Gordon Institute of Business Science
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Creating and capturing economic value through technology-enabled bartering

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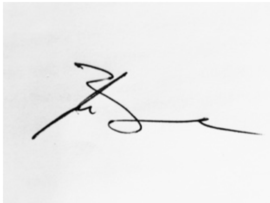
I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Eric Bornman



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DEFINITION OF PROBLEM AND PURPOSE

Bartering has largely been replaced by money as a means to exchange in virtually all societies. Yet despite its archaic connotation, practical constraints and the increasing sophistication of money, bartering continues to be utilised as a medium of exchange by individuals, businesses and governments.

This study set out to determine the extent to which technology-enabled bartering could create and capture economic value through the use of Web 2.0 advancements like matching technology, trust mechanisms and other elements of online markets.

i. Background and description of the problem

Very influential historic economic literature described bartering as synonymous with hassle (Smith, 1776; Alchian, 1977). The cost of information and the problem of the double coincidence of wants (Jevons, 1885), among a number of other reasons, emerged as the most robust discouragement of barter and inducement of money in exchange economies. Despite its disadvantages, barter has over the course of the last century emerged strongly during environmental changes such as in periods of cash shortage and particularly so during economic crises (Kaikati & Kaikati, 2013). Although bartering hasn't proven to be a solution to downturns to lift economies out of crisis (Cresti, 2005), it has proven to be a profitable (Marvasti, 2012; Kaikati & Kaikati, 2013), and effective way (Cellarius, 2000; Noguera & Linz, 2006; Marvasti & Smythe, 2011; Michel & Hudon, 2015) to deal with imperfect economic conditions. In response to economic imperfections such as constricted credit and budgets, companies have been exploring new ways to create and capture value (Keys & Malnight, 2012). Bartering has been identified as a means to extract value, specifically from perishable or underperforming assets, and to expand channels to market and find new customers (Keys & Malnight, 2012).

Kaikati & Kaikati (2013) successfully developed a framework that illustrated the importance of barter transactions utilising secondary data of conditions and objectives that tended to drive barter. Their work stopped short of extending into how barter can become more readily and widely adopted or the economic value it could create. It did not investigate the role that technological tools at our disposal in the Web 2.0 era could play in creating a sustainable model. They predicted that "innovative cashless business models" (Kaikati & Kaikati, 2013) would enable competitive advantage through inventive entrepreneurial endeavour and new technology (Kaikati & Kaikati, 2013). Belk (2013) supported the notion of new business paradigms and ventures which included skills barter. The development of barter through the facilitation of the internet was suggested to be a way to open the economy (Kaikati & Kaikati, 2013) and create greater efficiencies (Belk, 2013).

ii. Purpose of the Research

The purpose of this study was to explore the economic value that bartering as a cashless alternative mechanism could create and capture through the enablement of Web 2.0 technology. This study analysed the gains of trade from actual bartering transactions. The research generated empirical data from which an argument was developed to illustrate how companies and industries that either tend to or were disposed to bartering, but did so reactively, ought to adopt a more considered and opportunistic approach in the face of certain protracted circumstances. These circumstances included but were not by any means limited to economic imperfections that led to cash exchange failure, surplus inventory that could not be stored, excess capacity, underutilised assets, perishable goods or a preference for whatever reason to hoard cash.

SECTION 1: LITERATURE REVIEW

1.1 Introduction

The "propensity to truck, barter and exchange one thing for another" (Smith, 1776, p. 22) is one of the fundamental traits in human nature and the foundation of wealth in a commercial society. Since this famous phrase was penned, bartering has had its detractors, notably the famed "father of economics" Adam Smith himself. It nevertheless holds firm as a means of exchange without any empirical evidence that its historic backward reputation is preventing it from thriving in many contexts.

The purpose of this study was not to elaborate on the existing knowledge of motives behind bartering, even though some data was gathered to create a more current understanding. Neither was it the purpose to prove which means of exchange, monetary or commodity, was more efficient. Even as the world by and large moves towards cashless economies – cash payments in Sweden are expected to drop to 0.5% of GDP by 2020 (Mahgoub, Arvidsson, & Urueña, 2018) – monetary exchange will likely always be king. The main purpose was to determine the extent of economic value that bartering could create and capture were it enabled by Web 2.0 technology, a question that had not been raised in either pre- or post-Web 2.0 studies.

This section was structured into definition of constructs, an historic, present and future perspective along with a collation of the classifications of bartering. An argument positioning barter as an alternative opportunity to create and capture value was presented. Most studies thus far had utilised secondary or quantitative data, were either set within the US or transitioning 1990's Soviet economies, or conducted prior to or during early internet dissemination. This study is different in as far as it contributes prudent qualitative and empirical additions to why and how companies could create or have been creating and capturing value without money in the Web 2.0 era, regardless of context. To that end, this study aimed to contribute to current conversations relative to the technological advances in online bartering markets.

1.2 Terms of reference

The mainstream and adopted definitions of the study's main constructs are provided in this section.

1.2.1 Bartering

Bartering has been defined narrowly as the voluntary exchange of services or goods without the use of money (Williams, 1996; Kaikati & Kaikati, 2013). This study adopted a broader definition whereby bartering included the exchange of goods for services and vice versa but particularly under-utilised goods and services as per Ye, Viswanathan & Hann (2018), cross-promotion, in-kind payments, product placements, asset and unsold inventory swaps, crowdsourcing and by extension a form of collaborative consumption (Belk, 2013). An anthropological perspective by Appadurai (1989) was included to add some breadth, given that it included elements of transactional costs and a distinct positioning that both compares and compliments that of Belk (2013):

> "Barter is the exchange of objects for one another without reference to money and with maximum feasible reduction of social, cultural, political, or personal transaction costs. The former criterion distinguishes barter from commodity exchange in the strict Marxist sense, and the latter from gift exchange by virtually any definition". (Appadurai, 1988, p. 9).

1.2.2 Value Creation and Capture

Brandenburger & Stuart (1996) defined value creation as the maximum willingness to buy, that is "the amount of money at which equivalence arises", less the opportunity cost which is the highest value alternative foregone. Expressed as an equation, Value Created = Willingness to Buy – Opportunity Cost. In lay terms, it could be argued, this meant that value was created when one could supply a compelling prospect at an attractive price point. Empowered by the knowledge of prices obtainable elsewhere in the economy, the division of the value would then be determined by the bargaining between the parties (Brandenburger & Stuart, 1996). How much value is captured has been said to be a central question to business strategy (Brandenburger & Stuart, 1996), which is why the definition offered by Bowman & Ambrosini (2000) was significant in the context of this study. They combined value creation and value capture into one coherent definition, in one form as use value, subjectively assessed using consumer surplus as the criterion and exchange value, the price paid for the use value, realised upon the sale taking place. Borrowing from Value Capture Theory, economic value resulted from a value network (a collection of agents that included suppliers, firms and customers) that were connected by chains of transactions, citing the Apple ecosystem as a prime example (Gans & Ryall, 2017). Ryall (2013) observed that more value could in fact be produced when the value network changed how they transacted. It is proposed that bartering be considered as such an option, an option that both created and captured value.

