Premium Cola* is a company that operates virtually and outsources everything. It has no physical resources; however, it is still making profit. How is this possible?

The most valuable type of resources are intangible resources – resources that have developed over time and through experience. Defined as tacit knowledge, these types of resources focus heavily on managerial, co-ordination, and integration skills in relation to technology (Ibid). These are the resources that are part of *Premium’s* organisational structure and the source of its profit because *Premium* can arrange its relationships with partners and create profit. How to maximise the efficiency of these resources and how to arrange them in order to maximise profit will be addressed in this section.

As tacit resources are the source of value creation, it is important to mention what Krizner (1973) identified as “waste”. The term “waste”, according to Krinzer is the failure of entrepreneurial teams to utilise the combination of available resources - also called opportunities - in a way that allows them to get the maximum value out of resources, especially when opportunities have a long-term value. Later this research explores if *Premium* is facing any sort of “waste” and how to overcome this.

Furthermore, the research analyses how *Premium* manages the available resources in order to accommodate growth. When the focus is on growth, the most important type of resource is managerial knowledge and knowledge know-how (Arbaugh and Camp, 2000).
Thus, it is important to mention the knowledge-based view as it is highly connected to the RBV (Arbaugh and Camp, 2000).

The knowledge-based view contends that “companies are a collection of both tacit knowledge (company-specific) and explicit knowledge (available across companies) located within the total organisation as well as its various components”. Companies create success by adding knowledge from other resources in a way that enables them to create value-added capabilities, thus maximizing returns (Arbaugh and Camp, 2000).

According to the “Penrose Effect” (1959), business rate of growth is linked to a business’s ability to create capacity that accommodates growth. The creation of this capacity is determined by the management’s ability to configure the resources in pursuit of opportunities (Cit. Arbaugh and Camp, 2000). This in turn determines the organisation’s rate and pattern of growth.

The success of the company to create capacity to accommodate growth lies in its ability to build a routine approach - “a cycle” in which the company can configure resources in the light of available opportunities, in order to reach higher rates of growth for a longer period of time (Arbaugh and Camp, 2000).

However, the real success of the entrepreneurial team lies in its ability to manage resources during growth and transition, i.e. the point at which resources are reconfigured. Based on the RBV, it is how resources are configured at each stage and reconfigured
during the transitions between phases that determines the success of the phases of change (Arbaugh and Camp, 2000). This is explained in the following figure:

Figure 2.4: The configuration of resources to accommodate growth (Arbaugh and Camp, 2000)

Difficulties that the entrepreneurial team might encounter while managing resources during growth and transitions are as follows:

1. Based on life cycle models, growth comes with incremental changes. Therefore, at each phase of development existing resources might be enough for the companies to grow, however, the next measure of growth might require further resources.

2. Regular and unpredictable changes in different market factors might create slack in some resources and constraints in others. Issues might include financial, technological and human capital (Bruno and Tyebje 1982; Hanan and Freeman 1984 in Arbaugh and Camp, 2000). These unpredictable changes create difficulties for the
entrepreneurial teams in managing resources effectively, especially for long-term gains (Arbaugh and Camp, 2000).

Arbaugh and Camp (2000) suggests that for growth transition to be managed the best way, the entrepreneurial team or the company must be able to identify and develop the required knowledge necessary to make transition at earlier stages rather than waiting for growth to force them to do so.

According to them, this proactive strategy provides the company with a focus on key resources and processes prior to needing them. These researchers also mention that this strategy places attention on intangible resources rather than tangible one, thus enabling the company to compete with larger companies through the utilisation of specialized knowledge and new organisational routines, especially in the period of transition and growth. Finally, they added that what gives knowledge resources distinction is adhering to “How” and “Why” types of knowledge, which is important for the company’s survival during growth and transition (Arbaugh and Camp, 2000).

Indeed, it can be concluded that managerial knowledge and knowledge know-how are the key resources that determine a company’s survival and success. The following section discusses RBV in relation to the ICT revolution.
D. Recourse-based theory and electronic revolution

The question raised here: how can these resources be transferred efficiently and utilized in a virtual network?

Johnson et al (2002) argued that what is assumed to be achieved by information technology (IT) in terms of tacit knowledge exchange is overstated. Johnson et al (2002) refer their argument to two facts: first, converting implicit knowledge into explicit knowledge entails the expert to explain his or her knowledge by codifying it. What an amateur might create from this codified knowledge, however, is not as ideal as what an expert might create. Second, they claim that the utilization of ICT to construct an expert system to share experts’ skills involves not only high costs of building it, but also involves altering the expert’s knowledge content. Johnson et al (2002) defend their arguments by stating that big ICT companies failed in sharing expert knowledge, such as IBM’s failure in developing a successful expert system.

When Timonen and Yalitato (2007) studied the Finnish grocery value networks, they discovered that while knowledge, unlike other assets that increase by sharing, companies tend not to share freely (Timonen and Yalitato 2007; Leadbeater 2009). In fact, knowledge-sharing depends on the cost of the knowledge itself. Companies are usually protective toward their tacit knowledge, novel product ideas, and any type of knowledge
that its distribution over a network could threaten them and may possibly make them lose their competitive advantage.

According to Inkpen (1998) when highly competitive companies decide to collaborate, they tend to be highly protective towards their knowledge. However, conversely Timonen and Yalitato (2007) reveal that the tremendous amount of information sharing in value networks, for example, sales data and demographic information shared online, resulted in the construction of tacit knowledge.

In order to assess Premium’s management of its resources, whether it is in managing the resources available in the most efficient manner, the following questions are tested on Premium:

1. What is the degree of tacitness of the resources?

2. Can the available resources be organised in a way that creates disruption in the static nature of the market?

3. Are the available opportunities maximally utilized?

4. Does Premium have the ability to configure available resources to accommodate growth?

5. Is Premium able to transfer implicit knowledge into explicit knowledge and share it through ICT?
6. What is the degree of freedom in information sharing? Does this threaten the competitiveness of the business?

Conclusion

Living in this knowledge-based economy, the tremendous ICT revolution constantly imposes the questions of how to operate in the most efficient manner. Business theories are examined in all their dimensions repetitively in order to fit with continual ICT advancements, and thus participate in value creation. The theories and the arguments represented in this chapter are tested on *Premium* in later chapters. However, *Premium Cola*, the case study at the heart of this research, is explored in detail in the following chapter.
Chapter 3

The Sample

Introduction

This chapter gives an overview of the sample of this research\textsuperscript{12}. It explores why Premium is an interesting case that triggered the need for this research. The chapter is wide-ranging and covers the historical overview of the business process, the principles, the modules and the innovative analysis of the case study.

*Premium Cola* is an example of a successful innovative company that operates at near 100\% efficiency. It was developed by a collective of Germans in Hamburg in November 2001. This organisation, so-called the “Collective”, produces soft drinks and beer; in 2010 it also produced coffee.

\textbf{A. Historical overview}

The Collective commenced operations as a protest campaign (Named “Interessengruppe Premium”) carried out by a group of fans of “Afri-Cola” because of the changes in the recipe of that cola.

In 1999, this popular brand “Afri-Cola” (created in 1931) had just been bought by the Mineralbrunnen Überkingen-Teinach AG, and as a result the recipe has been secretly changed, in which the new Afri-Cola contained a significantly minimised amount of caffeine.

\textsuperscript{12} All the information in this Chapter is the summery of the documents explored through the Premium Site (www. Premium Cola.de) and Translated my Maha Alnahdi (The Researcher), then they are doubled checked with the Founder of the Premium Mr. Lubbermann. The Premium site is listed in the Bibliography as well.
(the original Afri-Cola contained 250 mg/L). The strong taste was significantly softened in order to meet the taste of a wider variety of customers.

The protests campaign of the “Interessengruppe Premium” led to some public awareness, but remained unsuccessful as far as Afri-Cola was concerned. So, campaigners started producing the original recipe cola on their own and named it *Premium Cola*.

*Premium* was started by a German called Uwe Lübbermannn, the entrepreneur in this case, and soon grew to 100 members. Now it has 500 members including the dealers and the stakeholders. How the product is produced and details of the company’s management are described in the following sections.

**B. Business process**

- The Structure

The reason that *Premium* is chosen as a case study is that traditionally cola producers have owned production plants, offices, boardrooms, meeting rooms, vehicles and other tangible resources. *Premium*, however, claims to own nothing except an interactive collaborative website, and as such is an example of a company operating in a new organisational form. While *Premium* can be loosely interpreted as a beverage producer – it supplies cola and beer to the public -, in reality, it is not responsible for the physical production of its commodities; the company does not possess any machinery and does not operate a production plant. In the case of *Premium*, every aspect of their operation, from production to financial management is outsourced, transferred into the hands of various companies with a specialist focus. On its
own, *Premium’s* decision to maximally outsource, while unusual for an operation that sits (albeit uncomfortably) in the secondary sector, is not particularly unique if you consider all sectors of the economy. What makes the company an interesting case for analysis is that it claims to function, paradoxically, by maximally in sourcing at the same time. Simply put, this means that all of *Premium’s* outsourced stakeholders can actively participate in the company’s decision making process, and this is achieved through membership to *Premium’s* interactive website. This operational paradox, supported by the strategic deployment of information and communication technology, is the key to *Premium Cola’s* innovation.

