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Full Length Research Paper

Information technology and e-risk of supply chain management

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Application of information and communication technology (ICT) is exponentially growing in Supply Chain Management (SCM) for increasing productivity and profitability in business. This growth of Information Technology in SCM has changed the paper based environment to Virtual Supply Chain, which is also generating electronic risks (e-risks) in form of cybercrime or fraud. Although, reducing the e-risks from huge data generated in day to day operation of supply chain networks is a big challenge for decision makers, auditors, detecting and investigating agencies. We know that technology is always a double-edged sword which can be reciprocally used for prevention of e- risks in SCM. The purpose of these empirical studies is to discuss the IT application and trend to curb the supply chain's e-risks.

Key words: e-risk, information technology (IT), supply chain management (SCM)

INTRODUCTION

In the last decades, organizations were reluctant to share the data due to leakage of their trade secret of business. However, organizations are bound to rapidly adopt the use of the Information Technology in their Supply Chain Management for survival at global market place due to globalization. Supply chain management (SCM) is an integrated and complex network concept that refers to the sum of all the processes starting from the procurement of the raw material from the manufacturer/producer and ending with delivery of the end-product to the consumer (Silver et al., 1998). Due to increased complexity of data, uncertainty risk in supply chains is growing (Christopher and Peck, 2007; Hillman and Keltz, 2007), leading to an increasing vulnerability of electronic risks (e-risks). The IT enabled SCM can easily manage the flow of information

with key business processes, materials, money within and outside the networks and contribute to firm profits by improving quality and by reducing coordination costs and transaction risks (Stroeken, 2000; Mabert et al., 2001; Sanders and Premus, 2002). Rigorous use of information technology in supply chain is also generating chance of cybercrime as "computer-assisted" such as hacking, phishing and "computer-focused" as hate crimes, telemarketing/internet fraud crimes. Widely used terms for crime involving computers are computer crime, computer related crime, computer misuse, cybercrime, digital crime, e-crime, internet crime, online crime etc. Therefore, IT is considered a critical prerequisite for managing supply chain (Davenport and Brooks, 2004).

According to the 2012 Report of the Nations

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on Occupational Fraud and Abuse, published by the Association of Certified Fraud Examiners (ACFE), \$3.5 trillion worth of fraud occurs every year. Organizations are spending money and time to detect, investigate, analyze and prevent it. Investigators and detecting agencies are forced to wade through massive amounts of data, which potential perpetrators count on to shield them from detection and prosecution. Many researchers discussed on the strategies, techniques and technologies for the design and development of SCM, survey papers on taxonomy of SCM, and modelling and analysis of SCM. There is a very few literature survey article that deals with generation and prevention of e-risks by IT in SCM. However, a comprehensive survey of IT in SCM will be useful to identify and prevent the e-risks. Also, some future research directions are indicated for developing IT embedded SCM system for fraud detection to reduce the e-risks. Section 2 discusses brief review of the literature. The details of the research methodology are presented in Section 3. Section 4 presents the classification of previous literature on the basis of different IT applications in SCM. A classification scheme for different type of e- risks (cyber crime) due to IT application and its detection and prevention through IT is presented in Section 5. In Section 6, a framework has been developed for the application of IT in SCM. Finally, discussion and conclusion are presented in Section 7.

BRIEF REVIEW OF LITERATURE

The development of information and communication technologies (ICT) that include Electronic Data Exchange (EDI), Radio Frequency Identification (RFID), Bar Code, Electronic Commerce, Decision Support system, Enterprises Resource Planning (ERP) package, the Internet and World Wide Web etc. had developed the complex and dynamic SCM. Researchers comment on this phenomena as beginning of an evolution in supply chain towards online business communities (Armstrong and Hagel, 1996), internet as the foundation for new business models, process and new ways of knowledge distribution (Laudon and Laudon, 2000). This arose for the application of IT in SCM. However, relation between IT and SCM was discussed as internet increases the richness of communications through greater interactivity between the firm and the customer (Watson et al., 1998), IT as cures for Bullwhip effect in Supply Chains (Lee et al., 1997), internet as the foundation for new business models, process and new ways of knowledge distribution (Laudon and Laudon, 2000), applications of radio frequency identification (RFID) in supply chain (Gould, 2000), electronic data interchange (EDI) (Ngai and Gunasekaran, 2004), inadequate enterprise without IT systems (Davenport and Brooks, 2004), e-commerce applications (Chou et al., 2004), enterprise resource

planning (ERP) (Davenport and Brooks, 2004), mobile agent technology, as applied in an E-commerce application (Patel and Garg, 2004), online ordering (Kull et al., 2007), SCM and IT (van Donk, et al., 2008), spread sheet based vendor (Mahamani and Rao, 2010), role of IT in SCM environment (Prasad et al., 2010), importance of e-procurement for an information technology chain (Ronchi et al., 2010), SCRM approach for risk mitigations (Tummala and Schoenherr, 2011), e-commerce depending on information infrastructures and telecommunications for its development (Gilaninia et al., 2011), RFID for SCM (Nair, 2012), e-supply chain and software agents (Nair, 2013), excel function as supply chain fraud detector (Varma and Khan, 2014) etc. The literature survey was primarily aimed to help researchers and practitioners in implementing a successful IT system for achieving an e-risk free SCM.

RESEARCH METHODOLOGY

Random data have been collected primarily through e-journals search engines available in intranet or organisational library that are in the areas of general, IT, fraud, cyber crime and supply chain management as shown in Table 1. The study was conducted for a review of e-risks (Cybercrime or fraud) which has been generated due to the application of IT tools and technique. Further, journal articles related to detection and prevention of e-risks in IT enabled SCM were reviewed.

Review of previous research on IT in SCM

Different IT applications in SCM have been reviewed based on the available literature in this area (Table 2).

Classification of cyber crimes and its causes, prevention

The aim of classification of literature is to identify different types of e-risks (Cyber crime) generation cause related to IT enabled SCM (Table 3). Further classification was related to IT tools and technique for detection and prevention of cyber crime and suggestion for future research directions was also aimed.

Electronic records management (ERM)

Virtual business transactions through Automatic identification (Auto ID), Electronic Data Interchange (EDI) and Enterprises Resource Planning (ERP) Systems are collectively known as Electronic Records Management (ERM). The objective of ERM implementation in SCM is to ensure the accountability of process flow, which is fruitful to reduce cybercrime risks (e-risks) generate during the e-communication.

Table 1. Random data on e-journals search engines.

Name of journal	No of article reviewed
African Journal of Business Management	1
Automotive Manufacturing & Production	1
Artificial Intelligence Review	1
Business Horizons	1
Business Process Management Journal	1
Computers and Electronics in Agriculture	1
CSI Communications	2
European Accounting Review	1
European Journal of Operational Research	1
Expert Systems with Applications	1
Industrial Management & Data Systems	1
Information Management	1
Integrated Manufacturing Systems	1
International Journal of Business Performance and Supply Chain Modelling	1
International Journal Of Computational Engineering Research	1
International Journal of Management and Enterprise Development	1
International Journal of Flexible Manufacturing Systems	1
International Journal of Operations & Production Management	3
International Journal of Physical Distribution & Logistics Management	2
International Journal of Production Economics	1
International Journal of Production Research	1
International Journal of Research in Management	1
International Journal of Security and Networks	1
Int J. Technology Management	1
Interdisciplinary journal of contemporary research in business	1
IUP Journal of Supply Chain Management	1
Journal of Business Logistics	2
Journal of Enterprise Information Management	1
Journal of Operations Management	1
Journal of Purchasing and Supply Management	1
Managerial Auditing Journal	2
Management Science	1
Serbian Journal of Management	1
Supply Chain Management: An International Journal	1

Bar code and scanner

Since many decades, the use of barcode for item-level identification, verification of orders at receiving and shipping etc in SCM is a mature automatic identification (auto-ID) technology. Barcode has become the “ubiquitous standard for identifying and tracking products” (Wyld, 2006). This is commonly used in product identification, speeds data entry, enhances data accuracy, minimizes on-hand inventory, improves customer service, reduces product recall, reduces work-in-process idle time, monitors and controls shop floor activity, improves shop floor scheduling, optimizes floor space, improves product yield, reduces scrap, attendance recording, ATM

card, debit and credit cards in banking organizations. Bar code helps us to reduce risk in supply chain which is rising due to manual oversight or fraudulent data entry by insider. Bar codes duplicity in process generate e-risks, which can be eliminated by application of biometric authenticity and authorizations. But there is a risk of data diddling which is performed by unauthorized modifications of data prior or adding fraudulent data during input or altering/omitting the desired input data or wrongly posting a transaction, making alterations or additions in the master file records, posting the transactions partially, destroying the output and substituting the counterfeit output or entry of a virus that changes data, the program, the database or application, exchanging valid disks and

Table 2. Different IT applications in SCM.