1.2.3 Web 2.0

Web 2.0 is the "network as a platform" (O'Reilly, 2007), a collective term for "websites that allow users to contribute content and connect with each other" (Belk, 2013). "It spans all connected devices" and creates network effects by getting better as more users consume and remix data, creating an "architecture of participation" (O'Reilly, 2007).

1.3 To Barter or not to Barter

It was prudent to assess why bartering was historically abandoned as a means of value creating exchange and why the topic was being researched again despite this by presenting an argument that updated the discourse within the status quo.

1.3.1 The Past and the Case Against

Standard economic theory dictated that money as a medium of exchange readily found more willing participants to trade than bartering due to the vast number of benefits it had over a commodity exchange. The essence of search theory suggested that buyers and sellers had to find a mutually agreeable trading partner (Kiyotaki & Wright, 1993). The cost to search and find information has changed dramatically between the mid-nineties and the present day. Internet usage stats has increased from 1% to 55% of the global population over this period (Miniwatts Marketing Group, 2018). The constraints of barter have traditionally been Jevons' (1885) double coincidence of wants, search and information costs, information asymmetry and information failure and / or access (Alchian, 1977). Various seminal articles of the mid 90s (Williamson & Wright, 1994; Banerjee & Maskin, 1996) set out to prove that money, as an intergenerational store of value and medium of exchange, not only relaxed the restraints of trade but that it also overcame information failure (Banerjee & Maskin, 1996). Banerjee & Maskin (1996) studied a fictitious barter economy against a Walrasian benchmark in which the traders could not distinguish between low and high quality goods due to information asymmetry. Once again, this may have been a rational departure point in 1996 when a mere 0.9% of the world population, roughly 36 million people, were using the internet (Miniwatts

Marketing Group, 2018). Banerjee & Maskin (1996) developed a model that set out to prove that money was the most suitable vehicle to overcome exploitation due to a lack of information about a product's physical and market characteristics because money was a medium that most traders were more familiar with (Banerjee & Maskin, 1996).

Williamson & Wright's (1994) model focused on the level of welfare created through the use of money and found that it indeed improved welfare but also related the use of money to the level of private information available (Williamson & Wright, 1994). They too consented about the benefits around the universal recognition of money as a medium of exchange in comparison to commodity exchange, deducing that in severe cases of information failure, there would be no economic activity without the use of money because money overcame the information asymmetry.

While search costs associated with finding a willing trade partner was a natural argument in favour of money and against barter, one could argue that mutual agreement had to be achieved irrespective of the means of exchange, irrespective of whether the trade was commodity or money based.

1.3.2 The Present and the Case in Favour

The International Reciprocal Trade Association (IRTA) estimated global barter trade volumes to have been in the region of USD13 billion per annum (The International Reciprocal Trade Association, 2018) and potentially double that were inter-governmental countertrade to be included. Barter has played a substantial marketing and distribution role in the media sector for both large multinationals as well as small to medium sized enterprises with top media agencies implementing specialist barter teams (M&M Global , 2015). Media barter has become an integral part of the USD558 billion media industry planning process, yet it has gone unnoticed by noteworthy economic literature (Cresti, 2005). Marvasti (2012) conducted an analysis of the US broadcasting industry which stipulated that a total amount of USD1.9 billion in barter transactions took place between television stations and syndicates in 1996. The industry was exploiting opportunities within the apparent curtails of bartering in contrast with the notions of Banerjee & Maskin (1994) and Williamson & Wright (1996).

Two of the three commonly identified factors that favour monetary exchange over bartering discussed above, have since been nullified. The introduction of trade exchanges, multi-lateral barter networks that coordinate trade within membership structures, has eliminated both the double coincidence of wants and costly search delays by offering trade credit, a virtual trade currency that is utilised within the exchange (Cresti, 2005). The collective thought before was that the use of money remedied these problems, but it has been further advanced through the dissemination of technology. The alleviation of information friction was commonly thought to be where the principle advantage of money over barter was contained. But taking into account the unprecedented access to knowledge in the Fourth Industrial Revolution, its velocity, scope and systems impact (Schwab, 2016), we therefore called for a revisit of the established conclusions at a time when, contrary to the mid 90s when the opinions about barter seemed to have been cemented, 54.4% of the world population or 4,156 billion, are now using the internet (Miniwatts Marketing Group, 2018). We see a depletion in the premise that a lack of information or knowledge is what inclines money over barter.

Changes in information technology and media have affected the way that organisations create, distribute and process their information (Miller & Skinner, 2015). Organisations have to an extent lost control over the proliferation of their information environments through the advent of social media (Miller & Skinner, 2015). If in fact Williamson & Wright (1994) were correct in deducing that producers of high quality goods in a monetary economy had the luxury of demanding cash and that this dynamic increased the probability of high quality goods being produced out of self-interest, information flow could be said to have the same effect. Kiyotaki & Wright (1993) concluded that if monetary and commodity exchanges were equally effortless, traders would be indifferent about their preference.

1.3.3 Bartering and Technology

Recent articles by Anderson, Ashlagi, Gamarnik, & Kanoria (2017) as well as Ye et al., (2018) on the effects of matching technology and reciprocity in online barter exchanges have indicated that it is no longer a question of whether technology can enable bartering, but how efficiently it can render trade.

1.3.3.1 Matching

Anderson et al., (2017) measured the efficiency of online barter exchanges based on the type of matching technology and matching policy it implemented. Bilateral (2-way) chains, 3-way chains as well as unbounded chains are tested within a clearing house and found to be most efficiently fuelled by a “greedy policy” of clearing items (the completion of a desirable trade) as early as possible (Anderson et al., 2017). The cost of waiting is proportional to the time spent waiting, although in certain cases, waiting on the market to thicken. In their homogenous stochastic model, traders were indifferent about the alternate feasible exchanges and preferred to match and clear their trades as soon as possible (Anderson et al., 2017).

1.3.3.2 Reciprocity

Contrary to the “greedy policy” of Anderson et al., (2017), Ye et al., (2018) found that online barter market policies needed to facilitate reciprocity. Reciprocity, which relied on relationships that were developed by means of trust building reputation systems among other positive outcomes such as lowered search costs, assisted discovery, increased the quality of the exchange outcome and increased efficiency (Ye et al., 2018). It allowed for more continuous or relational use which again contrasts the Anderson et al., (2017) model that sought a desirable trade as early as possible.

The data gathered in both studies illustrated not only that technology enabled online bartering but that there were in fact options in how it could be approached. In cases where a lack of past trading information and relationships could impede a transaction, greedy policy would enable owners of perishable inventory such as advertising space, accommodation and plane tickets, that had not been sold for money in the regular course of business but could alternatively be floated and traded in an online exchange.

1.4 The Classifications of Bartering

A literature review was performed to collate and contrast the various classifications of bartering, leading to the development of a new classification based on the creation and capture of economic value.