In addition, the organisational structure of *Premium Cola* is completely flat. Private individuals (even those without a direct monetary interest in Premium’s operations) may become members simply by connecting with one of the 107 existing members virtually, and logging on to the site. Once they have subscribed, *Premium’s* members then have the freedom to choose the field they want to work in, their workload and time commitment, and they are paid by the company accordingly.

This leads to the question of how decisions are made.

c. How this is managed

*Premium Cola* is a project-based organisation which is run on the basis of a pre-defined set of modules. It is believed that these modules are behind the success of *Premium*. The modules are divided according to their area of operation: mainly economical modules, ecological modules, social responsibility modules, protection modules and transfer modules. These modules are explained in detail in the following sections.
Economical modules:

Economical Modules are modules developed to manage the economical and financial aspects of Premium. Because the Premium website is a collaborative, collective site that connects a high number of stakeholders with different financial backgrounds, these modules are developed as a basis to prevent financial conflicts that may occur. In addition, they act as guidance for those members who have no financial background.

Module N0.1: No profit

This means that instead of charging a “market price” or a “competitive price,”

Premium believes that this is unfair, as the customer will pay additional costs they are not required to pay.

Thus, within Premium, charges are only made for the cost of the production of each bottle. This cost includes the ingredients, the wages, the cost, and the special features such as CO2-”compensation” or alcoholism prevention. A profit-share does not exist. The shares of each bottle are paid directly to individual participants or to a “cost centre.”

This may sound unconventional, but for Premium, it is believed that:

“No one can get more money by placing additional price[s] or reducing payments on someone else.” Lubburmann –Premium’s Founder
As the enterprise is not an individual-based organisation, but a collective that works as a custodian for the benefit of all (suppliers, customers and members), the choice of increasing revenue by increasing the price of a bottle is not a smart solution.

The diagram below shows the per bottle cash distribution among the network chain of *Premium*. 
Figure 3.1: The Cash Distribution on Premium

As the diagram shows, first *Premium* pays 0.20 cent/bottle to producer whose in-turn pay 0.66 cent/bottle for ingredients. One the bottle is produced, the wholesaler picks
them and pays 0.37 Cent/bottle to Premium accounts. Premium accounts then cover expenses of the .20 cent production costs and then pay the accountants, the speakers, environmental damage recovery cent, the organisational assistant, control, anti quantity discount and structure management as the above figure shows. Then the wholesalers transport the bottle to the dealers for storage and local distribution; the wholesalers receives 0.49 cents/bottle for that. Finally the dealers transport the bottle to the gastronomies (cafes, shops and bars) which in turn pay the dealer 0.660cent per bottle. This diagram is analysed later on in Chapter 5 (the analysis chapter).

- Module No. 2: Calculation

*Premium* defines each bottle by the revenue generated to whom and for which purpose it is spent. So, it is clear how much money is actually available from the balance statement, which everyone in *Premium* can access – and it is the only money that is allowed to be spent..

- Module No. 3: “Fixed prices”

By a decision agreed on within the module “consensus democracy,” fixed prices for *Premium Cola* and *Premium Beer* have been set for the bottles’ paths from the manufacturing plant to the wholesaler, retailer and restaurant owners.

The reason behind the fixed prices is to ensure that beverage shops in the city do not have a price competition, but quality customer service can make a difference.
Module No. 4: Unit-quantity discount

Before explaining how Premium acts in this module, it is important to mention the mechanics of transportation and the economies of scale generated. When transporting coke bottles, the higher the quantity of bottles requested, the better in terms of cost, as transportation cost is fixed (economies of scale).\(^{13}\) This is explained in the following graph:

![Graph showing how quantity discounts are offered for small dealers.](image)

**Figure 3.2: How Quantity Discounts are offered for Small Dealers**

This approach encourages cola producers to deal with big dealers, who request large numbers of cola bottles, rather than smaller quantities. Thus, cola producers follow the strategy of offering discounts to large dealers in an attempt to maintain long-term business relationships.

\(^{13}\) Define economies of scale.
However, unlike normal cola producers, *Premium* looks at it differently. *Premium* believes that the discount should be offered to smaller dealers who take a penny from large dealers and provide it at a discount for smaller ones. The wisdom behind this strategy leads to the creation of a large number of small dealers, meaning a larger customer base in their structure.

- **Module No. 5: “Immediate payment”**

If the order is placed and the work is done, there is no reason for delays in payment (assuming the money is there, module “Calculation”). *Premium* generally will pay on the day the invoice is received, and regularly ask for invoices from the other side. Cash discounts are not entertained (refer to module “No Discount.”)

- **Module No. 6: “No discount”**

In Germany, many creditors offer a 2–3% discount when they are paid on time. However, *Premium* thinks that all invoices should be paid in time, so they do not offer such a discount with their invoices. At the same time, they do not use such discounts when offered by their vendors (and still pay in time). From the module “Immediate Payment,” a lot of money is saved regularly. *Premium* attracts, but does not discount because it charges immediately and completely.

- **Module No. 7: “No interest”**

Fast payment is usually expected from *Premium* partners, as the module “Immediate
Payment” shows. However, a partner may need a longer time to pay the bill; this might be accepted on a temporary basis – but not always – otherwise the module “Immediate Payment” is not followed. In such situations, Premium does not ask for any interest, no matter what the interest rates are. Even if a loan is offered, Premium usually does not require interest.

**Transparency modules:**

Due to the endless number of people who could join Premium virtually and because everything is shared there, Premium decided to create rules to manage transparency. These rules are represented here:

- **Module No. 1: “Open franchise”**

  All the modules of Premium’s operating system are made public and are freely available. Furthermore, any advice on implementation can be provided based on request. Anyone who copies all current and future modules may call its product “Premium” and copy the proprietary design, and Premium will gladly assist. In addition, single modules could be copied freely, even in part. For example, a company called Drink-Skull has partially copied the module “Anti-discount,” so it does not provide any volume discounts. The aim here is to encourage other companies to adopt a smarter way of operation in the fields of ecology, economics and social affairs. Where Premium is concerned, it is believed that copying its operations provides benefits for all parties—that is the business mission.
Module No. 2: “Collective cooperation”

Premium works with maximum outsourcing, i.e. production, logistics and trade is done by independent partner companies. At the same time, it works with maximum insourcing because all parties have the right to participate equally with all aspects of the organisation and conditions. The sum of the parties is the “Premium Collective” in which the work is carried out and spread automatically in many ways to other minds and businesses.

Module No. 3 “Production error”

“All Premium’s possible defects are spontaneously published on the website since 8. 28. 2006” Uwe Lubburman – The Founder of Premium.

In short, no production system is capable of 100% quality. There will always be some 0,000001% mistakes, but nobody else will admit that.

Premium publishes every mistake actively, so customers know when something occurred. If Premium does not tell, no one would know and nothing has occurred. If other companies do not tell, then customers will not know. Premium hopes that other companies will, in the future, be asked why they do not publish their mistakes

Module No. 4: “Alcohol prevention”
For most people, alcohol is a drink that has pleasant effects. For some people, it is considered a financial waste and a health concern, and they always blame the producers. *Premium* tends to publish statistical information regarding the risks and awareness of alcoholism.

- **Module No. 5 “Transparency”**

  In the beverage industry, sometimes other companies use aggressive moves to gain market share. *Premium* does not do that but publishes what others do in order to:

  1. Embarrass them publicly
  2. Help protect *Premium* from their moves

**Ecological modules:**

*Premium* believes that business is not only about making money, thus business firms should have values and messages to transfer via their ethical practices. *Premium* does that through the Ecological Modules that it has built. These modules focus on solving the environmental issues that are threatening the globe.

- **Module No. 1 “Waiver”**

  Sometimes ecological activities are very simple: *Premium Cola* gives up two of the usual three labels on the bottle, thus saving not only a paper tower (A4) of about eight metres height and 333 kilos weight per year, but also the related burden of production.
Module No. 2: “Optimization”

Ecological activities can be complicated. *Premium Cola* and *Premium* beers do not just consist of liquid. There are still other components that are catching Premium’s attention in terms of ecological optimization. These include the following:

**BOTTLE**

Premium uses only reusable glass. This is done for many reasons:

- Plastic bottles are never fully closed, so carbon dioxide can escape from the beverage over time. Therefore, manufacturers increasingly fill carbon dioxide into plastic bottles, and do not do likewise with glass bottles.