Criteria	Reference
Electronic Records Management (ERM) in SCM	Mount and Caulfield (2001), Graham (2002), Sanchez and Perez, 2003, Coronado , et al. , 2004, D'Avanzo et al.,2004, Michael et al., 2005, Wyld, 2006, Attaran, 2007,Garcia-Dastuge and Lambert,2007,Sabbaghi et al., 2008,Chandan et al., 2009,Jedermann et al. 2009, Fosso Wamba, S,2012
Enterprises Resource Planning	Sandhu et al., 1996, Van deRiet et al. , 1998, Coderre (1999), Little et al., 2003, Kuhlmann et al., 2003, Boyle, 2004, Davenport and Brooks, 2004,Gara,2004, Schlegelmilch and Steffens, 2005, Panigrahi (2006), Vaidya et al., 2006, Moon, 2007, Zhang et al., 2007AICPA,2008, Huang et al., 2008, Vaidya et al., 2008; Albrecht et al., 2009, Kuhn et al. 2010, ISO17799
E-business	Bauer et al., 2001,Geoffrion and Krishnan ,2001,Boone and Ganeshan 2007
Electronic Supply Chains (ESC)	Gunasekharan et al, 2004,Sammon et al, 2007
Electronic Commerce	Ramya S. Gowda,2013
Mobile agent	G. P. Picco 2001, Patel R.B. and Garg K. 2004
Spread Sheet, data mining	Ghosh and Reilly ,1994, L. Delamaire, H. Abdou, and J. Pointon,2009, Varma, T.N. and Khan , D.A.,2014
XML (extensible markup language)	Ameron,2000,Nurmilaakso et al. ,2002,Simchi-Levi et al., 2003W3C, XML Schema Part 0, 2004; W3C, XML Schema Part 1, 2004; W3C, XML Schema Part 2, 2004,
Computer Assisted Auditing Tools and Techniques (CAATTs)	ACL,2006, C. Dowling and S. Leech,2007, D. Janvrin, J. Bierstaker & D. J. Love 2008

tapes with modified replacements into a computer or computer system by anyone associated with the process of creating, recording, encoding, examining, checking, converting and transporting data into a computer.

Radio frequency identification (RFID)

Radio frequency identification (RFID) is an IT revolution in which information exchange system that can create an environment in every object can be automatically recognized, tracked, and traced from factory to shelf only using a single tag on each product item or pallet (Jones et al., 2004; Jones, Clarke-Hill et al., 2005; Lai et al., 2005; Ranky, 2006; Sellitto et al., 2007). By adopting RFID technology, supply chain can be enhanced by visibility into customer needs, efficient business process, reliable and accurate order forecasts, productivity improvement, operating cost reduction, better tracking, counterfeit identification and theft predication (Attaran, 2007). RFID includes authentication (Coronado et al 2004), reducing channel volume and enhancing forecasting and planning capabilities (D'Avanzo et al., 2004) of the next revolution

in supply chain (Srivastava, 2004). Amcor uses RFID for managing the warehouses (Michael et al., 2005); Wal-Mart began setting deadlines for suppliers to start using RFID tags on their shipments in 2003 (Coronado et al., 2004). Suppliers are able to manage product recalls and return of faulty and defective materials by using RFID through its Electronic Security Marker (ESM) (Sabbaghi et al., 2008), wireless automatic identification and data capture (AIDC) technology (Fosso Wamba et al., 2008) that allows end-to-end supply chain item level tracking and tracing, adoption by Indian Retailers (Chandan et al., 2009). RFID is an emerging technology that is being increasingly used in logistics and supply chain management in recent years (Jedermann et al., 2009), reduce the risk of counterfeiting (Gao et al., 2004), products anti counterfeiting strategies, enhanced product recall, reverse logistics, and total inventory management (Bardaki, C., K. Pramadari and Oukidis,2007), technology in the supply chain (Sarac et al., 2010), internet of things (Calia, 2010), support of intra- and inter organizational business transactions (Wamba, 2012). There is different attacks as skimming attack (when RFID tag are read directly without anyone knowledge), eavesdropping

Table 3. Classification of cyber crimes.

Cyber crime*	Cause due to IT in SCM	Detection and prevention through IT
ATM/EDI/ Credit Card fraud	Bar code, Electronic Data Interchange, RFID,ERP, e-mail, Internet	Bar code, RFID, Data Mining, Cryptography, Biometric, GPS , EMV card standard or PIN technology
Cyber terrorism	Internet, e-SCM, application	Web ERM, Data mining
Criminal breach of trust/Fraud	All application of IT	Excel sheet, ERP, Data mining
Data Diddling	ERM,ERP, Database of SCM, Web application	Bar Code,
Denial of Service attacks, Web-jacking	Internet, ERP	Antivirus, auto-analysis of legitimate usage patterns, Firewall and intrusion Detection system
Destruction of electronic evidence	Internet, ERP	Antivirus, auto-analysis of legitimate usage patterns, Firewall and intrusion Detection system
Cyber Stalking	Internet, ERP	Antivirus, auto-analysis of legitimate usage patterns, Firewall and intrusion Detection system
E-mail bombing, spoofing , Phishing ,Spam	Internet, e-SCM	Anti-virus, auto-analysis of legitimate usage patterns
False electronic evidence	EDI, e-commerce	Firewall and intrusion Detection system
Forgery of electronic records	EDI,RFID, ERP	Cryptography, computer forensics
Identity theft	Internet, ERP	Authentication and authorization check, Firewall and intrusion Detection system
Illegal Access (Hacking, Cracking)	Internet, ERP	intrusion detection and risk mitigation, authentication and authorization check
Illegal data acquisition (Data Theft or Alteration)	Internet, ERP	data integrity verification,
Intellectual Property theft	Internet, ERP	data integrity verification, authentication and authorization check

Table 3. Contd.

Logic Bomb	Internet, Web application	Firewall and intrusion Detection system, authentication and authorization check
Money-laundering	e-commerce, Web application	Data mining Firewall and intrusion Detection system, authentication and authorization check
Privacy violation	Internet, Web application	Firewall and intrusion Detection system, authentication and authorization check
Salami attacks	Internet, Web application, RFID	RFID, Firewall and intrusion Detection system, authentication and authorization check
Sending threatening/ defamatory messages by e-mail	Internet, Web application	Mobile agent, Firewall and intrusion Detection system, authentication and authorization check
Spreading or Dissemination of Malicious Software (Malware), Virus attacks	Internet, ERP	Mobile agent, Firewall and intrusion Detection system, authentication and authorization check

* Terms explained in Appendix I

attack (attacker sniffs the transmission between the tag and reader to capture tags data) man-in-the-middle attack (a fake reader is used to trick the genuine tags and readers) and physical attack which requires expertise and expensive equipment takes places in laboratory on expensive RFID tags and security embedded tags (Mahinderjit-Singh and Li, 2009, 2010). The RFID tags play a significant role, as the latest form of artificial security tags, which can easily be integrated with existing chains and reduce counterfeiting. RFID helps the organization to avoid duplication of items, as the tags are unique and authenticated. It can also reduce the chances of fraud generated by manipulation in entry, authorization from the supplier to customer because of cloning become non existence. Cost and implementation constraints secure RFID tags and smart cards require specialized cryptographic implementations with Global Position System (GPS).

Electronic data interchange (EDI)

Electronic Data Interchange (EDI) is also called "paperless exchange" (Nagpalet al., 1999), in which there is computer to computer interchange of business

documents and/or information in standard, structured, machine retrievable data format (computer can process the information without human assistance) (Sanchez and Perez, 2003) between separate computer systems, using a standard structured format (ANSI ASC X.12 in the late 1970s and EDIFACT in the 1980s). It was the replacement of the traditional forms of mail, courier, or fax. SAP's exchange infrastructure (White Paper, SAP Exchange Infrastructure 2.0, 2002; White Paper, SAP R/3 Enterprise, 2002; White Paper, SAP Exchange Infrastructure 2.0 Technical Infrastructure, 2002) has been in place for many years as the footstone of all ERP technologies. It was used for the paperless communication within supply chain network to share transactional data (Garcia-Dastuge and Lambert, 2007), order processing, inventory controlling, accounting, transportation, quick access to information, better customer service, increased productivity, improved tracing and expediting, etc. EDI is also tremendously beneficial in counteracting the Bull Whip effect and supply chain organizations can overcome the distortions and exaggerations in supply and demand information by using technology to facilitate real-time sharing of actual demand and supply information.



Figure 1. Evolution of e-supply chain.

Smart card

A smart card can generally be defined as a plastic card with dimensions similar to traditional credit/debit cards, into which an electronic device has been incorporated to allow information storage. Frequently, it also has an integrated circuit with data processing capacity.

E-business

e-business is “the use of the Internet or any digitally enabled inter- or intra-organizational information technology to accomplish business processes” (Boone and Ganeshan, 2007). As classified by Geoffrion and Krishnan (2001), e-business consists of three areas: (1) consumer oriented activity i.e business-to-consumer, consumer-to-consumer, and government-to-consumer activities, (2) business-oriented activity i.e; business-to-business, business-to-government and government-to-business activities and supported by (3) the e-business technology infrastructure i.e; network infrastructure, network applications, and respective software tools and applications. The key tools and methods of e-business include EDI (electronic data interchange) and XML (extensible markup language), buy-side e-business applications, sell-side e-business applications, digital market places, Item identification and Content management (Bauer et al., 2001). If e-business is not properly secured then illegal data acquisition is performed by cyber criminals. There is law for copyright protection or protection from data or intellectual property theft in every country.

Electronic supply chains

Electronic Supply Chain (ESC) is a supply chain that is electronically managed in form of EDI-based or Internet based between or among participating organization. Basically it is a virtual supply chain, which links organizations to allow them to buy, sell and move products, services and cash by using internet-based applications to transact and exchange information with their downstream or upstream. American-On-Line and lastminute.com have achieved innovative results using ESCs (Gunasekharan et al., 2004). In this collaborative planning, forecasting

and replenishment (CPFR), Vendor Managed Inventory (VMI), Efficient Customer Response (ECR) and Quick Response have been easily managed. Intel began to recognise the power of the internet as a corporate communication channel by using the internet as “brochureware”, to share technical information and market the Pentium processors (Sammon et al, 2007) (Figure 1).

e- procurement

An e-procurement is expected to be integrated into the wider purchase-to-pay (P2P) value chain with the trend toward computerized supply chain management. An e-procurement is done with a software application that includes features for supplier management and complex auctions with value chain consist of Indent Management, e-Tendering, e-Auctioning (The electronic auction (e Auction) is carried out in real time, where participants log in to an auction site using a browser at a specified time and bid for an article as conventional auctions. This is a transparent process and reduces malpractices, Vendor Management, Catalogue Management, and Contract Management. The forms of e-procurement are Web-based ERP (Enterprise Resource Planning): Creating and approving purchasing requisitions, placing purchase orders and receiving goods and services by using a software system based on Internet technology, e-MRO (Maintenance, Repair and Overhaul). It is the same as web-based ERP except that the goods and services ordered are non-product related MRO supplies, e-sourcing; identifying new suppliers for a specific category of purchasing requirements using Internet technology, e-tendering; sending requests for information and prices to suppliers and receiving the responses of suppliers using Internet technology, e-reverse auctioning; using Internet technology to buy goods and services from a number of known or unknown suppliers and e-informing; gathering and distributing purchasing information both from and to internal and external parties using Internet technology. In 1998, Intel launched a global online ordering system that reached a record US\$1bn in product orders in the first month of operation. Today, Intel generates over 85 per cent of revenue from online orders and virtually all Intel customers are transacting business with Intel over the internet. Intel is aggressively moving towards paperless

purchase orders, shipment notification and deployment processes. Digital signatures on the documents submitted in electronic form in order to ensure the security and authenticity of the documents filed electronically. This is the only secure and authentic way that a document can be submitted electronically.