1.4.1 Commercial and Corporate

Cresti (2005) distinguished between commercial and corporate bartering. The former, also referred to as retail bartering, was made up of clubs, networks or exchanges that coordinated trade between members and were more readily made up of small and medium sized enterprises. The latter, more prominent among larger organisations, was characterised by brokerages that facilitated trades and often involved a portion of monetary payment (Cresti, 2005).

Cresti's (2005) classification aligned bartering with economic cyclicality, commercial bartering being pro-cyclical and corporate bartering being counter-cyclical. Although commercial barter implicitly connected excess goods that incurred a cost to be stored with services, surplus inventory of which could not be stored, neither commercial nor corporate bartering seemed to have as an objective the utilisation of excess inventories. The study settled that companies bartered to increase profitability (Cresti, 2005).

Keys & Malnight (2012) concurred on one hand that bartering was a new way for companies to "create and capture value" (Keys & Malnight, 2012, para. 2), and that companies needed to extract value from perishables, discontinued stock, underperforming assets and excess inventory. Bartering was proposed as a way to reduce costs, enhance revenue and build brand and product awareness (Keys & Malnight, 2012), a response to "restrictions imposed by cash and credit".

This study sought to link any manner of surplus inventory, goods or services in order to explore the economic value that the utilisation of surplus inventory could create.

1.4.2 Contingent and Structural Bartering

Kaikati & Kaikati (2013) classified two forms of bartering, namely contingent deals and structural deals. Contingent deals were sub-categorised as either survival or growth orientated in nature, both a consequence of adverse economic factors (Kaikati & Kaikati, 2013). Marin & Schnitzer (2002) determined that bartering increased exponentially in debt crises in developing countries and transition economies as an institutional response to the lack of contractual enforcement in such unsound capital and goods markets (Marin & Schnitzer, 2002). Survival-orientated deals were mainly once-off trades, reactionary and motivated by a threat of survival.

The concept of survival was underscored by Noguera & Linz (2006) in their study on Russia's transition economy during the 1990s having found that between 50-60% of all transactions were barter transactions in 1998 (Noguera & Linz, 2006). The widespread economic and financial disarray created an environment in which the double coincidence of wants occurred frequently and at least within this context, bucked the notion that inflation and bartering were directly proportional. Bartering in Russia thrived well after inflation started decreasing in 1995 (Noguera & Linz, 2006). Barter in a countertrade context was prevalent under adverse conditions such as inadequate export markets, liquidity, issues related to trade between heterogenous economies (Cresti, 2005) or foreign currency shortages (Nassimbeni, Sartor, & Orzes, 2014).

Growth-orientated deals on the other hand were ongoing, often beyond imposed external pressures and more pro-active (Kaikati & Kaikati, 2013). Contingent bartering straddled small and big business, even peer-to-peer trades unlike Cresti's (2005) cyclical classification and supported the premise that high inflation tended to drive traders back to a commodity based trading (Banerjee & Maskin, 1996). Barter has become custom in the sale of advertising airtime in the US broadcasting industry (Marvasti A. , 2012), indicating that companies tended to barter because they had surplus and obsolete inventories (Kaikati & Kaikati, 2013) in contrast to Cresti's (2005) findings.

On the other side of the spectrum, structural deals were transformative and sustainable new business models within the context of emergent new technologies (Kaikati & Kaikati, 2013) and were viable irrespective of economic circumstances; "long-term prospects for sustainable growth" that would lead to the reinvention of old methods such as word of mouth advertising.

Bartering has been proven to be an efficient way to deal with an imperfect economy but has been criticised because it didn't solve the imperfection (Cresti, 2005). Although the world economy has been in recovery and is expected to grow by 3.7% in 2018/19 according to the IMF World Economic Outlook (2018), it has been threatened by humanitarian concerns and trade tensions between major economies (Department of Economic & Social Affairs, 2018). The macro-economic state of affairs is not an opt-in, it is imposed. It will never be perfect, so this study seeks a way to optimize bartering irrespective of the conditions, building on the structural deal variant of Kaikati & Kaikati (2013), the development of "innovative cashless business models" fuelled by new technology.

1.4.3 Direct and Indirect Bartering

Ye, Viswanathan & Hann (2018) considered historic research and broadly classified barter transactions as being either direct or indirect transactions. Direct bartering was defined as a direct exchange between two parties. This of course brought to the fore Jevons' (1885) famous "double coincidence of wants", a historic impediment that involved parties having to be armed with disposable possessions that mutually suited each other's cravings or needs. This convenience, along with two other factors, namely the indivisibility of goods and the rate at which the exchange is made (Jevons, 1885, p. 5), set in motion the deposition of barter by hard currency as a means of exchange against the backdrop of the first and second era in the industrial revolution.

Levine (1989) illustrated a state of "barter equilibrium" that was achieved under conditions of uniform tastes and benefits where goods or services would be directly traded for other goods or services (Levine, 1989) and required no money at all. The specialised book exchange example of Ye et al., (2018) exemplified this type of mood.

Kiyotaki & Wright (1993) resolved that levels of bartering volumes were inversely proportional to specialisation i.e. specialisation encouraged the use of money. This contrasted to the specialist online barter book market as researched by Ye et al., (2018).

Indirect bartering on the other hand was a transaction involving an intermediary good (Ye et al., 2018), a more fungible one, that would be exchanged for another good with a third party. The latter overcame the improbable "double coincidence of wants" (Jevons, 1885, p. 13). Indirect exchanges therefore utilised a third party in the exchange or an intermediary token (Ye et al., 2018). Williams' (1996) Local Exchange and Trading Systems fell within this latter category. The field study by Cellarius (2000) conducted in economically chaotic 1997 Bulgaria showed how potatoes was used as an intermediary token. Bartering in this instance, as with the many others discussed thus far, provided a solution to an imperfect monetary system rather than the commonly held standpoint that money provided solutions to the imperfections of barter (Cellarius, 2000). Sexual barter in the Holocaust ghetto of Theresienstadt was motivated by necessity, survival and hunger through direct repeated exchanges in "relational relationships" that were at least partially pragmatic (Hajkova, 2013). Michel & Hudon (2015) found that intermediate tokens like community currencies built trust and as such had more of a social impact than an economic impact. The lack of economic impact was attributed to the small scale and lack of awareness (Michel & Hudon, 2015).

1.4.4 Value-Based Barter (VBB)

It is often "not one factor but the convergence of several different kinds of knowledge" (Drucker, 2012) that innovations are based upon. Stated otherwise, progress can take place when all the pieces are in place. Given the scale of bartering in the developed US economy as studied by Marvasti & Smythe (1998), Cresti (2005), Marvasti (2012) and Kaikati & Kaikati (2013), it was a more viable premise for this study to promote bartering as a legitimate form of exchange that should take place concurrent to the cash economy. This type of bartering in the context of the value-based terms of reference was subsequently termed Value-Based Barter (VBB).