- Second, plastic bottles, despite their lower total transport weight, negatively affect the environment.

- Third, plastic bottles may be dangerous or even mutagenic.

- Fourth, glass can be recycled to 100%, while plastic cannot.
  
  - Thus, Premium prefers glass over plastic.

Module No. 3: “CO2-compensation”

*As Premium’s* bottles cannot be sent via e-mail, it “compensates” all CO₂ emissions that have resulted from the transportation of every single bottle.

**Social Modules:**
Premium developed the following modules in order to manage and set the rules of the social interactions within Premium, and the Social interactions of Premium with the external environment.

- Module No. 1: “Minimum standards”

  It may sound common and it is the basis of many things: Premium assumes that all people are principally equal in a society, and thus their opinions are valued equally and should be considered carefully.

  Therefore, decision-making in the module “Consensus Democracy” is taken carefully, so that minorities cannot easily be discriminated against.

- Module No. 2: “Consensus democracy”:

  In order to explain this module, what is called “Basis democracy” has to be explained first. Basis democracy is the way democracy operates in Germany and in most Europeans countries in which actions taken are based on the votes of the majority.

  This democratic strategy is believed to be the best. However, Premium does not endorse that, in particular because of the virtual structure that this type of democracy entails. Furthermore, not all stakeholders may be satisfied, resulting in instability in Premium’s decisions. Thus, Premium follows a type of democracy that some Africans countries apply and it is called “Consensus Democracy.” This is where issues must be discussed until all parties agree to a solution or undertake to live with it. As all the
stakeholders must reach a common decision in this type of democracy, it takes usually a longer time to reach a decision than a Basis democracy. However, this decision is usually stable and lasts for a long time.

- Module No. 3: “Privacy”

For the module Consensus Democracy to work, there should be 100% transparency. However, sometimes privacy is needed and respected. This happens when one of the members neglects their work because he or she engages in unethical issues, such as alcohol or drug addiction, etc. When such problems arise, the name of that person is kept in secret, and the problem is solved anonymously. Keeping this private is easy when it happens in an area of operation where there are many working members, e.g. in transportation where many drivers are employed. However, if the person involved is the accountant and there is only one accountant in Premium, such a case may be hard to resolve anonymously.

- Module No. 4: “Handshake”

Premium did not complete a single written contract with partner companies over nine years, a handshake or a mail is sufficient. This means that all partners have a strong interest to deal with Premium, otherwise they could leave. Thus, Premium has a very stable structure with many years of partnerships. When the founder is asked how this is managed he replied: “By trust, I’d say. There is also missing a vital aspect: both
sides have a strong interest to behave well, because both sides could leave instantly if the other one does not.”

- Module No. 5 “Public relation-waiver”

Some Premium collectivists work in communications, marketing or PR. However, Premium does not use PR, because it believes that PR compromises the media, which is bad for society.

- Module No. 6: “Virtual company”

Premium has no office. Premium collectivists work when and where they want, and they participate in the decision-making process which is not bound by space or time. In this way, the “working life” no longer affects the private life, though sometimes it is necessary, of course, for decisions to be made and deadlines to be met.

- Module No. 7: “Competences”

Some members of Premium have taken good care of several working fields. They act freely over time, and their opinions are carefully considered when they talk about their field, but every step they take can be revoked by Premium at any time. This makes for consensus-orientated steps.

- Module No. 8 “Loyalty”

For Premium to work, its partners should be on a high level of loyalty and predictability to ensure that the business process will be organised as planned.
Premium succeeds in doing that for years simply by trying to avoid negotiation as much as possible and ensuring fixed prices. If a problem occurs, Premium tries to keep the negotiation period short and they work together with a partner to find a solution.

**Protection modules:**

To maintain security in an environment that almost lacks security these modules are developed.

- Module No. 1: “Access protection”

Because one of the main principles of Premium is transparency, it is at risk of having curious competitors copying information and using this indiscriminately against the company—concerns that have happened before. Thus, Premium has introduced a new strategy where new collectivists can access key information only if they know one of the already known Collectivists. This strategy of creating a network of trusts helps Premium to manage between the main principles: “Transparency” and “Access protection.”

- Module No. 2 “Emergency decision”

Imagine endless discussion processes over a small topic such as “which artwork should be printed on the inside labels,” and no consensus. All structure would come to a stop about that. To prevent that, one central persona (Uwe at the moment) can make
an emergency decision. This type of decision-making has been used before

concerning the inside labels where *Premium* decided to produce bottles without them.

- Module No. 3: “Emergency-exclusion”

As *Premium* believes in the concept of “loyalty,” it should be patient with bad employees

or service providers as all other normal businesses do. Exclusion is against the

background of the module “Collective.” However, when the damage reaches certain

levels, in which it might harm other suppliers and employees, an action of exclusion

should be taken. Of course, the seriousness of the damage is measured first, whether it

happened accidentally or not and whether it was the first or the second time.

- Module No. 4: “Backups”

Every role and software which is vital for the structure should exist at least twice, as

far as possible. Nobody could replace Uwe, the founder, but there is at least a second

banking login, and a second administrator.

- Module No. 5: “Compliance in”

*Premium* usually has set rules for procedures, including taxation, customs,

documentation, and so forth, even following these procedures may result in a

disproportionate burden. For example, there is a German law which requires the

business to send every invoice on paper.
Conclusion:

*Premium Cola* addresses innovation in different directions. First, it practises the open innovation strategy where active participation from customers and users is possible. *Premium Cola* combines the three groups of open innovation which are open source (software like Linux); open design (hardware, such as Openmoko); and open content (content, such as TripAdvisor).

In the field of user innovation: A user or group of users experience a need which is not satisfied on market products or services, and has developed an individual solution to meet their needs. The enterprise users are the innovation here, that is, plumbers, doctors, or manufacturing companies.

In conclusion, having the case study explained in this chapter and the theories explained in the previous chapter, the following chapter combines theory and sample together in which a framework of analysis is created.
Chapter 4

Interview guide and variables of analysis

Introduction

In an attempt to bring theory into real-life analysis, in this chapter a framework of analysis is developed and variables of analysis are identified. At the end of the chapter, the interview targeting *Premium Cola* is described.

In this Chapter, *Premium Cola*’s strategies, such as virtuality, collaboration, knowledge sharing, ethical business practices are combined with variables demonstrated by the theories discussed in chapter 2 in order to create framework of analysis. This framework of analysis is done in a systematic manner where:

1. First, it represents variables, examining the degree of the Premium efficiency in terms of its utilization of virtual opportunities.
2. Then, the chapter goes through the variables to assess the Premium’s efficiency in terms of the Transaction Cost View (TCV).
3. Finally, the chapter endeavours to establish the framework of analysis to assess the Premium’s utilization of available resources based on the Resources Based View (RBV).
I. The Frame Work of Analysis to Assess Degree of efficient utilization of virtual opportunities

Since Premium Cola is a 100% virtual organization, analysis commences by examining the efficiency of virtualization of the organization through assessing how virtual opportunities are utilized. This will be done in two steps:

First, the characteristics of efficient virtual networks identified by Timmer (2002) represented in chapter 2 are going to be treated here as variables in order to test the Premium’s efficient utilization of in virtual networks.

These Variables are divided into two sets: The first set of variables aims to assess the Premium’s efficient utilization of “Virtual Value Network”. The second set of variables aims to assess the Premium’s efficient participation in “Dynamic Market Configuration”\(^{14}\).

Each set of variables has its own typology, represented below. This typology includes:

1. Explanation of each variable.
2. The interview question related to each variable.
3. Measurements to help the interviewee to answer the questions.(This is only in the first typology)
4. Finally, in order to measure the percentage of the Premium’s efficient participation in virtual networks, a value is assigned to each variable based on its importance. However, in this research the variables in each typology are equally important that is why they all have the equal value in percentage.