Secure electronic transaction/trading/technology (SET)

It is a proposed industry standard for payment card acceptance over the Internet. At the system heart is a pair of digital keys, one public and one private, held by each party to a transaction. In practice, banks will give both keys to a customer together with a digital certificate for authenticity. When customers wish to purchase over the Internet, they firstly give the public key to the merchant along with the certificate to prove its authenticity. Likewise, the merchant provides its own public key and certificates to prove its own bona fides to allow the transaction to proceed. Problems may arise in key distribution and customer identification in order to ensure that accounts and clients match.

Enterprise resource planning (ERP) systems (e.g., SAP, Oracle, Peoplesoft)

Enterprise Resource Planning systems are the IT revolution that emerged in the 1990s. This system is a common term for a co-operating software that manages and co-ordinates much of a company's resources, assets and activities (Boyle, 2004). It includes cost cutting in internal operations, efficiency across the extended supply chain, enhanced customer service and network relationships (Davenport and Brooks, 2004), an enterprise information system designed to integrate and optimise the business processes and transactions in a corporation (Moon, 2007), provides the critical infrastructure necessary for the effective evolution of the assurance function from a periodic event to an ongoing process through the integration of continuous auditing applications (Kuhn et al. 2010). The security aspects in an ERP system are security policy and administrator, user authentication, authorization, time restriction, log and trace, database security etc. (Van deRiet et al., 1998), role-based access control, segregation of duties, encryption, username and passwords, etc. (Huang et al., 2008; Vaidya et al., 2008; Albrecht et al., 2009). Fraud can be prevented in ERP system as role based access control, segregation of duties, username and passwords, etc. (Little et al., 2003; Gara, 2004), a labor-intensive task requiring time, effort and resources (Wells, 2008) role mining techniques to automatically identify roles from existing permissions assigned to users within an organi-

zation (Sandhu et al., 1996; Kuhlmann et al., 2003; Schlegelmilch and Steffens, 2005; Vaidya et al., 2006; Zhang et al., 2007) proactively searching for or finding the indicators (also called symptoms or red flags), suggesting that fraud may be occurring (Albrecht et al., 2006). ERP with cloud computing, mobility and analytics is the next generation. ERP systems are integrated within the core functional modules (e.g., Material Management, Financial and Accounting, Human Resources, Production Planning, Sales and Distribution, Supplier Relationship Management, Customer Relationship Management, Supply Chain Management, etc.). The implementation of ERP in any organisations may create e-risks through failure of proper IT controls over critical application programs, data files /tables, failure to manage privileged user access and default system user accounts (e.g. SAP_ALL), exposure of business sensitive information, lack of segregation of duties, etc. The security issue of ERP system is a challenge for each organization. The different controls in ERP system for any organizations suggested by system implementers are a) IT general controls – access restriction and separation of responsibility to modify/change/delete system parameters, configurations, customizations, and/or master data etc., b) Automated Application Controls – approval of transactions workflow, encrypted data, validation of data upon entry using edits, unique transactions numbers of each process etc, c) Manual Controls – defined segregation of duties, reconciliations of materials and accounts, etc. and d) Hybrid or Computer-Dependent Application Controls – generation of MIS reports, review of audit logs, etc. Organisations are implementing NIST Federal information systems standards, COBIT®, Val IT, Risk IT, ITIL, and ISO17799 to control e-risks in there SCM.

SAP, Oracle and Baan are the market player in ERP systems package with high level of integration by utilizing a single data model, developing a common understanding of what the shared data represent and establishing a set of rules for accessing data. These ERP packages are playing a vital role in organisation to reducing the fraud or e-risks from their Supply Chains.

SAP

Organisations are using SAP solutions for purchase-to-pay, order-to-cash, or HR processes and using third-party tools for fraud detection or using proprietary relational databases. In either case, the need to export data out of the SAP system compromises both data security and governance which limit the amount of data that can be analyzed. SAP announced SAP Fraud Management in year 2013 with HANA platform. This is part of SAP's Governance, Risk and Compliance (GRC) product portfolio, along with Process Control, Access Control,

Risk Management and Global Trade Management, Business Objects and Business Intelligence. These solutions enhanced real-time fraud analysis. SAP HANA detects, investigates, analyzes, and prevents irregularities or fraud in even ultra-high-volume environments. Some application of SAP is used to detect and prevent fraud in e- environment as false vendor Payment. This is created due to lack of segregation of duties, where vendor creation or modification in bank account number in vendor master , Good receipt notes/ Service Entry Sheet and invoice creation and approval be performed by the same user. It can be easily detected and prevented by defining proper segregation of duties logic.

Web services

The phages of ERP are a) manufacturing applications, b) specialized applications such as supply chain management and c) application of Web services (Thuraisingham, 2006). ERP vendors are introducing the Web scenarios broker hub that will act as a broker between Web services and the ERP software. SAP offers this hub through mySAP and Oracle via its e-business suite.

Electronic commerce (e-Commerce)

Electronic commerce is tool and technique for managing business in a paperless environment. E-commerce includes electronic data interchange (EDI), e-mail, electronic funds transfers, electronic publishing, image processing, electronic bulletin boards, shared databases, and magnetic/optical data capture (such as bar coding), the Internet, and Web sites in form of B2B (Business to Business) as Covisint, B2C (Business to Customer) as Amazon.com, Wal-mart.com, C2B (Customer to Business) as priceline.com, C2C (Customer to Customer) as e-Bay auction, P2P (Peer to Peer) and Mobile, or m-Commerce. In 1995, Intel formed the Internet Marketing and E-Commerce Group (IM&E) to centralize online marketing efforts. In year 2013, Flipkart becomes net Rs. 1200 crores in single largest funding for an e-commerce company in India. Hence it is playing a major role for integrating supply chain management (SCM) and changing the dynamics of business. E-commerce deals with business online; security plays the heart of business. Business needs lots of communication skills which are provided by software agents. Software agents are responsible for customer satisfaction in terms of B2B E-commerce. Software agents can be thus proved as an important entity with respect to E-Commerce. Without Software agents E-Commerce is like "a man having his leg cut" (Ramya, 2013). A software agent is a software system, which has attributes of intelligence, autonomy, adaptability, perception or acting on behalf of a user proactively. The intelligence of an agent refers to its ability of performing tasks or actions using relevant

information gathered as buyer agents or shopping bots (retrieving information about goods and services from networks), monitoring and surveillance agents (used to observe and report on equipment, usually computer Systems), user agents or personal agents and data mining agents (finding trends and patterns from information gather from many different sources). Software agents provide security to the information.

XML (extensible markup language)

Structured information contains words, pictures, etc. which play an important role in Supply Chain Networks data flow and a markup language is a mechanism for identifying structures in a document. XML (extensible markup language) is simplification of Standard Generalized Markup Language (SGML) for originally large-scale electronic publishing and standard for exchanging various data over the Web, which is a flexible text format standard developed by the World Wide Web Consortium (W3C). It is useful over other description languages (e.g., HTML) to represent the data format using Document Type Declaration (DTD) schema or XML schema (W3C, XML Schema Part 0, 2004; W3C, XML Schema Part 1, 2004; W3C, XML Schema Part 2, 2004); hence it is applied in many ERP applications. The numbers of applications based on XML documents are large and e-business transactions are only one application area (Ameron, 2000). XML-based solutions provide a significant alternative to traditional EDI and lower the entry barrier to e-business because of the lower investment costs compared to EDI (Nurmilaakso et al., 2002), a cost-effective method of information exchange from system to system between organizations (Simchi-Levi et al., 2003). Initially ERP system was data or information based, which is now transforming into knowledge based system with various representations. Hence there is a requirement of description language, where XML is best choice.

Spread Sheet (Microsoft Excel)

Organizations are using Microsoft Excel as standard desktop software and decision making tools in their Supply Chains, because in comparison of total cost of ownership with commercial software based decision making supporting tool is less. It is also useful to apply in Supply Chain Networks (SCN), because it has many build-in capabilities to perform and execute quantitative modeling techniques. Microsoft Excel is an ever-present tool and easily use for data analysis because spreadsheets are easy to navigate and flexible enough. Excel allows users for applying analytical test (Horizontal and Vertical Analysis, Ratios and Trend Analysis, Performance Measures, Statistics, Stratifications, Aging, Application of

Benford's Law, Regression, Monte Carlo Simulation), Data management/analysis (Append / Merge, Calculated Field/ Functions, Cross Tabulate, Duplicates, Extract/Filter , Export ,Gap Analysis, Index / Sort, Join / Relate, sample, summarize),user forms design, and macros/Visual Basic Applications (VBA). The complexity of supply chains network data allows fraudsters to commit the fraud beyond the scope of internal controls but an effective approach of locating fraudulent on a data-set of supply chain network can be performed by using Benford distribution with help of excel sheet (Varma and Khan, 2012). Here are possibilities of different type of fraud risk in supply chain network as bid rigging, phantom bids, nepotism, substitution, false count, counterfeiting, creating fictitious accounting entities e.g., ghost employee, fake vendor, fake customer or vendor payments, falsified hours etc. We can easily detect and prevent fraudulent activities by help of excel functions (Varma and Khan, 2014).