It was beyond the scope of this study to detail the reasons behind excess inventory, but stating the reasons and consequence conveys its undesirability. Excess inventory is the result of demand-supply mismatches, sluggish sales and discontinued or obsolete inventory (Hendricks & Singhal, 2009) and leads to "significant negative stock market reaction" (p.523). The authors continued that such "mismatches can be significantly reduced if supply chain partners work collaboratively and cooperatively, share information with each other, and build relationships based on trust" (Hendricks & Singhal, 2009, p. 523). Prendergast & Stole (1999) added to the reasons behind failure to exchange when their study showed that a barter economy relative to its monetary counterpart eliminated certain pricing inefficiencies. It could be argued that failure to exchange value monetarily is precisely due to the lack of perceived consumer value, namely price.

Rather than see these situations as economically imperfect, management could alternatively view it as economic opportunity. To borrow from Williamson's (1993) definition of opportunism, *sans* guile: "Huge numbers of interesting problems of economic organisation are missed or misconstrued if opportunism is ignored or suppressed" (p. 97). Add to this elements of "as and when it arises regardless of planning or principle" as taken from the common dictionary definition. Williamson (1993) continued that "most economic agents are engaged in business-as-usual, with little or no thought to opportunism, most of the time" (p. 98). The contention therefore is that excess goods and services (from here on "product") should be seen as an opportunity, because there is still value that can be created and captured by bartering the excess. It could well be a recurring opportunity, especially in cases when (but not limited to) the excess is protracted.

The convergence of the bartering classifications into a new cashless business model (Kaikati & Kaikati, 2013) or an alternative mechanism therefore amounts to the following:

The adoption of a proactive alternative mechanism of exchange. A viable, value-based alternative to monetary exchange. The bartering for product that can be utilised in the regular course of business. It can be done directly or indirectly, within or outside an existing network of relationships, towards survival, growth or both, but it has at its core the objective to create and capture value irrespective of the economic conditions. Value-Based Bartering (VBB) was applicable in a vast number of scenarios where monetary exchange could not be achieved. VBB was particularly effective when owners of spare capacity, excess stock or unsold inventory that could not be stored met in online marketplaces, were given the option to adopt different positions towards the realisation of a transaction, and in the process created and captured value by means of an alternative mechanism.

1.5 Voluntary Exchange Theory

The following section illustrated how the theoretical base connected the constructs and the premise through an empirical example.

1.5.1 Exchange and the Creation of Value

When goods and services are freely exchanged in an open market, it is termed a market economy. Price normally portrayed the value of the output and was determined entirely by interaction between the producers and the consumers in the market. This concept is known as voluntary exchange, is a key principle of a market economy and is based on consumers and producers acting in their self-interest (Jevons, 1885). Smith's (1776) famous quote states "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest". We can all get what we need if we can show the other party to an exchange that our desired action will also be to their advantage (Smith, 1776, p. 24; Anderson etal., 2017). We therefore trade because of our own interests – our needs and wants. Such exchanges rendered both parties better off than they were prior to the exchange.

It is accepted that markets create value by satisfying the needs and wants of both buyers and sellers and markets exist to exchange said value. The exchange of value usually involves money paid for goods or services (from here on collectively referred to as "product") but the exchange of value can also be conducted via barter where product is exchanged for other product. Transactions in a market occur when mutual gains from trade can be achieved. Gains from Trade can be described as the sum of the Consumer Surplus, the Perceived Value less the Price Paid or (V – P) with the Producer Surplus being the Price Received less the Cost to Produce (P – C):

$$(V - P) + (P - C)$$

In the development of the Value Capture Model, Ryall (2013) described (albeit under the topic of competitiveness) that firms, customers and suppliers, all the players within a productive “value network”, had the opportunity to capture more value by changing the way they transacted (Ryall, 2013). By “value network” as opposed to value chain, Gans & Ryall (2017) implied “a collection of agents connected to one another via chains of transactions that, taken together, ultimately result in the production of economic value” (Gans & Ryall, 2017). This strongly correlates with the solution to market mismatches as presented by Hendricks & Singhal (2013): “mismatches can be significantly reduced if supply chain partners work collaboratively and cooperatively, share information with each other, and build relationships based on trust”. Changing the way that the circumstances beyond a failed monetary exchange is viewed, is one of the principles of the VBB concept.

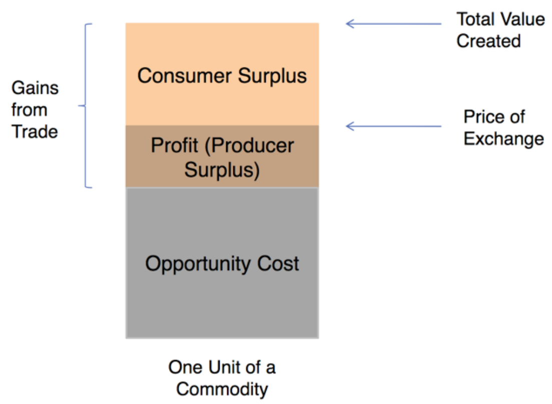

Figure 1: A graphical representation of value and exchange

1.5.2 Case Studies

The following case studies were conducted in the general course of business between this researcher’s media company (Mediaco) and several other companies that included an international airline (Airco), an international leisure accommodation company (Stayco), a fashion retailer (Wearco) and an upmarket office furniture company (Furnco). These cases have been included to illustrate that in spite of economic failure of monetary transactions, gains from trade could be achieved under Value-Based Bartering (VBB). Although the actual names of the companies have been altered, the majority of the figures are exact figures and although certain costs were hypothetical for illustrative purposes, all cases were actual transactions. The monetary exchange mechanism values were displayed in US Dollar ($) converted from South African Rand (R) valued at R14 to $1, the average exchange rate at the time of observation.

1.5.2.1 Example 1: Airco

Monetary Exchange Mechanism

Seller: (P – C)

Mediaco approached Airco with an annual advertising proposal valid over the course of the 2018 calendar year. The advertising included a print and online component and was priced at P = $7 500. As a standing client, Airco had advised Mediaco beforehand that budgets were under pressure. In the interest of continuing a business relationship and with some room to negotiate the rate, Mediaco proposed a carbon-copy of the successful 2017 package. The production cost was calculated at C = $3 000.

(P – C) = (7 500 – 3 000) yielding $4 500 of producer surplus/profit.

Buyer: (V – P)

Due to unforeseen financial constraints and economic circumstances, the 2018 marketing budget was frozen and Airco was unable to accept the proposal even at the 2017 price. Equivalence could not be achieved under monetary exchange; no deal, no transaction, no value created nor captured.

VBB Exchange Mechanism

The adoption of a VBB approach presented an alternative mechanism to create and capture value. Despite the no deal status quo, negotiations and further discussions were entered into in order to understand the objectives of the two parties. The buyer needed the advertising but it was subsequently found that the seller required plane tickets for an international business trip scheduled for later that year. Considering the legitimate need for tickets that the business would have to pay for and the retail price of 4 business class tickets being $7 500, the seller was indifferent about whether this particular exchange yielded the value in the form of cash payment or in the form of plane tickets. The parties decided to exchange the advertising space for the plane tickets.