\(^{14}\) Refer to Chapter 2 in order to see the difference between the two networks and their characteristics.
Table 4.1: Assessment of participation in virtual value networks (Timmer, 2002)

<table>
<thead>
<tr>
<th>Variables (Characteristics)</th>
<th>Questions</th>
<th>Explanations</th>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
</table>
| There is standard set of tools to manage Premium | Is there a standard set of tools used in the Premium? If Yes, what are these tools? | Value networks require a high level of standardization of business process among partners. There should be a commonly agreed mechanism in force on semantics among partners in terms of inputs, outputs, and internal flow, plus there should be a common understanding of the business objects that are related to these processes including resources (Timmer, 2002) | Does it use:  
1. Online project management  
2. EDI, electronic data interchange  
3. STEP, standard for the exchange of product data  
4. PDM, product data modelling | 20% |
| The Premium is able to manage complex networks. | The level of complexity among networks | Value networks vary in the level of configurations as they have different levels of complexity, formalization, and intimacy (the degree of enterprise integration and collaboration) | Premium Cola will be categorized whether it is a:  
1. A Stable network in which long-term relations exist  
2. An Internal network in which a loose association of business units operate | 20% |
<table>
<thead>
<tr>
<th>The Premium has a built-up online data base shared among partners.</th>
<th>Is there a built-up shared online database among partners? For example</th>
<th>A shared database facilitates communication among partners and puts the operation into control</th>
<th>Yes/No</th>
<th>20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Premium seeks network relationships rather than horizontal and vertical integration</td>
<td>Does the Premium seek horizontal, vertical ownership or network relationship in its integration</td>
<td>As past organizations used to target ownerships in their networks, new organizations should focus on improving their strategies, including time to market, quality, and market access through virtual relationships.</td>
<td>To know the answer the Premium must fall into one of the following categories: 1. Yes, the Premium seeks ownership 2. The Premium seeks relationship 3. The Premium seeks a mixture of both</td>
<td>20%</td>
</tr>
<tr>
<td>The supply and The degree of</td>
<td>Does the participation of Premium Cola in Surplus in quantity (produced</td>
<td>Surplus in quantity (produced</td>
<td></td>
<td>20%</td>
</tr>
</tbody>
</table>
The demand of the Premium drinks are usually matched. Matching between supply and demand is critical for better and faster match of supply and demand, or not supplied) and shortage in quantity demanded will be measured.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Explanation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree of its ability to give up current relationships for future opportunities</td>
<td>The operation in virtual dynamic markets is characterized by having the ability to trade off current relationships for future opportunities (Timmer, 2002)</td>
<td>25%</td>
</tr>
<tr>
<td>Do they produce customizable or standard products?</td>
<td>Customization makes it difficult to have rapid deliveries and consequently response time is longer, which means cost</td>
<td>25%</td>
</tr>
<tr>
<td>Degree of exposure to financial risks?</td>
<td>Financial risk is minimized through internalizing operations or through contracts.</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 4.2: Assessment of the Premium’s participation in dynamic market configuration (Timmer, 2002)
<table>
<thead>
<tr>
<th>Operating in dynamic markets means less contracts and written agreements</th>
<th>However, both of these strategies are costly</th>
</tr>
</thead>
<tbody>
<tr>
<td>How flexible is the Premium when dealing with customer requests?</td>
<td>High flexibility means a high complexity – a thing that is overwhelming and hard to manage.</td>
</tr>
</tbody>
</table>

In the next chapter, after conducting the interview and having the questions answered, the analysis goes through the following methodology:
1. The answers of the interview questions are reviewed in relation to the variables. Thus, conclusions are drawn answering whether the premium satisfy the variables or not. What is meant by satisfying the variables or not is either:

- The conclusion: Yes the Premium satisfies these variables means that the Premium carry out the Characteristic related to that variable.

- The conclusion: No the Premium doesn’t satisfy that variable means that the Premium is not characterized by the characteristic related to that variable.

2. After that, the values of the satisfied characteristics are summed up to evaluate the degree of the efficiency of the Premium in terms of participating in virtual networks, i.e. Virtual Value Network and Dynamic Market Configurations.

The following table is an example of the table that is used in the assessment

<table>
<thead>
<tr>
<th>Variables</th>
<th>Value</th>
<th>Satisfied (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable x</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>Variable Y</td>
<td>20%</td>
<td>No</td>
</tr>
<tr>
<td>Variable G</td>
<td>20%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Total value of the satisfied characteristics are 40%

Table 4.3 an example of the Summery of the evaluation of the Premium’s efficient Participation in Virtual Network

3. Finally based on the table and the interview, an overall analysis and recommendation are represented.
This methodology is implemented in Chapter 5 after conducting the interview.

II. The Framework of Analysis to Asses the Premium’s of the Transaction Cost Theory:

According to Williamson (1981) transactions happen when goods or services are transferred between technologically separate entities, and as one phase of activity ends the other begin. Williamson demonstrated that in a perfectly organized system, the process happens smoothly with no economic loss. Any malfunction that may lead to delay is, thus, an economic loss, i.e. a transaction cost.

This section represents a framework of analysis aimed to assess the Premium’s transaction cost-effectiveness. This analysis consists of two stages:

**First:** As the Transaction Cost theories deals mainly with evaluating the decision “whether to internalize or externalize business operations”. The first stage of the analysis identifies the Premium’s organizational boundaries. In which the following questions are asked:

1. **What are the operations that the Premium does internally?**
2. **What are the operations that the Premium does externally?**

The expected outcome of this stage is mapping out the Premium’s organizational boundaries.

**Second:** Having the organizational boundaries mapped out, the research assesses the Premium efficiency in terms of Transaction Cost management through the three steps:

1. The efficiency the Premium’s application of Legal Contracts.
2. The efficiency of the Transactions costs by “Dimensionalizing” them.
3. The final stage is testing the efficiency of the supply network; whether the Premium has redundant intermediaries.

This is explained in details in the following section:

1. **Enforcing Contracts and The Transaction Cost view:**

Historically enforcing contracts and managing them were imposing additional cost on business leaders. Conversely, As mentioned in chapter 3, the Premium’s have a new, partly risky, strategy in managing contracts, where a hand shake or an email is sufficient to start operations. Testing whether this strategy is cost efficient or not is going to be through the following steps:

1. Does this high degree of trust produce opportunistic behaviour?\(^{15}\) If yes
2. Has this caused any kind of loss?
3. What is the value of the loss measured in Euros?
4. This loss will be subtracted from the cost of adopting ICT

Going through these steps assess whether the Premium is utilizing a cost efficient strategy in managing its Contracts.

However, recalling from chapter 2, Williamson (1982) explained what really makes partners stick to the operation are not the contracts; instead the dimensions of the Transaction itself, i.e. the degree of asset specificity, the Frequency of Transaction, and degree of transaction Uncertainty. In fact, these are the determinants of the decision “Whether to internalize or externalize business activities”. Thus the following section tends to build a frame work of analysis in order to test the dimensions of the Premium.

---

\(^{15}\) Oppotunitic behavior defined as, "The art or practice of taking advantage of opportunities or circumstances, or of seeking immediate advantage with little regard for ultimate consequences" - *Answers.com*
2. The efficiency of the Transactions costs by “Dimensionalizing” them:

This section provides a framework of analysis to dimensionalize the Premium’s Transactions. Referring to Williamson’s (1981) article reviewed in chapter 2, the most important dimension is determining the asset specificity. That is if the asset is specific, the analysis goes through testing the other dimensions. Otherwise, the assets is non-specific, outsourcing would be the most efficient decision.

The following typology represents:

1. The dimensions.

2. Detailed explanations of each dimension.

3. The way of measuring each dimension.
Table 4.4: Dimensionalizing the Premium’s Transactions

<table>
<thead>
<tr>
<th>TCV - Variables of Analysis</th>
<th>Explanations</th>
<th>Measurement</th>
</tr>
</thead>
</table>
| The degree of asset specificity (riskiness of the investment) | This includes measuring the three types of asset mentioned by Williamson (1981): 1. Physical assets 2. Site assets 3. Human assets | In terms of measuring  
a) The specificity site assets:  
$\Delta$ Cost of Transportation and Inventory  
b) The specificity of physical assets:  
$\Delta$ of production cost + $\Delta$ in governance cost.  
Then if it is positive it is better to market contract.  
If zero or less, it is better to internalize.  
Human asset specificity:  
In which category\textsuperscript{16} it falls:  
1. M1, H1: Internal Spot Market.  
3. M2, H1: Primitive Team.  
4. M2, H2: Relational Team.  
(Refer to Chapter 2 for further description) |
| Frequency of the | Based on the TCV, it is always | Frequency ranging from occasional to recurrent |

\textsuperscript{16} Refer to chapter II to have a description of the classifications.
<table>
<thead>
<tr>
<th>transactions</th>
<th>better to internalize frequent recurrent transactions, especially idiosyncratic recurrent transactions (Sendler, 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertainty of the transactions (uncertainty of the partners)</td>
<td>Uncertain partners might place the organization at risk through their investments. One of the ways to overcome this is by choosing standardized investments</td>
</tr>
<tr>
<td>Does the Premium deal: 1. Heavily. 2. Slightly. with uncertain partner</td>
<td></td>
</tr>
</tbody>
</table>

After identifying the best way of carrying the operations of the Premium, whether outsource or in-source, the following section will tests of the Premium is employing redundant organizational units in its supply chain.
4. Testing the Efficiency the Network Chain of the Premium:

This section examine whether the Premium is able to get rid of its old value chain and redundant intermediaries, or is it struggling in the IDR cycle (intermediation, disintermediation, re intermediation).