Data mining

Data mining is a process that uses statistical, mathematical, artificial intelligence, and machine learning techniques to extract and identify useful information and subsequently gain knowledge from a large database (Turban et al., 2007) to uncover hidden patterns and subtle relationships in data and to infer rules that allow for the prediction of future results. Data mining helps the organisations in defining business rules (alerts based on intuition and general experience), anomaly detection (alerts are defined based on events that represent statistical deviation from normal or expected behavior), predictive models (statistical models which derived from event characteristics that are indicators of prior fraud incidents) and social network analysis (alerts are based on the level of association between the current event and individuals or accounts that are known or suspected of fraudulent behavior). Fraud detection has become one of the best established applications of data mining and it is useful to detect credit transaction fraud, telecoms subscription fraud, automobile insurance fraud and the like (Phua et al., 2005), application of data mining to extract and uncover the hidden truths behind very large quantities of data (Bose and Mahapatra, 2001), application of data mining technique in fraud detection such as neural networks (Cerullo and Cerullo,1999), logistic regression models (Owusu-Ansah et al., 2002; Yuan et al., 2008; Panik, 2009), regression analysis (Spathis et al., 2002), Bayes method (Viaene et al., 2004), decision trees and Bayesian belief network (Kirkos et al., 2007).

Computer assisted auditing tools and techniques (CAATs)

There are a couple of reasons – Increase in use of

electronic documents large firms developing computerized decision aids to assist themselves in decision making, customer relationship management and analytical procedures (Dowling and Leech, 2007) and impact of IT on the behavior and attitude of individuals (Janvrin et al., 2008). CAATs are computer tools used by external or internal auditors as a part of the audit procedures to process significant data contained in organizations information systems. CAATs can be classified to include the following groups: electronic documents, fraud prevention and detection, information retrieval and analysis, network security, continuous monitoring, audit reporting, database of audit history, computer based training, electronic commerce and internet security. Some of the techniques to detect fraud using CAATs (KPMG. International, 2006) as calculation of statistical parameters – calculating average, standard deviation to find fraudsters outside the required calculation limit, Pattern classification – to find trends or patterns in data and detect an unusual pattern, Stratification – to identify unusual number of entries, Benford's Law – to identify unexpected occurrences of digits or combination of digits, Joining different diverse sources – to identify invalid columns which match in a dataset but should not be present there, Duplicate testing – to identify duplicate transactions., Gap testing – to identify missing values in sequential data, Validating entry dates or time – to identify transactions during suspicious date or time etc.

Intranet/extranet

The computer networks inside an organisation that are connected via internet based protocols (HTML: HTTP, FTP, Mail: SMTP, POP3) and are not accessible from outside. By using Web browsers and server software with their own internal systems, organizations can improve internal information systems and link otherwise incompatible groups of computers within supply chain networks for reducing manual intervention. Extranet provides secured access to its intranet and to additional information and services that may not be part of its intranet and it is secured via a firewall. Internal networks often start out as ways to link employees to company information, such as lists, product prices, or benefits. Because internal networks use the same language and seamlessly connect to the public Internet, they can easily be extended to include customers and suppliers, forming a supply chain "Extranet" at far less cost than a proprietary network.

Internet

Good supply-chain management is essential for a successful company. Supply chain management can reach beyond the boundaries of a single organisation to

share that information between suppliers, manufacturers, distributors, and retailers. This is where the Internet plays a central role. In terms of advancement in technology and communications capabilities, perhaps the most influential development over the past decade has been the adaptation of the Internet applications into the areas of commerce and mass communications and it provides instant and global access to an amazing number of organizations, individuals, and information sources. A key Internet concern is the issue of privacy regarding the sensitive information, the level of security for information because supply chains members are struggling the challenge of freely sharing the information. The internet is a source for cyber criminals. Internet security was ranked the first concern for customers and supply chain members.

World Wide Web

The World Wide Web (WWW) is the Internet system for hypertext linking of multimedia documents, allowing users to move from one Internet site to another and to inspect the information available without having to use complicated commands and protocols. The number of Web sites relevant to supply chain management is growing at a rapid pace. Enterprise Transportation management was recently launched by Metasys Inc. through the Oracle Web Applications Server; this system deploys a variety of critical information about transportation and distribution applications throughout the supply chain.

Wireless internet

Wireless Internet enables wireless connectivity to the Internet via radio waves rather than wires on a person's home computer, laptop, smartphone or similar mobile device. Wireless Internet can be accessed directly through service providers. Wi-Fi hotspots and wireless LANs are also options for wireless Internet connectivity. In these cases, Internet connectivity is typically delivered to a network hub via a wired connection like satellite, cable, DSL or fiber optics and then made available to wireless devices via a wireless access point.

Groupware (e.g., Outlook, Lotus Notes)

FA27 2F94 998D FDB5 DE3D F8B5 06E4 A169 4E46
Lotus Notes has been one of the first complete groupware products to hit the market way in 1989, and ever since it has continued to dominate the Groupware market. Developers of Notes realized the importance of Security quite early, and therefore we see many Industry Standard Security Features built into Notes over and above Security Features unique to Notes. Together, they effectively cover many aspects of Security that are of

significant importance today. Even after there is chance of e-mail bomb attack on Supply Chain Network in a form of net abuse consisting of sending huge volumes of e-mail (sending numerous duplicate mails to the same email address) to an address in an attempt to overflow the mailbox or overwhelm the server where the email address is hosted in a denial-of-service attack.

Mobile agent

A mobile agent is a software process, which can move autonomously from one physical network location to another. The agent performs its job wherever and whenever it is found appropriate and is not restricted to be co-located with its client. Thus, there is an inherent sense of autonomy in the mobility and execution of the agent. It is applied in SCM as the delegate of tasks, network load reducer, parallel processing facilitators, code shipper rather than data shipper etc. As distributed system, the mobile agent is subject to security threats such as eavesdropping, corruption, masquerading and denial of service, replaying, and repudiation. Issues such as encryption, authorization, authentication, and non-repudiation, therefore, must be addressed in a mobile agent. Moreover, a secure mobile agent must protect both the hosts and the agents from tampering by malicious activities.

M2M

Machine to machine technology (M2M) allows both wireless and wired systems to communicate with other devices of same ability. The modern M2M communication has expanded beyond a one to one connection and changed into system of network that transmits data to personnel appliances. M2M domains are system monitoring/telemetry, asset tracking, digital signature & advertising and telematics. There are many M2M application in supply chain has been implemented as tracking supply and demand and making informed decisions. Real time monitoring of the process is using sensor that makes operations to detect, predict and ensure smooth process. As the concept of Internet of Things, M2M will solidify in future, there will be requirement of optimised the high performance message handling component within the messaging network which is able to handle the connectivity between millions of devices and applications communicating with each other.

DISCUSSION

The use of information technology (IT) is considered a prerequisite for the effective control of today's complex supply chains. The exponential growth Information Technology in supply chain networks has significantly

changed the paper based communication to e-communication, which is a serious threat of cyber crime (e-risk) by unauthorized or illegal access by means of physical or / and virtual intrusion to a computer or computer system or computer network. Criminals may commit illegal access of confidential data, theft of data, manipulation in data, and denial of access of system of supply chain networks. They may also perform the fraudulent activities by help of IT in Supply chain networks and it can be curbed through help of IT. The application of data integrity verification, cryptography, intrusion detection and risk mitigation, authentication and authorization, auto-analysis of legitimate usage patterns and computer forensics are useful to reduce the e-risks in SCM. Barcodes are both cost effective and time saver which eliminate the human error, reduce the paper works to improve the customer service, the usage of this limited to supply chain partners. Improved data integrity allows decisions to be made with real time, accurate data, improving product and category management decisions. Bar code technology facilitates the use of automated replenishment or vendor managed inventory so the right product is always at the right store at the right time. Recently, organizations, from both government and corporate sectors had mandate to implement radio frequency identification (RFID) technology for their suppliers. The global standard for RFID such as the Electronic Product Code (EPC) and offer insight into the coexistence of barcodes and RFID increased their importance to curb the e-risks. Asymmetric cryptography with secure bit length still requires significantly larger chips in RFID than symmetric cryptography. The major risks to EDI messages are loss of integrity (that is, alteration, modification, or destruction), loss of confidentiality (that is, copied, seen, or heard by unauthorized persons) and non availability (that is, not accessible when needed). The claims made by ERP software vendors that their software solutions are complete and designed to be industry specific. In practice, these packages do not support many business processes and frequent up gradation required. Consequently, many organizations are forced to leave some processes un-automated and a few legacy systems in place. The organizations are worried that the implemented package will work in the future or not. However, ERP as SAP implemented integration of different business modules with business data ware and intelligences. Its new tool SAP HANA is very useful to stop fraudulent activities in even ultra-high-volume environments. The internet not only provides communication in virtual environment, but also enables the opportunity of online business with mutual benefits of customer and suppliers of supply chain networks globally. The online supply chain management creates the e-risks as hacking, spreading or dissemination of malicious software (Malware), theft of internet hours / identity theft, cyber squatting (an act of obtaining fraudulent registration

with an intent to sell the domain name to the lawful owner of the name at a premium), Privacy violation, cyber terror, etc. Microsoft Excel has many powerful features and by using this for Supply Chain Management can easily detect and prevent fraudulent activity with some limitation of excel sheet that it can process only one million rows or records of data. Implementation of IT in SCM as discussed in the study appears to have modest role in decision making as well as reducing e-risks by supply chain management. The evolution of high performance and cloud computing systems have started appearing in the domain of SCM and helping to provide transparency and visibility in supply chains. This upcoming technology is predicted to revolutionary changes in field of performance and e-risks prevention of SCM. Similarly next generation Internet connects heterogeneous computing devices to create network traffic that is generated by automated objects from public sectors to day to day life of people rather than human intervention. The IT systems with service oriented architecture and web service standards, expected to come in future, may facilitate better supply chain management.