Seller: (P – C)
Seller's (P – C) remains as stated under monetary exchange:
P = $7 500, C = $3 000, producer surplus/profit = $4 500

Buyer: (V – P)
V = the maximum willingness to pay for the advertising space was $9 000. P, the marginal cost of 4 business class tickets was $3 000. Therefore (V – P) = (9 000 – 3 000) = $6 000. The total value created = broken down as follows:

$$(V - P) + (P - C) = 6\,000 + 4\,500 = \$10\,500$$

Under the VBB exchange mechanism, value had been created and captured through the mutual voluntary acceptance of the terms and conclusion of an alternative transaction. Money didn't work because the buyer didn't have any budget, but benefitted from excess capacity at low opportunity cost by generating a surplus that could not be made under a monetary exchange. The seller in turn was indifferent about the exchange mechanism because it yielded the same value and a transaction could be concluded, value created and captured.

1.5.2.2 Example 2: Stayco

Monetary Exchange Mechanism

Seller: (P – C)
Mediaco approached Stayco with an opportunity to advertise on a newly launched media platform over the course of a calendar year. The exposure included options across various channels but was largely digital advertorial which was inexpensive to produce but contained slightly more expensive print components. The advertising package was priced at P = $10 000. The production cost was valued at C = $2 500. (P – C) = (10 000 – 2 500) yielding $7 500 of economic surplus or profit for the firm.

Buyer: (V – P)
Under economic pressure, Stayco had adopted a policy of allocating the vast majority of its marketing budget to advertising in primary target markets that had proven over time to deliver guaranteed returns. Mediaco operated in one of Stayco's secondary markets and despite recognising and acknowledging the value in accessing this market via the Mediaco offering, Stayco was not prepared to allocate the amount proposed.

Equivalence could not be achieved under monetary exchange; no deal, no transaction, no value created nor captured.

VBB Exchange Mechanism

The adoption of a VBB approach presented an alternative mechanism to create and capture value. The parties discussed the mutually beneficial elements of collaborating, in the process discovering that Mediaco had continuous need for desirable and exotic photo-shoot locations that mostly proved unattainable due to high cost of access. Stayco on the other hand was a seasonal business with unreserved accommodation going to waste due to the fact that it couldn't be stored. Stayco offered its venue and accommodation, adding additional nights for the executive of Mediaco, in exchange for the media package.

Seller: (P – C)

Seller's (P – C) remains as stated under monetary exchange:

P = \$10 000, C = \$2 500, available profit \$7 500

Buyer: (V – P)

V = the maximum willingness to pay for the advertising was half the proposed value, \$5 000. P which was the marginal cost of 10 nights = \$2 500, therefor (V – P) = (5 000 – 2 500) = 3 500 The total value created = 2 500 + 7 500, broken down as follows:

$$(V - P) + (P - C) = 2\,500 + 7\,500 = \$10\,000$$

Under the alternative mechanism of VBB, value was created and captured through the mutual voluntary acceptance of terms and the conclusion of an alternative transaction to a standard monetary exchange. Money didn't work because the buyer was not prepared to allocate the proposed budget to a secondary market, but it was prepared to allocate its excess capacity at marginal cost towards an experimental exercise to gauge the potential. The seller was prepared to offer the relatively inexpensive-to-produce advertising package in exchange for an elusive shoot location and executive retreat. Both parties benefitted, a transaction could be concluded utilising low cost capacity to create and capture value.

1.5.2.3 Example 3: Wearco

Monetary Exchange Mechanism

Seller: (P – C)

Mediaco approached Wearco with an entry level per-quarter advertising proposal in its flagship fashion magazine. Wearco, a family-owned and operated business, did not have the type of marketing budget usually associated with big advertising campaigns and even less so within the luxury fashion media channels its target audience frequented.

Price of the advertising package, P = $1 600. Cost of production, C = $700. (P – C) = 1 600 – 700 = $900 of producer surplus/profit.

Buyer: (V – P)

Wearco could not justify the expense. With brick and mortar retail under pressure from e-commerce, Wearco had spent its annual marketing budget on the development of an online retail portal and despite wanting to advertise, simply didn't have the budget. A failed attempt at monetary exchange creating and capturing value. Equivalence could not be achieved under monetary exchange; no deal, no transaction, no value created nor captured.

VBB Exchange Mechanism

In the interest of cultivating a relationship with a potential future client and despite the no deal status quo, the companies discussed and aligned their respective future objectives. The conclusion was that, advertising targets having been achieved, Mediaco may have unsold advertising assets closer to its production deadline that would be in jeopardy of yielding no value for the firm. Wearco was in a position where stock was seasonal, at risk of redundancy or simply in surplus supply. To avoid their collective stock yielding no value whatsoever, Mediaco agreed to barter $1 650 in advertising space for the reciprocal value in shoes which would in turn be utilised for promotional give-aways to grow audience numbers as well as staff incentives.

Seller: (P – C)

Mediaco's price and cost remain the same. Price = $ 1 600. Cost of production = $700. (P – C) = 1 600 – 700 = $900

Buyer: (V – P)
V = the maximum willingness to pay for the advertising space was \$2 000. P, the cost of purchasing the stock was \$500, therefore the total value created = \$1 500 broken down as follows:

$$(V - P) + (P - C) = 1\,500 + 900 = \$2\,450$$

Although a small and relatively insignificant amount of economic surplus, it remains more than what would have been achieved under a monetary exchange. Value had nevertheless been created and captured through an alternative exchange mechanism. Both parties benefitted furthermore from additional spill-over activities and promotions from the use of the acquired product achieving development of their respective brands and businesses. A transaction could be concluded that created and captured value.

1.5.2.4. Example 4: Furnco

Monetary Exchange Mechanism

Seller: (P – C)
Furnco approached Mediaco with an offer to provide it with new office furniture that better suited its cutting edge standing in a creative industry. After site evaluation, a quotation was submitted with P = \$12 800. Cost estimated at C = \$8 000. (P – C) = 12 800 – 8 000 yielding \$4 800 of producer surplus/profit.

Buyer: (V – P)
Due to office renovation and decoration being an unbudgeted expense in that financial year along with the fact that it had a list of other priorities, Mediaco was only prepared to pay \$3 500. At a maximum willingness to buy far below the quoted price, equivalence could not be achieved under monetary exchange; no deal, no transaction, no value created nor captured.

VBB Exchange Mechanism

After negotiation and agreement that the respective parties and their brands would collectively benefit from collaborating on a project of this nature, a way forward was found by virtue of value-based bartering. Furnco called upon regular suppliers to provide product at cost in lieu of longstanding value-network relationships. Mediaco agreed to publish an editorial feature about creating creative spaces on its flagship media platform and in turn get the feature sponsored, thereby incurring no production cost. All suppliers would be profiled in the editorial feature from which additional business would be generated. The association with a high-profile, publicised project was a further intangible incentive and therefore difficult to quantify.