The analysis follows these steps:

1. It picks the possible redundant intermediaries.

2. Ask if the Premium if it could get rid of those intermediaries. If Yes why, and if no why?

III. The Framework of Analysis to Assess Degree of the Premium’s Utilization of the Available Resources:

In terms of analyzing the degree of utilization of the organizational resources, the research goes through the following methodology:

First, looking at the firm’s competitive resources, inputs into production process, which might be one (or more) of the following:

- Brands
- Brand equity
- Products
- People/Talent
- Business processes
- Innovation
- Learning
- Macro structure
- Vision direction
- Strategies
- Core values

The following variables are then applied:
Table 4.5: Assessing Degree of Utilization of the Available Resources

<table>
<thead>
<tr>
<th>RBV–Variables of Analysis</th>
<th>Interview Questions</th>
<th>Explanations</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree of utilization of available resources (Is there a slack in the resources?)</td>
<td>What is the degree of utilization of available resources? is there any slack in the resources? Are the resources threatening the Premium’s competitors?</td>
<td>Can the available resources be organized in a way that creates disruption in the static nature of the market? (Can the Premium create competitive advantage)</td>
<td>The quality and the quantity of available capabilities (Set of resources) that creates competitive advantage</td>
</tr>
<tr>
<td>Effects of tacitness on resources</td>
<td>What is the degree of tacit-ness of the resources?</td>
<td>Tacit resources are resources that develop over time through experience and cannot be copied. The more tacit the knowledge is, the harder it is to be copied</td>
<td>The percentage of tacit resources out of total resources available</td>
</tr>
<tr>
<td>The degree of utilization of available opportunities</td>
<td>What is the degree of utilization of available opportunities?</td>
<td>Are the available opportunities maximally utilized? Is there any missing opportunity?</td>
<td>The loss resulted from missed opportunities that are missed</td>
</tr>
</tbody>
</table>
The ability to configure resources in order to accommodate growth.

<table>
<thead>
<tr>
<th>Does the Premium have the ability to configure available resources to accommodate growth?</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the case of intended growth, are the available resources sufficient to carry out that growth?</td>
</tr>
<tr>
<td>To answer this question three sub-variables must be considered:</td>
</tr>
<tr>
<td>1. Does the firm adopt proactive strategies when it comes to growth (not re-active)?</td>
</tr>
<tr>
<td>2. Does the firm utilize available intangible resources (including specialized knowledge and organizational routines) during growth?</td>
</tr>
<tr>
<td>3. Does the firm identify important survival variables during growth?</td>
</tr>
</tbody>
</table>

The Ability to codify tacit knowledge and share it (i.e. moving explicit units into implicit units)

<table>
<thead>
<tr>
<th>Is the Premium able to transfer implicit knowledge into explicit knowledge and share it through ICT?</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the important factors to carry out innovation in virtual network is having an organized way to share knowledge. Knowledge, unlike other resources, increases by sharing</td>
</tr>
<tr>
<td>Is there any type of knowledge-based system where knowledge could be stored, shared and developed freely? Example: expert system</td>
</tr>
</tbody>
</table>

The degree of

<table>
<thead>
<tr>
<th>What is the Firms tend to be</th>
</tr>
</thead>
<tbody>
<tr>
<td>What type of information</td>
</tr>
</tbody>
</table>

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Thes variables are addressed in chapters 5, where the interview questions are represented along with the answers. Then the analysis is provided based on the answers, the literature review, and the documents of the Premium all together.

**Conclusion:**

As the chapter shows, the frame work of analysis followed a systematic manner where each thread of literature has an independent framework of analysis. This is because each one of them has its own argument, views, and dimensions. However, all of these frameworks serve one question which is the research question, which mainly targets enhancing efficient operations in Virtual Organizations.
Chapter 5

Analysis

Introduction:

The answers to the interview questions and variables set up in the previous chapters are represented here, along with their analysis and recommendations.

As mentioned in the previous chapters, since Premium Cola is a 100% virtual organization, to make sure that the Premium is operating efficiently in a virtual environment, the analysis starts by assessing the efficiency of the Premium’s utilization of virtual value and network and Dynamic Market Configurations.

Then the chapter analyzes the efficiency of the Premium’s organizational boundaries by addressing the transaction cost view. During this phase the analysis takes three directions. First, the analysis examines the Premium’s application of legal contracts. Then, the analysis goes deeper and examines the efficiency of the Premium’s transactions costs by Dimensionalizing. The final stage involves testing the efficiency of the supply chain; whether the Premium has redundant intermediaries.

The final section of the analysis goes through identifying the competitive resources of the Premium, and sees if the Premium utilizes them in the most efficient manner. Finally, this section analyzes whether the Premium is able to utilize these resources in a way that enables it to accommodate growth.

The interview is conducted with the founder of the Premium, Uwe Lübbermann, who started the business nine years ago. Mr Lübbermann is a 34-year-old student of business psychology. Besides managing the Premium, Mr Lübbermann is an advertising merchant. He started working in his youth. He worked as a bricklayer, barkeeper, mobile phone seller, carer for
handicapped children, advertising executive (finished apprenticeship), translator, team leader, marketing man for study paths and in new lifelong learning at university, in co-development and accreditation of study paths, and in distribution of European Union regional funds. Mr Lübbermann now travels a lot and gives speeches. In the future Lübbermann plans to study for an MSc in sustainability management.

This interview is done virtually over Skype and took about three days, three hours every day. After finishing the interview, the founder double-checked the written answers. Minutes of the interview are represented throughout this chapter within boxes. Below these boxes I represent the analysis of the related variables.

I. Assessing the Premium’s efficient utilization of virtual value networks:

Referring to the variables of evaluating, the Premium’s efficient participation in virtual networks are stated and explained in chapter 4. This section starts by representing minutes of the interview related to these variables. Then the section moves into analyzing those variables in relation to the Premium.

Minutes of the interview:

1. Is there a standard set of tools used in the Collective?

Answer: The Premium uses the following tools to contact with its stakeholders:

---

17 His speeches are published in the Premium’s site [www.Premium-cola.du](http://www.Premium-cola.du) And they can be found in this site [www.social-banking.org](http://www.social-banking.org)
A mailing list for discussions.

Map-mail accounts to keep track of jobs, some accounts shared.

Phones and Skype-chats to discuss.

An internal online-board for collecting all relevant long-term information.

A groupware to keep track of jobs and dates. We have a festival calendar with automatic reminders.

Platform for online accounting.

Excel tracking of all deliveries to dealers.

A website to publish all public information, several people can publish on Facebook, Twitter

All these tools can be accessed by members in the Premium.

2. What is the Premium level of complexity among networks? Does it maintain a stable network in which long-term relations, internal networks within the organizations participate in dynamic markets?

Answer: Actually the Premium is a mixture of all this. The Premium tends to establish stable long-term relation with partners, all the internal and external business units are connected through the website. And it does participate in dynamic markets to search for the best customers and partners.

3. Is there a built-up, shared online database among partners?

Answer: We have some like the festival calendar and the dealers list on our website, but need more. The Premium does not have a standalone expert system. However, all the knowledge is published in the website.

4. In networking, does the Premium seek horizontal and vertical integration or network
relationship?

**Answer:** Relationship only. Ownership is not needed, except for one: the brand.

5. **What is the degree of matching between the supply and demand? Is there a shortage or surplus in the production? (Provide statistics if available.)**

The supply and demand are usually matched because both producers and wholesalers have access to the site. Even when sometimes we produce more than demanded, we try to search for a new wholesaler to market our products.

**Analysis**

Analysis of this section goes through the following methodology:

1. First, a value is assigned to the characteristics (variables) that virtual value networks have to operate efficiently, represented in chapter 5. As the five characteristics are equally important, I assigned to them an equal value in percentage form. Since there are five characteristics, the value assigned to each one is \(\frac{100}{5} = 20\%\), represented in Table 5.1.

2. Then, by reviewing Luebbermann’s answers of the interview, I will test whether these characteristics are satisfied by the Premium or not, Table 5.1. Recalling from chapter 4 what is meant by satisfied:

   - Satisfied: Yes, the Premium satisfies these variables. Means that the Premium carries out the characteristic related to that variable.
   - Not satisfied: No, the Premium does not satisfy that variable. Means that the Premium is not characterized by the characteristic related to that variable.
3. After that the values of the satisfied characteristics are summed up — in evaluating the degree of the efficiency of the Premium in terms of participating in virtual value networks.

The summary of this process is represented in Table 5.1

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
<th>Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a standard set of tools to manage the Collective?</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>The Collective is able to manage complex networks.</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>The Premium has a built-up online database shared among partners.</td>
<td>20%</td>
<td>No</td>
</tr>
<tr>
<td>The Premium seeks network relationships rather than horizontal and vertical integration.</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>The supply and demand of the Premium’s drinks are usually matched.</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>Total value of the satisfied characteristics.</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.1 Summary of assessing the evaluation of the Premium’s efficient participation in virtual value network.