Conclusion

This paper discusses the role of IT as an enabler in Supply Chain Management with vast benefits to organisations with a comprehensive IT implementation as well as curbing e-risks. Technology is always a double-edged sword. Society that is dependent more and more on technology, cyber crimes are bound to increase because bytes are replacing bullets in the crime world. There will always be new and unexpected challenges to stay ahead of cyber criminals and cyber terrorists but we can win only through partnership and collaboration of both individuals and government. Cyber crime in India has gone by 60% in 2012 compared to 2011. History is the witness that no legislation and technology has succeeded in totally eliminating crime. Securing physical and virtual systems which is sabotage on computer systems and their access to information and databases by cyber criminal has always been one of the critical risks for the supply chain management. Criminal may involve deliberated deceit or misrepresentation of facts or significant information to obtain illegal gain from Supply Chain Networks. Information Technology be used as tool against bid rigging, phantom bids, nepotism, substitution, false count, counterfeiting, creating fictitious accounting entities e.g., ghost employee, fake vendor, fake customer or vendor payments, falsified hours etc. The alignments of IT technology in SCM, viz. implementation of Electronic Record Management (Bar Code, RFID, EDI), ERP system (SAP, Oracle, People Soft), Microsoft package, Data Ware House, software agents, decision support systems, web services, e-commerce, electronic

supply chains, etc will overcome the e-risks and increase the performance. To curb the e-risks in India, in July, 2013 Indian government releases the National Cyber Security Policy.

Conflict of Interests

The authors have not declared any conflict of interests.

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Appendix I

Some terms related to cyber crime (e-risks)

Illegal Access (Hacking, Cracking)

Hacking means unauthorized or illegal access by means of physical or / and virtual intrusion to a computer or computer system.

Illegal data acquisition (Data Theft or Alteration)

If any person without permission of the owner or any other person, who is in charge of a Computer, its system or network - downloads, copies or extracts any data, computer data base or information from such computer, its system or network including information or data held or stored in any removable storage medium, then it is data theft.

Salami Attack

These attacks are used for the commission of financial crimes. The key here is to make the alternation so insignificant that in a single case it would go completely unnoticed. E.g. The Ziegler case wherein a logic bomb was introduced in the bank's system, which deducted 10 cents from every account and deposited it in a particular account.

Spreading or dissemination of malicious software (Malware)

The virus/malicious software means any computer instruction, information, data or program that destroys damages, degrades or adversely affects the performance of computer resource or attaches itself to other computer resources.

Data Diddling

Data diddling is the performing unauthorized modifications to data prior or during input into a computer or computer system. In data entry, a virus that changes data, the programmer of the database or application, exchanging valid disks and tapes with modified replacements.

Denial of Service Attack

The Internet Security Glossary (Shirley, 2000) defines Denial of Service (commonly named DOS attack) as "The prevention of authorised access to a system resource or the delaying of system operations and functions."

E-Mail Bombing

An e-mail bomb is a form of net abuse consisting of sending huge volumes of e-mail to an address in an attempt to overflow the mailbox or overwhelm the server where the email address is hosted in a denial-of-service attack. Mass mailing consists of sending numerous duplicate mails to the same email address.

Theft of Internet Hours / Identity Theft

The idea behind this is to prevent theft, misappropriation, fraud or forgery of access code/ user id / password etc; by the person to the account of another person by tempering with or manipulating any computer, computer system or network.

Cyber squatting

Cyber squatting refers “an act of obtaining fraudulent registration with an intent to sell the domain name to the lawful owner of the name at a premium”.

Sending offensive message

The offensive messages may be sent in the form of text viz. e-mail, SMS, blog, vblog, tweet; image, sound or voice through communication service, etc. Any information that is grossly offensive or has menacing character (obscenity in electronic form, morphing, defamation, text bullying, stalking , etc.) or any information which is false, but for the purpose of causing annoyance, inconvenience, danger, obstruction, insult, injury, criminal intimidation, enmity, hatred, or ill will. It may be any electronic mail for the purpose of causing annoyance or inconvenience or to deceive addressee or recipient about the origin ie; spamming, unsolicited email/ telephone call, etc.

Cyber Stalking

Cyber Stalking can be defined as the repeated acts of harassment or threatening behavior of the cyber criminal towards the victim by using internet services. Stalking in general terms can be referred to as the repeated acts of harassment targeting the victim such as following the victim, making harassing phone calls, killing the victims pet, vandalizing victims property, leaving written messages or objects.

Spam

Spam is described as the emission of unsolicited bulk messages. Offenders send out millions of e-mails to users, often containing advertisements for products and services, but frequently also malicious software.

Vishing

Vishing is the practice of using social engineering over the system, most often using features facilitated by Voice over IP (VoIP), to gain access to private personal and financial information from the public for the purpose of financial reward. The term is a combination of “voice” and phishing.

Stolen Computer Resource or Communication

It is a theft with dishonestly receiving and retaining any stolen computer resource for wrong full gain.

Mail Spoofing or forgery

Email spoofing is a technique in which the sender address and other parts of the email header are altered to appear as though the email originated from a source other than its actual source.

Privacy violation

It is an offence, whoever, intentionally or knowingly captures, publishes or transmits the image of a private area of any person without his or her consent, under circumstances violating the privacy of that person. Nature of offence may include installation of spy cam/ hidden camera/ communication device inside private area or hotel rooms etc.

Cyber Terrorism

Cyber terror is a threat against the unity, integrity or sovereignty of any nation or to strike terror in people.

Full Length Research Paper

Entrepreneurial opportunities in the craft- distilling market in South Africa

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Opportunities for entrepreneurial entry into the craft-distilling product and market domains of the agricultural sector are presented in this study. Although the craft spirits industry in South Africa is currently in its infancy, the study is able to investigate potential entrepreneurial opportunities for such activities in the farming areas of the Western Cape Province. The first part of the study explores the supply side (product-led diversification) of the market. This in turn leads to a better understanding of the current state of the craft-distilling industry, and establishes a base for the survey. An appropriate survey instrument is developed and administered to existing distillers. The subsequent findings confirm the small size of the craft spirits industry. As expected, the small number of active producers generates a limited range of products in a market with established players having strong bargaining power. To perform effectively however, the entrepreneurial craft producer is advised not to compete directly with these players but rather to exploit niche product opportunities created in the premium consumer market segment attracted to handcrafted, locally-produced and customised offerings. By developing products with a competitive positioning of focussed differentiation complementary to the current portfolio of offerings, new market space can be created and new entrants should find attraction.

Key words: Craft-distilling, diversification, entrepreneurship, industry analysis, market space, product spread, strategy.

INTRODUCTION

Managing a portfolio of assets and revenue streams is a robust strategy for farmers exposed to a range of contextual factors outside their direct control. Diversification in the agricultural sector is widely acknowledged as a survival, risk mitigation, revenue enhancement and optimal resource utilisation strategy (Alsos et al., 2003; Meert et al., 2005; Barbieri and Mahoney, 2009; Grande,

2011; Vik and McElwee, 2011). Since the bulk of agricultural products contain some form of sugar or starch that lends itself to fermenting and distilling to produce a range of alcoholic products, including beers, spirits, liqueurs and aperitifs, craft- distilling presents an opportunity to diversify the portfolio of product offerings (Jorgensen, 2010). As a hedge against the cyclical nature

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of the agricultural sector and to boost revenues, farmers are encouraged to optimally utilise their resources by diversifying their operations and investing in value-add through product beneficiation (Biyase, 2010). One such area for possible diversification is craft-distilling, also referred to as boutique distilling.

There is however a lack of reliable market information on the characteristics of the craft-distilling industry in South Africa.

Entrepreneurship and product diversification

One way to create new market space is by expanding a portfolio of offerings to include complementary products for which there is demonstrable untapped demand. Essentially this involves market space creation across the boundaries of current product offerings (Kim and Mauborgne, 2005). In Ansoff's (2007) matrix for the product/market portfolio mix, this type of market space creation would be referred to as diversification, where the latter simultaneously involves the introduction of new products and expansion into new market segments.

Notwithstanding the risks, diversification is an established strategy within the agricultural industry. Vik and McElwee (2011: 390-392) identify diversification as a survival strategy for agricultural businesses, where diversification variably involves developing non-agricultural offerings and/or forward and backward integration in the supply chain. Meert *et al.* (2005: 81-97) also identify diversification as a survival strategy, particularly on marginal farms. They report that a popular and successful form of diversification is structural diversification where farmers channel farm resources into new products or services, including gate sales, participation in farmers markets, on-farm processing or agri-tourism activities. In other instances, survival is not necessarily the primary driver of diversification and the drive is rather entrepreneurial and focused on revenue growth.

Alsos *et al.* (2003) as well as Barbieri and Mahoney (2009) investigated entrepreneurial activities aimed at sustaining, complementing or growing farming revenues by optimally allocating resources, be they physical assets, intellectual capital or both – and the underlying goals, be they economic or non-economic. In some instances, on-farm diversification also extends beyond product range expansion or beneficiation of current output. Diversification could also venture into new types of service offerings (looking beyond industry boundaries and not only beyond product offerings) such as tourism activities (Grande, 2011).