Seller: (P – C)

Seller's (P – C) increases due to reduced cost in comparison to monetary exchange:
P = \$12 800, C = \$5 000, available profit \$7 800

Buyer: (V – P)

V = \$3 500, the maximum willingness to pay for the renovation. P, the marginal cost of producing 6 additional pages of editorial exposure, normally \$1 000 but was sponsored and therefore 0, therefor (V – P) = (3 500 – 0) = \$3 500. The total value created = \$11 300 broken down as follows:

$$(V - P) + (P - C) = 3\,500 + 7\,800 = \$11\,300$$

Under the VBB exchange mechanism, value had been created and captured through the mutual voluntary acceptance of the terms and conclusion of an alternative mechanism. Monetary exchange failed due to the fact that the buyer did not see the expense as a priority. The seller did however have access to a desirable product of alternative value which could be delivered at a reduced cost due to the media exposure that was made available to the suppliers. The seller benefitted in this case by creating more value under VBB, with the buyer remaining indifferent to both exchange mechanisms yielding the same value. The conception of an alternative means of exchange created and captured value.

1.5.2.4 What each case illustrates

Airco: Money didn't work because the buyer (Airco) didn't have any budget but leveraged low opportunity cost excess capacity. The seller (Mediaco) was indifferent about the exchange mechanism because it yielded the same value. The transaction generated gains from trade that could not be achieved under a monetary exchange.

Stayco: Money didn't work because the buyer (Stayco) was not prepared to experiment with its marketing budget but was prepared to utilise perishable unreserved accommodation to provide the seller (Mediaco) with venue and accommodation for an exotic photo-shoot. The transaction yielded gains from trade that could not be achieved under a monetary exchange.

Wearco: Money didn't work because the buyer (Wearco) was simply not a big enough company to afford high-end advertising. Using obsolete stock, it provided the seller (Mediaco) with promotional product to grow its audience. The transaction created mutual benefit and gains from trade that would otherwise have gone begging.

Furnco: Money didn't work because the buyer (Mediaco) had prioritised budget elsewhere in the business. The seller (Furnco) took advantage of its network, providing the service at cost and the seller reciprocated by providing high-profile media exposure. The potential value on offer was captured resulting in mutual gains from the trade.

1.5.3 Summary

The aforementioned case studies showed how value could be created and captured by means of an alternative value-based bartering mechanism, opportunities that would otherwise have gone begging under a business-as-usual monetary exchange. As long as both parties benefitted, there would be gains from trade and therefore value was created. In all the case examples, barter proved to be a better means to create value and economic surplus than money. Returning to the argument against barter and Kiyotaki & Wright (1993). In a reversal of important conclusions in that piece of seminal literature that stated "We have presented a model of exchange in which the difficulty of pure barter leads to a transactions role for fiat currency" (p. 75), the present study presented a contrasting model of exchange in which the difficulty of fiat money led to a transaction role for pure barter.

1.6 The Questions to Management

"The essence of business enterprise, the vital principle that determines its nature, is economic performance" (Drucker, 2012, p. 7).

Economic performance is measured by among other things, the generation of economic profit. Economic profit is calculated by the amount that revenue exceeds the opportunity costs of production. If opportunity cost is defined as the highest value foregone opportunity, the following axiomatic logic applies:

Income foregone is an implicit opportunity cost. In the event of a potential zero revenue incoming due to a failed monetary exchange, it could be assumed that anything that can be gained rather than the zero is something of value. More so if that product can be utilised in the general course of business to reduce costs, create brand awareness or even potentially gain a new client (Keys & Malnight, 2012). Monetary outlay in the cost of production on the other hand is explicit opportunity cost. It could furthermore be assumed that anything useful gained is better than a potential sunk production cost. Unsold product at retail price is the highest value foregone opportunity. What if something could be gained as opposed to a scenario of total loss? Wouldn't even 10% of something be better than 100% of nothing?

If incentives mattered and determined managerial action, what business unit linkages did organisations need to build to help them capture value through bartering? (Keys & Malnight, 2012)

Why all or nothing? Why not something rather than nothing? Why not money or barter? If and when economic imperfection prevents the exchange of value through monetary exchange, why not consider an opportunistic alternative exchange such as Value-Based Bartering? Can VBB be your plan B?

1.7 Conclusion

The dim view of bartering in traditional economic theory required review and it has been put forward that a more opportunistic alternative mechanism of exchange fuelled by internet dissemination and the globally connected context of Web 2.0 be adopted. The speed and ease of information exchange, search and matching technology, value-networks and specialisation may be the answer to making barter the concurrent alternative to value creation and capture when traditional money fails to do so.

1.8 Bartering and Tax

While Cresti (2005) provided evidence that tax evasion was not an incentive to barter, the reviewed studies had been conducted in the US and included examples from Australia, Canada and New Zealand where barter income is considered as "equivalent to cash income" by the respective tax authorities (Cresti, 2005) and therefore taxable in the event of a profit being generated (Kaikati & Kaikati, 2013). Marvasti (2012) did not find any "support for tax evasion as a motive for barter" (p. 538) either. Even though it was not the intention of the present study to be limited to a South African context, tax avoidance as an incentive to barter was gauged as a concurrent exercise.

Among several factors, perceived government mismanagement of tax induced tax resistance in developing nations such as South Africa (Morisset & Cunningham, 2015). Moderate levels of tax collection in said developing nations, when compared to OECD nations, placed development at risk (Morisset & Cunningham, 2015). Bartering was found to be a popular means to resist tax liability especially among the entrepreneurial component of the sample. Entrepreneurs have an engrained willingness to bear risk (Herranz, Krasa, & Villamil, 2015) and as such were susceptible to tax resistance.

SECTION 2: METHODOLOGY AND DESIGN

2.1 Introduction

This section relates to the research methodology that was implemented towards the completion of this study. Considering the inclination towards the use of quantitative secondary data in the vast majority of the reviewed articles and the lack of empirical data, an exploratory qualitative approach was adopted. This approach subsequently informed the research method and design as well as the data sampling and analysis.

2.2 Methodology and Design

Qualitative research is concerned with the collection and analysis of data in the form of empirical information as opposed to numbers (Flick, 2018). Although not exclusively so, qualitative research was usually conducted in the development rather than testing of theory (Bryman & Bell, 2007). This study set out to find potential new insights into bartering as an alternative exchange mechanism enabled by technology, as such a study of activity in an intermediate state (Edmondson & McManus, 2007) and therefore an exploratory study (Saunders, Lewis, & Thornhill, 2009).

The methodology of this present study was informed both by what it set out to do, as well as what it did not set out to do. The analysis and testing of variance, as with the majority of studies that had been conducted before, constituted quantitative methods. Past studies mostly utilised secondary or panel data to determine impact and significance of economic variables on levels and prevalence of bartering. The present study was more about whether, and if so how, bartering could create and capture value through technology. Following an inductive approach of allowing the data to lead to the discovery of emergent concepts (Yin, 2015), theory was built on an understanding from the ground up as opposed to one “handed down from theory” (Creswell, 2012, p. 22).