4. Finally, based on the table and the interview, an overall analysis and recommendation are represented.
Results of the analysis and recommendation:

Based on the characteristics of virtual value networks stated by Timmer (2002) and picked up to test the Premium’s efficiency in its participation in virtual value networks, the Premium satisfies these variables on an 80% basis.

As value networks require a high set of standardization among all the networks members, the Premium covers a wide range of tools that is sufficient to manage inputs, outputs and information storage.

Furthermore, through this high level of standardization the Collective is able to manage complex networking, in which stable long-term relations exist with producers, wholesalers, dealers in its nine years’ operation. Statistically, there were only two incidents of relationship failures among hundreds.

The Collective also succeeded in managing internal networking business units that depended on market forces, supply and demand. Thus, this proves Timmer’s (2002) claim that, through value networks, supply and demand are better matched and outweigh what Cordilla (2007) argued: that this huge amount of information exchange results in the creation of opportunistic behaviour by economic actors – an incident which only happened once against hundreds of transactions.

The Premium uses some databases (Festival Calendar and Dealers lists), but these are still not enough for big networks to operate efficiently. A shared database will put operations under control.

So what is recommended for the Premium here to perfect its participation in virtual value network is to have some efficient online database that could be accessed by all involved stakeholders.
II. Assessing the efficiency of the Premium participation in Dynamic Market

Configuration:

This section follows the same process followed in the previous section. First, the minutes of the interview are represented. Then, based on the framework of analysis represented in chapter 4, analysis is outlined.

Minutes of the interview:

<table>
<thead>
<tr>
<th>To what extend can the Premium give up current relationships for future opportunities?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Answer:</strong> The Premium sticks to its dealers and customers. During the whole nine years of operation there was no incident in which the Premium tried to trade off one dealer for another. However, there were only two cases where the Premium fired dealers and one case where the Premium fired a secretary. These cases are:</td>
</tr>
<tr>
<td>The dealer did not stick to the prices which were agreed on.</td>
</tr>
<tr>
<td>A wholesaler outsourced the sorting of bottles and cases, which led to insufficient wages for the workers.</td>
</tr>
<tr>
<td>A secretary who was supposed to do easy tasks and was paid on an hourly basis was assigned to do a certain task with a given amount of money. However, he/she spent the money on themselves, and admitted that to the founder without any remorse. The secretary was fired for these irresponsible actions.</td>
</tr>
</tbody>
</table>

Do they produce customizable or standard products?

**Answer:** Generally the Premium produces standard products (Coke and Beer). When it comes to customers’ suggestions and requests, the Premium adopts a flexible strategy, where the members of the Premium respond to them and try to find a solution. For example, small dealers complained about high transportation costs, so the Premium introduced an anti-
volume-discount for small dealers.

What is the degree of exposure to financial risks? Operating in dynamic markets means less contracts and written agreement?

Answer: Surprisingly, although the Premium does not have any type of written contract, during the last nine years there was a very low rate of financial risk; only three incidents out of 100 transactions (the incidents are explained in detail in the contracts section).

Lübbermann, the founder, explained that there are two reasons behind this:

Taking care of all of the stakeholders is part of the Premium’s strategy. For example, the consensus democracy module and the privacy modules etc, and the stakeholders feel that they are morally obliged to treat the Premium right.

The stakeholders’ interest to maintain a long-term relationships and a long-term stable income pushes them to stick to the Premium.

How flexible is the Premium when dealing with customer requests?

Answer: As mentioned, the Premium tends to produce standard products.

Analysis

The same analysis methodology of the previous section is followed here. In which the Value in percentage is assigned to each characteristic. Since there are four characteristics, Here is the value = 100/4 = 25%.

18 Refer to Chapter III.
Table 5.2 is a representation of the analysis:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree of its ability to give up current relationship for future opportunities.</td>
<td>25%</td>
<td>No</td>
</tr>
<tr>
<td>The Premium produces standard products.</td>
<td>25%</td>
<td>Yes</td>
</tr>
<tr>
<td>The Premium contracts successfully.</td>
<td>25%</td>
<td>Yes</td>
</tr>
<tr>
<td>The Premium is not flexible when dealing with customer customizable requests.</td>
<td>25%</td>
<td>Yes</td>
</tr>
<tr>
<td>Total</td>
<td>75%</td>
<td></td>
</tr>
</tbody>
</table>

**Table 5.2 Summary of assessing the evaluation of the Premium’s efficient participation in Dynamic Market Configuration.**

Based on the characteristics of Dynamic Market Configuration set up by Timmer (2002) and picked up to test the Premium’s efficiency in its participation in Dynamic Market Configuration, the Premium satisfies these variables on a 75% basis.

Actually, the success of the Premium is a contradiction in that the participants in Dynamic Market Configuration must be able to give up current relationships for future opportunities. In fact, the Premium follows a different strategy in which the more relationships they have the better. There is no need to trade off one relationship for another, and to do so there should
be a good reason. Instead, they accumulate relationships within their network in order to add value, and to utilize them whenever they need them.

In terms of how standard their goods and services are, the Premium produces standard goods—beer, cola and coffee—these products lack any sort of customization, meaning fast responses and delivery in the dynamic markets, i.e. efficiency.

Though the Premium does not have any sort of written contracts, its exposure to financial risk is very low. However, when exploring the Premium’s documents, it was noted that the Premium gives its partners the right to participate in each and every decision. Thus, when one of the dealers asked about his loyalty, he replied: “We feel like we are part of the Premium we participate even in decisions that are not directly related to our area of operations, plus putting the Premium at financial risk means putting us at financial risk because we are a part of the Premium’s network.” This also supports what Lübbermann, the founder, said.

In terms of flexibility of responding to customers’ requests, though the Premium allows customers to participate in the network by being members, it does not produce a customizable product base, as this might result in high complications in virtual networks.

III. **Assessment of the Premium’s efficiency in terms of transaction cost:**

Recalling the framework of analysis developed in chapter 4, the analysis starts by identifying the Premium’s organizational boundaries. Question asked here are:

**Minutes of the interview:**

| What are the operations that the Premium does internally? And what are the operations that the Premium does externally? |
| In terms of the Premium’s organizational boundaries, Uwe Luebberman asserts that the |
operation of the Premium could be seen from two sides: the first where all the operations are outsourced by law; however, all the stakeholders participate in the internal governance of the Premium.

Here is a description of the role of every organizational unit:

Production: responsible for producing the Premium’s Cola and Beer bottles and packaging them.

Transportation: Responsible for the long transportation of bottles.

Wholesalers: Responsible for storage and regional distribution.

Dealers: Responsible for the local distribution.

Accountancy: one of the most important positions, responsible for managing cash flows and keeping records of every Euro spent and received.

IT and Web development: responsible for maintaining the website.

The Founder: Acts as a hub that manages to connect all the organizational operations together.
Figure 5.1: Premium’s organizational boundaries.
After identifying the organizational boundaries of the Premium, the transaction cost efficiency will be assessed in stages:

1. The efficiency of the Premium’s application of legal contracts.
2. The efficiency of the transactions costs by dimensionalizing them.
3. The final stage will be testing the efficiency of the supply chain and whether the Premium has redundant intermediaries.

Efficiency of the premium’s application of legal contracts:

As mentioned in previous chapter 3, the Premium does not apply any sort of legal contracts, an email or a handshake is good enough to start operations. Thus, the question here is:

Minutes of the interview:

Does this high degree of trust produce opportunistic behaviour? If yes, has this caused any kind of loss?

Answer: Surprisingly no, there were only two incidents during the whole nine years where the Premium lost this high degree of trust, leading to financial failure, these incidents are:

A bar owner did not pay for 10 beer cases, an amount of 216.00 Euros. However, this bar owner was confronted with many other legal problems.

One dealer got very sick, and died afterwards. His family refused to take the heritage, so was
not asked to pay his debt to the which amounted to 400.00 Euros.

Some stakeholders pay late, however. I guess that might happen with or without having a contract.

**What is the value of the loss measured in Euros?**

**Answer:**

The total loss is 400.00 + 216.00 = 616.00 Euros

If this is divided by nine, the annual loss would be = 68.4 Euros

**Analysis**

To have legal contracts in the Premium, will entail many involved costs:

First, the Premium should have an online contract management system (Allen and Widdison, 1996; Merz et al, 1998 cit. Cordilla 2007), e-signature machines, and hire lawyers within the network.

The ICT cost = ICT equipment + contracts operation system + professional lawyers should be employed = 50,000 + 10,000 + 100,000 Euros (one lawyer salary over nine years)

If this cost is divided over the past nine years, to see the annual cost = 160,000/9 = 20,000 Euros.