The majority of studies show that farmers have a desire to maintain their farm-based lifestyle. Whether economic

considerations come into play or not, these farmers feel an emotional connection to the land and thus often base new ventures on the resources currently found on the farm.

Effective strategy underpins growth. To understand how entrepreneurs on farms exploit opportunities, the application of strategy perspectives can enhance the analysis. Two such perspectives are the resource-based view (RBV) and the dynamic capability perspectives (DCP) (Alsos *et al.*, 2003; Grande, 2011). The former views a business as a collection of resources, varying in the level of value adding, which provides the basis for developing new strategies and enduring competitive advantages. It suggests that only resources that are 'valuable, rare and inimitable' provide the firm with the potential for superior performance. In the case of the craft distilling market, valuable resources would include methods of hand-crafting and maintaining an adaptable business that is able to respond quickly to market changes. The rare resources include the novelty aspect of products, innovative packaging and label design as well as a flexible production facility. Inimitable resources include the perceived smoothness or taste of products and the fact that these are high-end goods that are locally made.

Consequently, from an RBV perspective, a critical question when developing new business strategies or ventures is how to develop these valuable resources to meet the needs of the market and make the best of the opportunities it presents (Grande, 2011: 222). Through the RBV lens, the company's success relies on its ability to discover, develop and exploit the unique characteristics of its resource base. However, as Grande (2011: 222) emphasises, the RBV lens does not address dynamic processes in the organisation, such as organisational learning, resource procurement or knowledge integration.

A more complete understanding also factors in the dynamic capabilities that a company uses to align it with changing economic environments and to adapt its resources to suit new situations. In short, through the DCP lens, the success of farm diversification strategies relies not only on the type of resources the farmer has at hand, but also on the farmer's ability to apply these resources in innovative ways – in other words, to exploit entrepreneurial and social abilities including sensing, network-building and forming strategic alliances (Grande, 2011). In this context, entrepreneurship and the process of new venture creation play an important role in the establishment of any new business, including those established as part of farm diversification strategies.

The literature suggests that the success of entrepreneurial ventures relies on a number of interrelated

factors. Most authors (Man and Chan, 2002; Ozgen, 2011; Kim et al., 2010) agreed that, although opportunity recognition is an important first step in any entrepreneurial endeavour, it is not enough to guarantee success. Others (Man and Chan, 2002; Hmieleski and Baron, 2009) state that entrepreneurs should guard against their inherent optimism for an idea, blinding them to its potential failures and they should not underestimate the value of relying on proper planning and evaluation techniques when assessing the potential for success.

Factors influencing entrepreneurial success

Entrepreneurial success is dependent on several factors. Recent research related to financial entrepreneurial success (Pienaar, 2013) indicates that commercial success is predicated upon the interrelation of three fundamental elements: the financial potential of opportunity, the effectiveness of applied know-how and abilities; and the motivational drive in the face of significant resistance. This study begins with the examination of the potential commercial opportunities of a niche marketing strategy.

Know-how

The second attribute (Pienaar, 2013) for successful entrepreneurship is the effectiveness of applied know-how and abilities. An enhanced understanding of the supply side of the craft-distilling industry going beyond current product offerings must address the following questions:

1. What legacy and macroeconomic factors impact the industry?
2. What are the regulatory entry barriers?
3. Who are the current market players and what are their respective market shares?
4. What is the range of products on offer? And the primary production methods in the context of farm diversification?
5. What is the current turnover (volume versus revenue)?
6. How is distribution done?
7. What are the perceived factors of competition in the industry?

In a response to these questions a survey was conducted among a sample of craft-distillers. The findings have relevance not only for entrepreneurs considering market entry but also established farmers wishing to diversify production by entry into the craft spirits industry.

Before reporting on the survey and its findings, a brief overview of what is currently known about the industry and its competitive environment is called for. The Western Cape produces 92 per cent of the country's wine grapes and is home to 493 private wine cellars, 54 producer cellars and 26 producing wholesalers (SAWIS, 2011). In 2010, the industry produced more than 780 million litres of wine for consumption, 39,5 million litres of wine for the production of pot still brandy, and more than 113 million litres of distilling wine used in the production of wine-based spirits such as brandy, fortified wine, commercial liqueurs and industrial products (SAWIS, 2011). Yet, very few wine farms add value by producing their own spirits and the uptake of the opportunity in the broader agricultural community to produce alcohol from crops that contains some form of sugar or starch are negligible (Jorgensen, 2010).

Market factors influencing entrepreneurial behaviour

The third factor influencing entrepreneurial commercial success (Pienaar, 2013) is the motivational drive when confronted by significant resistance. In the case of craft-distilling the potential entrant should ensure that an objective view is made of the task at hand.

Regulation does not facilitate market entry. Governmental excise duties and controls traditionally made independent craft-distilling illegal (Deacon, 1980). It was only after 1997 that formal deregulation created more market space for independent spirits producers and craft distillers alike (Ewert, 2005). However despite the post-1997 deregulation, the historical legacy concentrated the market into three large players, namely Distell Group Ltd, Edward Snell & Co Ltd and Diageo Plc who hold 67% of the market share in 2010 (Datamonitor, 2011: 2,14). These players have become highly diversified in all segments. Their immense resources, market share and power drove brand-building (Datamonitor, 2011: 15). These forces will present significant challenges for an entrant into the liquor market.

A further regulatory issue is the Liquor Act. The regulatory framework for the manufacture, distribution and sale of liquor in South Africa is founded in The National Liquor Act, Act No 59 of 2003, together with provincial liquor legislation (RSA, 2003). The National Liquor Act distinguishes between manufacturers and micro-manufacturers only in terms of production level. Currently, to qualify as a micro-manufacturer, a producer may not exceed two million litres of spirits, 100 million litres of beer, 50 million litres of traditional African beer or four million litres of wine per year. Should a manufacturer exceed the limit in one of the categories, liquor authorities

will not allow registration as a micro-manufacturer in any of the other categories, regardless of the quantity produced in the second category (RSA, 2004: 19). Furthermore the liquor licence application procedure is complex.

Notwithstanding the regulatory framework, there are factors that may encourage the entrepreneur.

Evolving consumers' preferences

There is a discernible consumer preference-shift away from mass-produced, mass-marketed spirit brands, towards higher quality, premium products produced by small-scale, private manufacturers (Datamonitor, 2011). This opportunity can enable a private brand to enter the liquor trade and compete more directly in both price and quality with the larger players. This is evidenced by the large number of craft- (or micro-) breweries that have of late become active in the South African beer market (Cape Town Festival of Beer, 2011; Clarens Craft Beer Festival, 2012; Heron, 2012; Holmes, 2012).

Entrepreneurial opportunities exist, yet the craft-spirits trade has been slow to exploit this emerging consumer trend. Nevertheless, new entrants face many poorly understood challenges, including the regulatory and market entry barriers highlighted above.

Objectives

The purpose of this article is to present survey findings and report on the current state of the craft spirits industry, supporting craft-distilling as a potential diversification strategy for entrepreneurial activity. The Western Cape Province is South Africa's key fruit and grain producing region (Hortgro Services, 2010; Grain SA, 2011). There are opportunities that could favour astute market entrants.

METHOD

This section describes the market data collection process beginning with an online survey of the current state of the South African craft spirits industry.

Respondents were those who operated a commercial craft-spirits business in South Africa, and who market and distribute their products independently, and express at least the intention to distil and sell their own spirits. The questions included geographic location and size, number of products, and basic production and sales information such as product type, bottle size, sales price and total sales volume.

The bulk of the questions explored (i) perceptions on factors of competition for craft distillers, (ii) the role of social and other media platforms in marketing, (iii) the profitability of the craft spirits

industry and its share of overall revenue, (iv) the extent of farm diversification, and (v) the nature of the craft-distilling value chain, including typical value adding processes respondents engaged in.

Through a diligent process that involved, inter alia, web-based research and direct interaction with industry experts, industry bodies and suppliers of distilling equipment, a total population of 36 possible respondents were identified. Of the 36 identified distillers, 32 were contacted personally to complete the survey and 23 respondents eventually completed the survey, representing 63.8% of the identified population. In most instances, data analysis used point estimators to calculate an estimated population mean for the particular parameter. The calculated confidence level required for a 10% bound on the error of estimation was 78.89%. This was rounded up to 80%, with the bound on the error of estimation at 10.28%.

RESULTS

The subsequent analysis produced the following results.

Geographical spread – The majority of respondents (16 of the 23) were located in the Western Cape Province.

Product types – Respondents were asked to categorise each of the products they produce into one of 18 categories. This is captured in Figure 1.

Of the 65 different products produced by the sample of craft distillers, 19 products fell in the pot still brandy category, 11 in the husk spirit (or grappa) category and 10 in the mampoer/witblits category. This concentration in four product categories underscores the lack of variation in the industry's current product offering. The remaining 25 products were spread over 10 other categories of spirits, with seven in the liqueur category, five in the gin category, three in each of the Eaux de vie and vodka categories and one in each of the aquavit, rum, spirit aperitif and three whiskey categories.

Sales volume – It was possible to estimate the combined average annual sales volume by multiplying the bottle size of a particular product with the midpoint of the sales volume class of that product. These estimates were then used to calculate a confidence interval for the average annual sales volume per product of each individual product type. Because the population of craft-spirits products is small relative to the sample size, it was necessary to apply a finite population correction factor when calculating the confidence intervals.