As one of a very limited number of published qualitative studies on the topic of bartering to the knowledge of this author, concrete justification had to be sought in order to confirm beyond doubt that the rarely used qualitative method was in fact providing the desired discovery and understanding. Creswell (2012) stated that qualitative methods were used when deficient and partial existent theoretical literature required development. In his work on education, Eisner (2017) set out to question conventional research and in the pursuit of gaining a better understanding, selected qualitative inquiry in order to get closer to that which was being appraised and interpreted. In light of the fact that this study set out to question formative conclusions that set the standard on the role of bartering, qualitative methods were eventually deemed suitably justified.

Time was restricted and the sample comprised of multiple types of people which prompted a cross-sectional design (Saunders & Lewis, 2012). An updated “snap-shot” (p. 123) of bartering was required which was subsequently obtained by the data collected during semi-structured, in-depth, open-ended, face-to-face and telephonic interviews with subject experts. The subjectivity of value perception as well as the requisite understanding of the future potential of bartering, made an understanding of the context essential. Four case studies were included to gain an understanding of why management made certain decisions (Saunders & Lewis, 2012) even though it has been argued that there “is no basis for placing faith in the findings” (p. 117). Case studies have however been considered as a means to “emphasise rich, real-world context in which “phenomena occur” (Eisenhardt & Graebner, 2007, p. 25). To avoid bias and criticism of the strategy, the case studies were restricted to act as an exploratory tool (Saunders & Lewis, 2012), not necessarily the foundation of theory-building, but complimentary to the extant mainstream deductive research (Eisenhardt & Graebner, 2007).

“The investigator cannot fulfil qualitative research objectives without using a broad range of his or her own experience, imagination, and intellect.” (McCracken, 2011, p. 19). Towards this end, this researcher wanted to draw from his own experience in bartering to provide individual insight, thereby utilising self as instrument (McCracken, 2011; Eisner, 2017). Care was taken to avoid improvised interference from the researcher to the respondent and plausible matches had to be rigorously confirmed and proven (McCracken, 2011).

2.3 Population

The population of relevance to this research included Chief Executive Officers (CEOs), Chief Operating Officers (COOs), Managing Directors (MDs), General Managers (GMs), Sales and Marketing Directors (or Managers), Sole Proprietors or Owner Operators of small and medium sized firms who had knowledge and experience of bartering as a means of exchange, at the very least appreciative of its qualities (Eisner, 2017) as an exchange mechanism.

2.4 Sampling Method and Size

A complete list of the population was not obtainable. Given this limitation and the need to be practical, a non-probability sampling technique was used (Saunders & Lewis, 2012). A purposive sampling method was utilised in the selection of a small sample based on their knowledge of bartering, the researcher utilising his own judgement to make a selection that would best meet the objectives (Saunders & Lewis, 2012). Two pilot interviews were conducted to test the effectiveness of the questionnaire in generating useful data and to identify any shortcomings in its structure (Saunders & Lewis, 2012). It was subsequently established that respondents without a fair degree of knowledge about bartering would not yield data deemed useful towards the completion of this present study. The ability to answer the research questions therefore rested on the respondents being experienced in bartering or at the very least appreciative of its potential scope and scale. From this, an understanding of the status quo and a formulation of the broader view was developed.

(Refer Table 1: Overview of Respondents)
The sample of 8 respondents was extracted from 7 different industries including Leisure Accommodation, Media, Food and Food Delivery, Hair and Beauty, Fashion Retail, IT Services and General Trade. The sample size raised concerns, but an emphasis was placed on the collection of useful and credible data related to the research questions. The validity of the data was of more relevance than the actual size of the sample. Although it was initially estimated that 20-30 interviews would be required (Saunders et al., 2009), McCracken (2011) stated that “qualitative research does not survey the terrain, it mines it. It is, in other words, much more intensive than extensive in its objectives. For many research projects, eight respondents will be perfectly sufficient” (p. 18). Judgement in the selection of individuals was therefore crucial. Selection was firstly based on knowledge as previously explained, but two further factors were taken into account. The respondents had to occupy a position with senior level decision making capacity and sight of dynamics between the marketing, sales and finance functions or then general management. An understanding of economic and financial concepts like marginal cost and benefit, value creation and capture, under-utilised assets, redundant stock, excess capacity and how it could affect a business in general were considered. While there was not absolute certainly that a Sales and Marketing Director would have deep knowledge of the financial and other implications that the adoption of an alternative exchange mechanism could possibly have, it was assumed that a level of general understanding would exist, sufficient for the purpose of the current study. Viewing the

respondent as collaborator pursuant of “fuller disclosure”, jointly exploring the topic by creating “elements of freedom and variability within the interview” (McCracken, 2011, p. 27). The nature of the industry in which the business operated as well as the nature of the product it dealt in was the final criteria requiring relative susceptibility to barter as a means of exchange. This included industries that dealt in inventory that couldn’t be stored like the hotel industry, airline industry, space or time related products, as well seasonal industries like fashion.

Table 1: Overview of Respondents

Respondent	Designation	Industry	Barter Proficiency
1. Rory	Owner Operator	Beauty	Advanced
2. Trish	Sales & Marketing Manager	Hospitality	Advanced
3. Brett	Director	IT	Intermediate
4. Anthony	CEO	Food	Superior
5. Gareth	MD	Hospitality	Advanced
6. Gina	Partner	Media	Advanced
7. Steve	Sole Proprietor	General Trading	Superior
8. Peter	Director	Fashion	Advanced

This selection criteria may have led to applicable industries not necessarily being equally represented. To avoid data shortage in answering the research questions, the business and bartering experience of the respondents, their expertise or connoisseurship (Eisner, 2017), was deemed sufficient enablement to judge merits of technology enabled value-based bartering and its potential applicability in other industries.

The four case studies were selected by means of theoretical sampling (Eisenhardt & Graebner, 2007), not to test theory but to develop it. Exemplary cases, particularly appropriate for shedding light on the relationships between the constructs were “chosen for the likelihood that they would offer theoretical insight” (Eisenhardt & Graebner, 2007, p. 27). Even though selecting a single case was fairly simple, the sampling approach for selecting multiple cases was based on the ability of the cases to illustrate relationships and contrasts, thereby providing a stronger base for the theory and clear patterns between the constructs (Eisenhardt & Graebner, 2007).

2.5 Units of Analysis

The first-hand experience of bartering and the underlying drivers and motives thereof formed the units of analysis. Data was extracted from within the focus sample and case studies with the view of addressing the research problem and purpose described in Chapter 1 as well as answering the research questions.

2.6 Data Gathering Instruments

2.6.1 Interviews

Following a thorough literature review and prudently selected sample, an analysis was conducted in as far as the data that needed to be collected in order to answer the research questions and fulfil the objectives of the study (Saunders & Lewis, 2012). An interview guideline was designed accordingly (Refer Interview Guideline here). Pilot interviews were conducted prior to the actual interviews, testing the interview guideline in order to ensure among other rigours, that the questions were clearly understandable and not leading (Saunders & Lewis, 2012).