It can be concluded that applying contractual agreements within the Premium is not cost-efficient. The estimated average annual loss during the past nine years was 616 Euro, while
the estimated cost of adopting ICT in order to enforce contracts is 20,000 Euro annually, thus enforcing legal contracts over the Premium is not efficient.

Regardless of the availability of the contractual agreement, what determines the commitment to the agreement (or the transaction) is not the contract, it is the dimensions of the transaction (Williamson 1981), which is tested in the following section.

Efficiency of the transactions costs by dimensionalizing them:

Dimensionalizing a transaction means testing the specificity of the transaction, then the frequency of the transaction, and finally the uncertainty of transaction. The first and most important feature: the specificity of the transaction will be the focus here to determine whether to internalize or externalize business activities.\(^{19}\)

Based on the literature review done in chapter 2, Dimensionalizing, the research first tests the asset specificity. If the asset is non-specific, it advises the Premium to outsource and skip the frequency of transaction and the uncertainty of the transaction. Otherwise, if the asset is specific, then it tests the other two factors.

**Degree of asset specificity**

Site asset specificity:

There is no need to test the site asset specificity since the Premium operates virtually; it does not have a physical location.

\(^{19}\) Refer to chapter II to have a detailed view about Dimensionalizing the transactions.
Physical asset specificity:

The methodology of measuring the degree of physical asset specificity is justified and explained in chapter 2. It is done mainly by measuring and comparing the cost of external governance and production against the cost of internal governance and production. This section examines these characteristics in detail, using the Premium. First the distribution of cost among the supply chain is represented, and then the analysis begins.

The following is a description of how the cost is distributed among the supply chain.
Figure 5.2: Distribution of cost per bottle along the Premium’s supply chain.
As Figure 5.2 shows, the Premium pays 20 cents/bottle to the producers, which in turn pays 0.66 cents/per bottle for the ingredients. Then the wholesalers pay 0.36 cents/bottle to the Premium. After that the wholesalers gain 0.49 cents/bottle for the delivery of the bottles. The dealers then receive 0.60 cents/bottle from food sellers (cafes, bars and restaurants) due to their local delivery and storage of bottles.

The following section analyzes this way of managing asset specificity that is cost-efficient.

**Analysis:**

- Differences in the production costs between outside and inside the organization should be measured. The production cost will be assigned to the variable $C$, where $C_1 - C_2 = \Delta C = f(C)$ (the difference in the production cost).

As the graph shows the cost outsourced production is 20 cents/bottle

Thus $C_2 = 20$ cents/bottle.

The average cost of insourced production is 11 cent/bottle

Thus $C_1 = 11$ cent/bottle (Wikianswers.com)

$F(C) = C_1 - C_2 = 11 - 20 = -9$

- Then the differences in the cost of internal and external governance of production will be measured. Where the governance cost will be assigned to the variable $G$. Thus, $G_1 - G_2 = \Delta G = f(G)$ (the difference in the governance cost).

The cost of outsourced governance is 0 cents, thus $G_2 = 0$ cent/bottle (since the production itself is outsourced.

The cost of internal governance is = 101 cent/bottle (answers.com)
\[ F(G) = G_1 - G_2 = 101 - 0 = 1001 \]

Hence

\[ \Delta C + \Delta G = -9 + 101 = 92 \text{ cent per bottle} \]

Assuming the governance cost function \( f(G) \) and the production cost function \( f(C) \) have the shape and the relative location represented in graph 2, represented in chapter 2:

![Graph showing net production and governance cost differences](image)

So, as the sum \( \Delta C + \Delta G \) is above zero, the market enjoys the advantage and it is better here to outsource (Williamson, 1981).

Thus, from the above analysis it can be concluded that in terms of physical asset production, the Premium is operating in an efficient manner. Actually, outsourcing is logically an efficient solution for the Premium, as it produces standard products with nothing to specialize in (Standard Coke, Standard Beer and Standard Coffee). Thus, by outsourcing the Premium benefits by eliminating the cost associated with governance, zero governance cost. It also
enjoys the economical benefits, where the more bottles they request the lower the cost will be as well.

**Human asset specificity:**

The methodology of analyzing the degree of human asset specificity is explained and justified in chapter 2. The framework of analysis that is built in relation to the Premium is explained is chapter 4. Here is an implementation of analysis; first, the interview is outlined, then the analysis is given.

**Minutes of the interview:**

Are the Premium’s human assets high or low firm specific? In other words, is it easy to replace employees?

**Answer:** Yes, it is easy to replace an accountant with another if the first does not want to work for any reasons. That also applies for dealers, wholesalers, transporters, speakers, and many others. Most of the job guidelines are stated and explained, so it is easy for the newcomer to start working. It is important to note here that one of the Premium’s core principles is “No one should work under pressure”. Thus, whenever one the Premium members refuses to do his task, another member takes his place.

Is it easy to meter the outcomes of the members?

**Answer:** Everyone has his or her own outcome and is paid accordingly. The Premium’s members do not work in teams because then it would be hard to measure the inputs of every member against the whole outcome.
Analysis:

As Lübbermann demonstrated, it is easy for the Premium to replace an employee with another, the most important thing is that the employee should not work under pressure. Most job requirements are stated and there is always someone to carry out the work, as there are 500 members in the Premium. Thus, the characteristic: Low firm Specific could be assigned to the human assets of the Premium.\(^\text{20}\)

Furthermore, from Lübbermann’s reply, it can be concluded that the Premium is characterized by easy metering capabilities.

Figure 2.3 in chapter 2 represents Williamson’s (1981) analysis of the Human asset Specificity that falls under “Spot Market” as Figure 2.3 shows:

![Figure 2.3: Governance of human asset specificity (Williamson 1981).](image)

According to the literature reviewed in chapter 2, the relationship between the human assets and the employer could be replaced easily whenever one of the parties is dissatisfied (Williamson, 1981). This means that there is no need for governance structure, i.e. no need to provide job security or any assurance to insure the employee. This is efficient, in terms of

\(^{20}\) Refers to chapter II to have a full explanation of the human asset characteristics.
operating virtually, as Timmer (2002) mentioned that relationships in virtual networks should be easy to replace.

Generally, the Premium’s assets are non-specific, thus it could be concluded directly that outsourcing is the best solution for the Premium. Questions regarding frequency and uncertainty are skipped because efficient solutions could be directly determined by having law specific assets.

**Testing the efficiency of the network chain:**

Recalling the arguments represented in chapter 2 about whether to intermediate or not, this section tests whether the Premium has redundant intermediaries. The analysis is based on the related framework of analysis explained in chapter 4.

**Minutes of the interview:**

**Looking at the network chain of the Premium, do you think the Premium could skip the dealer or the wholesalers?**

**Answer:** Yes, it could, and costs would be minimized. However, the Premium would not function that well, because everybody in a supply chain should only do what he/she can do best. Plus the outcomes might be at risk, especially at the beginning.

**Analysis:**

These answers support Timmer’s (2002) view on the intermediaries, and what Chircu and Kauffman (1998) demonstrated as the IDR cycle (Intermediation Disintermediation Re-intermediation). Their claims are that, though the ICT revolution seems to be cutting out
intermediaries, in fact, the intermediaries are making their way back to supply chains, as they are needed for distribution, sales and marketing.

IV. Measuring the Premium’s efficiency in terms of utilization of available resources:

This section starts by outlining the interview to test the degree of the Premium’s utilization of organizational resources. Then the analysis of the interview is conducted in relation to framework analysis of chapter 4.

Minutes of the interview:

Which of the following do the Premium consider its competitive resources?

- Brands
- Brand equity
- Products
- People/Talent
- Business processes
- Innovation
- Learning
- Macro structure
- Vision direction
- Strategies
- Core values

Answer:

- Innovation
- Learning
What is the degree of utilization of available resources? Is there any slack in the resources? Are the resources threatening the Premium’s competitors?

**Answer:** No, actually the Premium’s total share of the market is 0.005%. However, I believe that the core values of the Premium are a bit threatening as our customer base has an average of 50% increase annually. This can be shown in the number of Premium’s annual sales:

- 2007: 202,000 bottles
- 2008: 312,000 bottles
- 2009: 492,000 bottles
- 2010: 750,000 bottles (estimated)

What is the degree of tacitness of the resources?

**Answer:** The Premium produces standard products and performs a standard set of tasks. The knowledge gained through experience of the Premium is shared through the website as far as possible. The founder, Lübbemann, asserted the strategy of keeping the information and the knowledge a secret.

The Premium adopts a license-free strategy. However, when someone requests to copy the Premium strategy, the Premium advises him or her to stick to the following:

Have an inner wish to care for everyone else in order for him or her to succeed.
Adopt equality between members. This means that everyone in the organization might have a good idea, no one should be ignored and no one should be preferred over another.

“Be against pressure”, the company should grow slowly instead of working under the pressure of having to pay for loans. Furthermore, if a member cannot perform his or her task for any reason, the task should be transferred to another member.