Furthermore, because the size of the population of each individual product type is not known, this was estimated by taking the number of products produced by each respondent as a basis to calculate the weighted average number of products per identified producer in the population. This average (which was rounded up to a

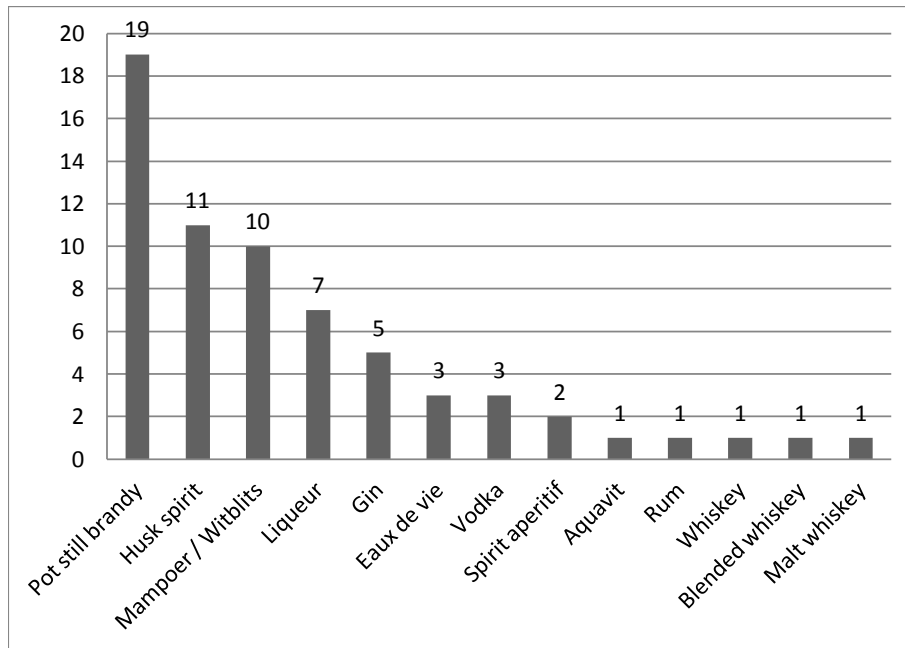


Figure 1. Market segmentation – products by category.

whole number) was then multiplied by the number of producers to estimate the total number of individual products in the population. The previously calculated population proportion of each product type was then applied to the calculated number of products to obtain a total number for products in the population for each product category. The midpoint of the calculated confidence intervals for each product type was then used as a point estimator of the expected average annual sales volume of the population of each type of craft spirits product. The results are captured in Figure 2.

The most important finding is that the estimated total annual sales volume of all craft spirits produced in South Africa currently does not even exceed the maximum two million litres of spirits that may be produced under a micro-manufacturing licence. Stated differently, the entire industry's manufacturing capacity can be accommodated under a single micro-manufacturing licence.

Turnover –To calculate the average annual turnover produced by a particular product, respondents were asked to place the price per bottle (excluding VAT) at which they sell a particular product in one of nine classes [<R50; R50 – R99; R100 – R149; R150 – R199; R200 – R249; R250 – R299; R300 – R349; R350 – R400; > R400]. By following the same procedure described in the previous section, it was possible to estimate the average annual turnover produced by each spirit type. The

midpoint of the confidence intervals calculated for each product type was again used as a point estimator of the expected average annual turnover of the population of each type of craft spirits product. The results are captured in Figure 3.

To put Figure 3 into perspective, a comparison was drawn between the anticipated turnover for an individual product of a particular type versus the anticipated total turnover for that product category in the market. This was then superimposed on the anticipated total annual sales volume for each product category on a combined graph, as per Figure 4.

From Figure 4 it is evident that mampoer/witblits, vodka, gin and liqueur products have high anticipated sales volumes relative to their turnover. This implies that many of the products in these categories are being sold at relatively low prices.

When comparing turnover anticipated from an individual product in a particular class to what is expected from the class as a whole, it becomes apparent that individual husk spirit products are anticipated to have a higher annual turnover per product than pot still brandies. However, the husk spirit class as a whole is anticipated to have a lower total annual turnover than pot still brandy.

This implies that, generally speaking, husk spirit producers sell fewer units, but at higher prices, than do pot still brandy producers. The same can be said for spirit aperitif. These products seem to sell at much higher

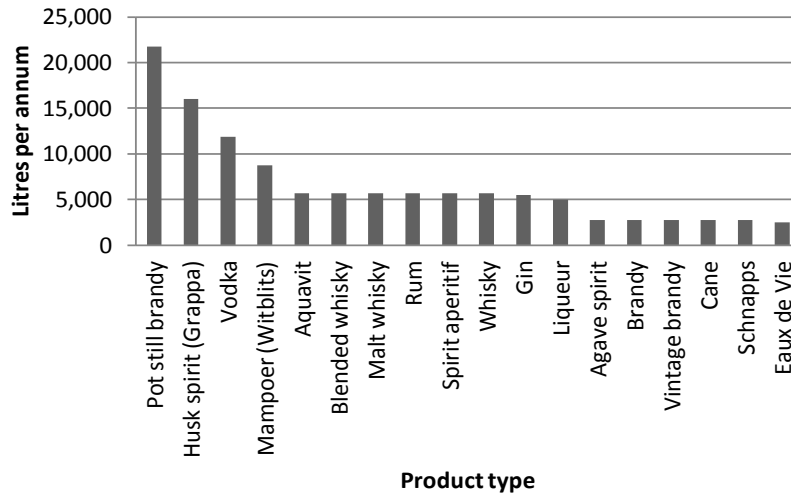


Figure 2. Estimated average annual sales volume of the population of craft spirits products.

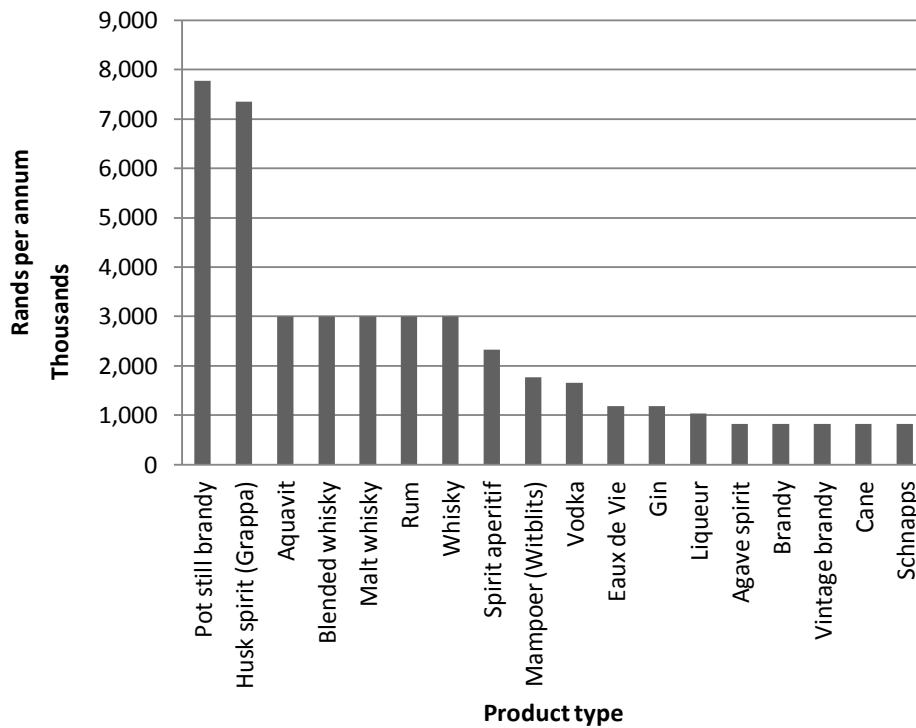


Figure 3. Estimated average annual turnover of population of products.

individual prices than any of the other product classes, although there are very few units being sold in the market as a whole, causing the anticipated total annual turnover for this class of product to be comparatively low.

Production methods – Respondents had to indicate whether or not they ferment their own alcohol and/or distil their own spirits. Although craft-distilling in the purist sense of the word implies a certain combination of skill

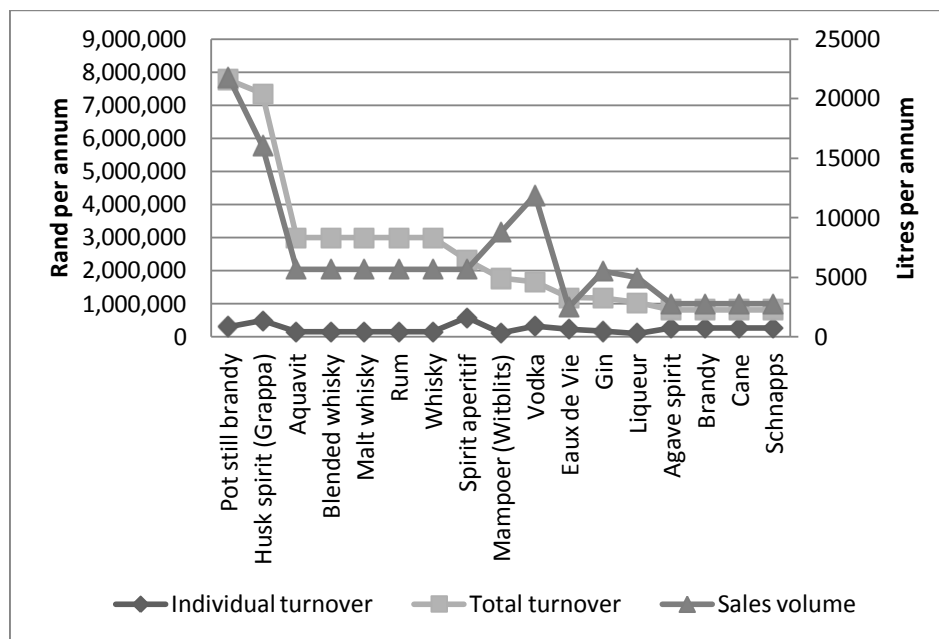


Figure 4. Anticipated turnover versus anticipated sales volume.

and art and hints at the hand-crafted nature of the product, the fact that a producer buys in distilled spirits does not preclude such producer from applying a certain amount of skill and artful expression in the flavouring and blending of the base spirit. By implication, farmers who do not have the necessary resources to ferment and/or distil their own spirits, but have access to other resources such as distinctive herbs or spices, could also partake in craft-distilling diversification opportunities.