Consistency was a key element in ensuring reliability and validity (Saunders et al., 2009). The interview guideline, although in-depth and unstructured, had to yield consistent findings by keeping sight of the objectives and questions and in order to be replicable. Even though care was taken to avoid leading respondents, a series of prompts had to be implemented to avoid shapeless enquiry and maintain a degree of control over the process (McCracken, 2011). Questions were designed to answer the research questions, open-ended or not (Saunders & Lewis, 2012). Although the same questions was asked to all respondents, opportunities to explore unstructured responses had to be seized (McCracken, 2011). Whilst every attempt was made to maintain the order and structure of the questions, it was not “allowed to destroy the elements of freedom and variability within the interview” (McCracken, 2011, p. 27) allowing for changes as part of an iterative process. The portrayal of the interview guide questions relative to the research questions is illustrated in Table 2: Interview Questions relevant to Research Questions.

The interview guide served as exactly that, a guide, and although structured for the purpose of discovery and even insightful theoretical development, the questions were not necessarily presented in this sequence and were, when deemed appropriate, expanded or toned down in order for the conversation to develop its own course (Arsel, 2017).

Table 2: Interview Questions relevant to Research Questions

Interview Questions	Research question
Q 1.1, 1.2, 1.3	1. Why do companies do business without money at all?
Q 2.1, 2.2	2. In which industries can bartering enjoy prevalence?
Q 3.1, 3.2, 3.3	3. How are the companies in these industries conducting business without money?
Q 4.1, 4.2, 4.3	4. How can technology improve these methods?

2.6.2 Case Studies

Although one exhaustive example would have obtained theoretical insight according to Saunders et al. (2009), confirmed by Daniel (2011), the study evolved to a point where it became about the demonstration of particular characteristics. Four in-depth case studies featuring barter exchanges were conducted by this researcher’s own company in order to credibly demonstrate transferability into other contexts, how value could be created and captured through technology enabled bartering as an alternative mechanism to failed monetary exchanges. The building of good theory fundamentally resulted from among other, comparative, multiple-case logic (Eisenhardt, 1991).

2.7 Data Gathering

2.7.1 Interviews

Data was collected by means of semi-structured, in-depth, open-ended, face-to-face and telephonic interviews. In the event that the respondents weren’t physically available, telephonic interviews were conducted. In extreme cases necessary to the successful outcome of the study and if the respondent represented a crucial element in the sample or in the event that the candidate was otherwise unavailable, the interview questions were sent via email for completion in writing. Face-toface and telephonic interviews were recorded and transcribed. Even though face-to-face interviews were considered important and recognised as the "gold-standard" (Braun, Clarke, & Gray, 2017, p. 1), the nature of current day Web 2.0 life has resulted in many people (it was reasonable to assume the target sample fell within this generalised category) would be fairly comfortable with online interaction and it was determined that it would not necessarily compromise the quality of the data (Braun et al., 2017).

Four opening questions were posed to each respondent. These questions although posed as informal, preliminary chatter (McCracken, 2011), served a multi-fold purpose: firstly as final qualifying of the respondents' knowledge of bartering, secondly in the establishment of rapport, thirdly to understand the respondent's definition of certain central themes (McCracken, 2011). Although the interviews were purposeful and cordial, the conversation was casual and light-hearted and standard interview protocol was observed. Handwritten notes were taken during most of the interviews which together with all the recordings and transcripts, constituted the data that was analysed.

2.7.2 Case Studies

A pragmatic view was taken to conducting the case studies in the spirit of answering the "what" and "how" (Creswell, 2012) of technology enabled value-based bartering as a value creating and capturing mechanism. This view catered for the cases to be focused on the practical implications of the research (Creswell, 2012). During the regular course of taking its product to market, to be specific, advertising space on two prominent media platforms, this researcher adopted the value-based bartering model by proposing it as an alternative exchange mechanism when money failed to produce a transaction. All four cases were actual cases, the supporting evidence of which was narrated in section 1.5.3.

2.8 Data analysis approach

2.8.1 Interviews

The transcription of interviews proved to be an ideal, though time-consuming, method of getting close to the data. Whilst the study's objectives needed to be top of mind, chasing new insights that emerged from interviews (Edmondson & McManus, 2007) that may have contributed to the formulation of theory. An open coding content analysis of the interview data was carried out (Schulz, 2014). The data was categorised into recurring themes, ideas and topics (Lapan, Quartaroli, & Riemer, 2011; Schulz, 2014) in an iterative process of constant comparison during the analysis (Schulz, 2014). ATLAS TI, a qualitative data analysis program was utilised to integrate the data into patterns followed by a written analytic summary that provided the basis for interpretation and consideration of the various similarities, relationships and differences (Lapan et al., 2011). Alternative explanations emerged during data analysis, leading to unexpected learning. Being an exploratory study, allowances were made for such findings.

2.8.2 Case studies

The presentation of the rich qualitative data gathered in the case was presented in a summarised rendition of the context and the dynamics that lead to the successful VBB transactions within the text (Eisenhardt & Graebner, 2007). The story was intertwined with theory to demonstrate the close connection between empirical evidence and emergent theory. (Eisenhardt & Graebner, 2007)

2.8 Limitations

A distinct weakness of the purposive sampling was the inability to estimate the sampling error and the degree to which the sample was representative. The intent of exploratory research was, however, not about generalising to a larger population (Daniel, 2011) as much as it was about obtaining a general idea about a topic and the subsequent development of theory. The degree of sample selection bias was considered a limitation but was overcome by thorough sample selection criteria. Even though as wide an industry sample as possible was selected, it was not representative of all potential industries which may or may not have complicated the generalisation of the study.

The researcher’s own experience, understanding of the topic and relationship with the respondents may have generated as much blindness as insight (McCracken, 2011). Attempts to mitigate this included the manufacturing of distance. Eisner (2017) spoke of positively exploiting subjectivity to provide individual insight whilst McCracken (2011) merited the approach as one that provided fuller disclosure.

Despite solid defence of theory building from case studies, their inclusion as exploratory tool, subjectivity remains a potential limitation to the findings.

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INTERVIEW GUIDELINE

Opening questions

- What is your understanding of barter?
- What is your impression of bartering as a way of doing business?
- Have you ever been involved in a barter agreement?
- If so, what was your general impression of it? If not, would you participate in a barter agreement given the opportunity?

Research Question 1

1.1 Why does your company enter into barter agreements?
1.2 Under which conditions do you tend to barter as opposed to using cash?
1.3 What kind of products or services have you bartered?

Research Question 2

2.1 Why does barter work in your industry/ business? Does it have anything to do with the fact that you can't store your inventory or spare capacity?
2.2 In which other industries do you think bartering can be conducted successfully?

Research Question 3

3.1 How do you conduct your barter agreements?
3.2 What do you like or dislike about bartering? Are there any issues, constraints, operational or executional problems you have experienced?
3.3 Would you consider using a barter company to facilitate the transaction and handle the deliverables?

Research Question 4

4.1 How can technology (Web 2.0, the sharing economy, technology like mobile applications or artificial intelligence) improve bartering?
4.2 Would you barter more if it were made easier through technology? If yes, elaborate by explaining why and how?

4.3 How would a simplified, hi-tech seamless and hassle free way to barter improve your business?

Closing question

- Do you see bartering as a way to avoid paying tax?