**What is the degree of utilization of available opportunities?**

**Answer:** Yes, there are some opportunities that are missing, or, in other words, the Premium could not enforce them. For instance, the Premium hired 44 field workers, so-called speakers, to go to gastronomies to convince them to buy from the Premium. The Premium set 4% as a commission for every bottle sold through them. However, only four speakers were active the rest were silent.

**Can the Premium configure available resources to accommodate growth?**

**Answer:** The growth of the Premium was in two stages: After seven years of producing Cola, it started producing beer, then producing coffee; the Premium was proactive and the resources available were sufficient.

**What is the degree of freedom in information sharing? Does this threaten the competitiveness of the business?**

**Answer:** Generally no, however, it happened once when one of our competitors downloaded the list of the clubs and bars we deal with and tried to steal them from us by providing them with money if they switched to his products. However, the harm was not that big as most of those clubs and bars feel that they are part of the Premium. Plus, the Premium reacted by publishing what happened on the site so the stakeholders would have an idea how other
Analysis

By looking on the core competitive resources that Lübbermann chose, and through studying the Premium, it can be concluded what makes these resources competitive lies behind these features:

- Intangibles

- Embodied within the structure of the Premium

Though the Premium believes in open innovations and that knowledge increases by sharing, it enjoys first mover advantage, as identified by Schumpeter.

The innovative aspects of the Premium’s resources lie in its ability to spread morality in a morally-disrupted market (Cola and Beer), and its ability to outsource everything, but giving those outsourced stakeholders the ability to participate in decision-making. This could be the reason behind the Premium’s survival over the past nine years.

However, the Premium market share appears to be considerably low—only 0.005% – after nine years’ operation. This may be because the Premium does not use the media and PR as they consider these are immoral and bad for society.

In terms of its ability to accommodate growth, the Premium is adopting a proactive strategy in which it started producing beers and coffee as a self-initiative.
Finally, as the Premium believes that information should be shared, it should be an expert system in which all the knowledge gained throughout the years can be accessed and viewed online.

**Conclusion:**

The next chapter presents the conclusion of the research, including guidelines for efficient operation in virtual networks based on the experience of this research.
Chapter 6

Conclusion

This Chapter summarizes the basis for Virtual organizations, including Premium Cola, to operate efficiently in the Virtual Environment. The efficiency here is based on the literature studied throughout the research, which are The Resource Based View, The Transaction Cost View, and The literature of Managing Virtual Networks. It (this Chapter) provides a summed up answer, for the questions, the arguments, and the conclusions of this research. It harmonizes them together and provides them to the reader in a simple way.

Introduction:

Recalling form chapter one, the innovation of Premium-Cola lies mainly within its ability to utilize the ICT revolution in managing its organizational structure in a novel and efficient way, and as this research is targeting maximizing this efficient way on managing virtual organizations. The Chapter first represents the principal to build a stable virtual organization. Then it provides specialized tips regarding the efficiency of three aspects: transaction costs, resources, and the virtual environments.

General guidelines to build a Stable Virtual Organization:

1. Ethical Practices:

In real life, i.e. Physical life, money is the main driver for business survival. However, in virtual environment money is not enough for the business to survive. That is in virtual environment, there are no papers no contracts and no offices and nothing to touch. Thus ethical Practices should be established and embodied within the values of the organization in order to give all the involvers a sense of security. This sense of security, results in a Moral, trustful and Committed behaviour within the members of the Premium.
Referring to Chapter 3, the ethical practices could be seen within the premium’s system. For examples, within the Ecological modules, there are “CO2-Compensation”, “Optimization”, etc... Furthermore, within the Economical Modules there is the “Unit-Quantity Discount” offered to small dealers instead of big ones, and within the Social Modules there is the “Alcohol awareness” Module, that tends to keep members alerted to dangerous consequences of the alcohol addiction – though the Premium produces beer, and various other modules that promote ethics within the business environment.²¹

In fact, the founder of the Premium stated that the Premium’s Members feels that they are morally committed to the Premium, and this is because of the Premium’s ethical practices.

He also stated that the Premium tends to spread Morality in ethically corrupted markets – such as Beer and Cola.

2. Established Rules of Governance:

Though physically established businesses usually have standard predefined rules of governance, however, in virtual environment these predefined rules of governance should be heavily standardized and shared. Plus they should be un-negotiable in order to be able to manage the huge number of members with various backgrounds. These standard predefined rules are also embedded within Premium’s systems, for example within the Economical Modules there is the “Fixed Prices Module” that states the Prices are not negotiable, and within the Social Modules there are “The consensus Democracy” and “The Immediate Decision Modules” which are modules that manage decision making within the Premium.

3. Transparency and Equality:

We live in the era of information sharing, No matter how the businesses tend to be protective towards their knowledge, because these days’ people could access them in various ways.

²¹ Refer to chapter Three to get a broader Idea
Thus, virtual organization should short cut this by adopting transparency and collaboration. Plus having the tacit knowledge as the most valuable resource in the virtual organization, it should be codified and shared- refer to chapter 2. Charles Leadbeater (2009) in his book “We Think” stated that the knowledge unlike any other type of asset increase by sharing. Furthermore, in virtual environment there are no certificates and everyone is evaluated by the performance, thus equality among members should be adopted.

Premium adopts equality and transparency within its Modules. For example, the “Consensus Democracy Module” states that every member has equal opportunity in to vote. Furthermore, the “Transparency Module” states that all the information should be publish in the website even for example the production errors. Chapter 3 and 4 shows various strategies of how the Premium shares information.

The following is diagram summarizes the standards to establish of Stable virtual Organization based on the Premium Experience:

![Diagram](image-url)

Figure 6.1: Summery of the standards to establish Stable Virtual Organization.
Now that the standards to build stable virtual organization are represented, the following section will focuses on maximizing efficiency of the core competitive operations of the Premium.

The final section in this research summarizes the Process of maximizing efficiency. Following the methodology that is used throughout the research; the guidelines of efficient management of Virtual Networks are first represented, then Transaction costs management, and Finally Competitive Resources management.

**Efficient Management of Virtual Value Networks:**

1. **Standardized set of Tools:**
   
   For a value network to be managed efficiently there should be a standardized set of tools that the participants agree on. These standardized set of tools facilitates not only the efficient management among partners, but also within the organization itself. The Premium succeeded in managing complexity through having a standard set of tools in which everyone could access, assuming Transparency and Equality already established.

2. **A Shared Data Base:**
   
   Data base should be shared and accessed by all involved parties, i.e. suppliers and customers. This result is having a match between the supply and demand.

   The shared database should cover all areas of operations to put everything under control. The Premium doesn’t have a shared Data Base that covers all the operation. However, The Premium recognizes its importance, and planning to have one in the near future.
Efficient Management in Dynamic Market Configurations:

1. Accumulate Relationships:

Contradicting to Timmer (2002) claim that operating in Dynamic requires having the ability to give up current relationships for future opportunities, the Premium succeeded in managing relationship efficiently by accumulating them – the Premiums refer to partners when they are needed.

2. Standard Products and Services:

Offering standard products and services, means less complexity, faster delivery, thus efficiency.

3. Minimizing Financial Risk through Establishing Morality:

The Financial risk that virtual firm usually exposed too could be minimized by establishing moral values within the organization.

Efficient Management of Transaction Costs:

1. Avoid the cost of legal contracts:

Enforcing legal contracts on transactions within Virtual networks is inefficient in terms of cost. Plus it is hard for courts to chase people in Virtual world. Thus what is important to make partners committed the transactions, is having common interests between involved parties, establishing moral values within the structure of the organization, and optionally, letting the partner participates in the decision making process as the Premium does (Totally flat organizational structure).

2. In terms of determining the organizational boundaries, if the asset is non-specific it is always better outsource- refer to Chapter 2, 4, and 5 to see how this could be calculated.
3. Cutting intermediaries sometimes might be in-efficient as it complicates the operations. Thus cost- benefit analysis should be applied before making the decision.

Efficient Management of Resources in Virtual organization:

1. The most important type of resources in virtual organization is knowledge and knowledge increase by sharing (Leadbeater 2010). Thus, it should be always shared and published. “Hiding knowledge is totally outdated in the era of ICT” – The founder of the Premium.

2. Participating in Virtual networks means having endless number of opportunities and endless number of resources to outsource, thus growth in such type of organization is easy as long as the products and service are standard.

3. Finally, following the Premium strategy, when someone take an opportunity out this freedom of information sharing and use it against the organization, the organization could publishes his acts too, thus preventing such events in the future.

In conclusion, in the era of ICT revolution business leaders should looks at the current solutions from all its dimensions before applying in order to ensure stability and efficiency. They should recall old business theories and reshape them to cope with current incremental technological advancements that are surprising market every day. Plus the hidden resources should be unconverted and shared in order to boost innovation.
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