The survey nevertheless found that 87% of respondents fermented their own alcohol and over 95% distilled their own spirits. Stated differently, the vast majority of sampled independent producers can be considered craft distillers in the purist sense of the word.

Distribution – Respondents were asked to select channels from a list of distribution options where consumers can purchase their products.

It was found that the majority of producers have their own retail stores (online or physical) and that a meaningful number are able to distribute their products through speciality bottle stores. About half are able to distribute their products through bottle stores in their own area. Restaurants, fairs or farmers markets also play a role in getting craft producers' products to market. Hotels and bars however play a minor role, as do national bottle store chains.

It was furthermore found that around 35% of sampled producers export their products and of these producers,

the majority export their goods to Europe, followed by Africa and North America.

Factors of competition – To understand the basis of competition, respondents were asked to choose from a list of pre-coded competitive factors that they believe attract consumers. Respondents could choose three or more alternatives from the following, but had the option of adding additional factors in an open-ended section:

1. Handcrafted methods used in manufacturing products
2. Smoothness or taste of products
3. Products are high-end or luxury goods
4. Products are locally made
5. Novelty aspect of products
6. Innovative package and label design
7. Heritage of production facility
8. Age or aging potential of your products
9. Above-the-line marketing

As summarised in Figure 5, the majority of producers in the sample regard handcrafted production methods as having particular attraction to consumers. Smoothness and taste is also perceived as an important feature, followed by the perception that their products are luxury goods appealing to consumers' high-end lifestyle aspirations. The fact that products are locally made was seen as important in drawing consumers in by ten of the

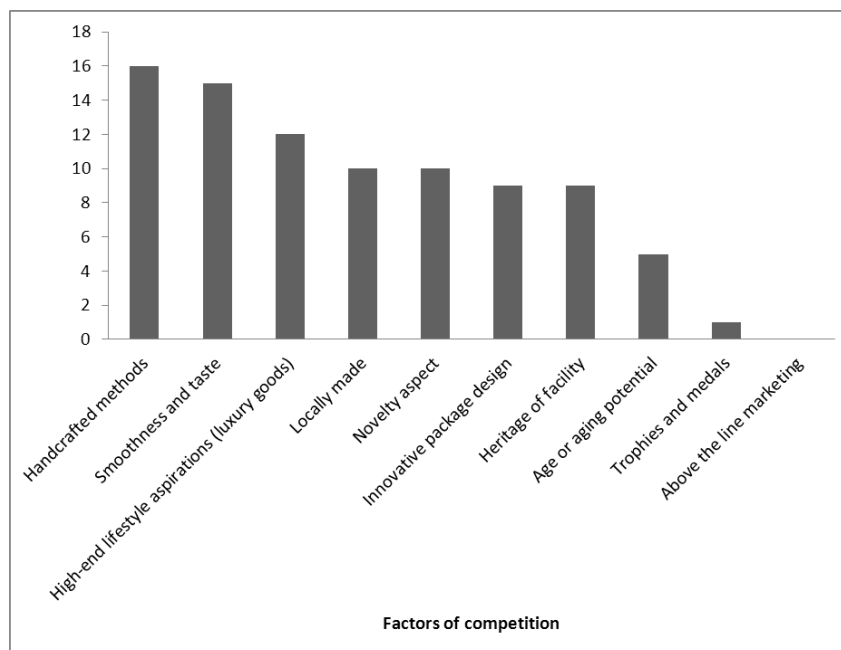


Figure 5. Factors of competition.

23 respondents and just as many producers felt that the novelty aspect of their products is important. Only nine of the 23 sampled producers thought that consumers are attracted by their innovative package design or the heritage of their production facility and only four felt that the age or aging potential of their products appealed to their consumers. Not one producer in the sample felt that an above-the-line marketing had meaningful consumer-facing value. Word-of-mouth and social media thus seem to be more important in terms of marketing.

Farm diversification – Since the research is concerned with craft-distilling as a potential farm diversification strategy, it was deemed necessary to gain an understanding of how many craft-distilling businesses are run as part of a larger farm operation.

It was found that some 96% of respondents do not derive their main source of income from their distilling business. Other sources of income listed by respondents included winemaking, growing olives, making olive oil, being engaged in mixed farming or external employment, making beer, distributing liquor, running a restaurant, guest house or bar, living off a pension, selling gift cards and growing vegetables.

It was also found that 74% of respondents operated their distilling businesses from a farm and, of these, 88% indicated that they owned the farm from which the business is operated. Of the respondents who owned the

farm, 73% indicated that the distilling business supplemented the farm's income and that, as such, their distilling business could be considered a farm diversification initiative (i.e. 47% of total sample).

In terms of share of inputs, it was found that all of the respondents who own farms grow some of the ingredients on the farm, with 40% of these respondents indicating that they grow all of the ingredients used in the production of their craft distilled products themselves. When asked what ingredients they grow on the farm, respondents indicated that it was mostly grapes, but also botanicals, peaches, apricots, plums, herbs and lemons. Judged by the results of the study, the response to the question of whether craft distilling can be considered as a diversification option must be a yes. There are a variety of products and many different input ingredients. Many diverse options are available to the would-be craft spirits distiller. Furthermore, applying Ansoffs (2007) product/market matrix, craft spirits distilling is a new product seeking to go to a select, still to be created, market thus serving as a true diversification option.

Conclusion

In considering the potential entrepreneurial opportunities for diversification (product and market expansion) in the agricultural sector, and specifically craft-distilling as a

Table 1. Summary of main findings.

Geographical spread	Market segmentation			Distribution channels		
	Product categories	Proportion of total population of products	Average annual sales volumes (lit)			
Eastern Cape	2.8%	Pot still brandy	22%	21,770	Own store/tasting room	25%
Free State	0%	Husk spirit	13%	16,050	Speciality bottle stores	23%
Gauteng	5.6%	Mampoer/Witblits	12%	8,762	Local bottle stores	13%
Kwazulu Natal	0%	Liqueur	9%	4,966	Restaurants	11%
Limpopo	2.8%	Gin	6%	5,513	Fairs and farm markets	11%
Mpumalanga	2.8%	Eaux de Vie	4%	2,500	Hotels	8%
Northen Cape	5.6%	Vodka	4%	11,877	Bars	6%
North West	5.6%	Spirit aperitif	3%	5,679	National chain of bottle stores	4%
Western Cape	75.0%	Aquavit	3%	5,679	Exports	35%
Production methods		Rum	3%	5,679	Africa	25%
Ferments	87%	Whiskey	3%	5,679	Europe	67%
Distills	96%	Blended whiskey	3%	5,679	North America	8%
Farm diversification		Malt whiskey	3%	5,679		
Farm diversification strategy	75%	Agave spirit	2%	2,769		
		Brandy	2%	2,769		
		Vintage brandy	2%	2,769		
		Cane	2%	2,769		
		Schnapps	2%	2,769		
		Total		119,357		

means to create new market space, a number of observations can be made about the supply-side of the craft spirits industry in South Africa. These observations have direct relevance to entrepreneurs that wish to venture into this form of farm diversification.

The legacy of a high degree of bargaining power, brand dominance and monopolised access to distribution channels held by major players in the industry renders distribution to and sales of craft-distilling products in national retail stores very difficult. Furthermore, the high degree of regulation, e.g. zoning and other licensing requirements, in the alcohol industry serves as a barrier to entry.

A number of industry characteristics can be identified from the craft spirits survey. A summary of the main findings are contained in Table 1.

The majority of craft spirits products in South Africa (concentrated in the Western Cape Province) currently fall into only four product types, indicating a lack of product/market portfolio diversification.

Many products currently on offer have high anticipated sales volumes relative to their turnover, which points to

rather undifferentiated products being sold at relatively low prices. In terms of total sales volume, the craft spirits industry is currently so small that the combined production can be accommodated under a single micro-manufacturing licence. There seems to be substantial room for growth within the industry – assuming demand stimulation and successful diversification beyond the portfolio of products currently on offer. In Ansoff's (2007) product/market portfolio mix matrix, diversification of this kind would involve both product and market expansion. Market space would be created through innovation beyond the boundaries of current product offerings, in other words, by diversifying into a complementary product offering namely craft-distilling, thereby exploiting untapped demand (Kim and Mauborgne, 2005). Entrepreneurship would be a key enabler towards successful diversification.

In terms of farm diversification, the survey found that, of the respondents who owned their farms, 73% indicated that the distilling business supplemented the farm's income. As such, their distilling business could be considered a farm diversification initiative (i.e. 47% of

Table 2. Industry issues and trends.

Industry driving force	Industry trends	
	Impact	Opportunity / Threat
Bargaining power of large players in the mass-market industry	Limits craft producers' ability to distribute their products effectively	Threat: Distribution in national stores problematic
High degree of regulation	Start-up phase time consuming due to licensing requirements	Threat: Long start-up phase
Minimum alcohol requirements	Inhibits international appeal of craft products Inhibits development of local market	Threat: Limited possibility for export Threat: Limited local market
The majority of products fall into four product categories	There is very little variation in terms of the types of craft spirits products available in the market	Opportunity: Create new types of product offerings
Low sales volumes relative to micro-manufacturing licence restrictions	Under-developed product segment	Opportunity: Substantial room for growth
Producers currently only export to three world regions	Many untapped export markets	Opportunity: Export to emerging markets such as China

total sample). Yet, reliance on income from craft-distilling is relatively small. The most important distribution channels are own retail stores; speciality bottle stores; and restaurants, fairs or farmers markets. Only 35% of the sampled craft spirits producers export their products and those that do, export to only three world regions, leaving many export markets untapped. The key competitiveness factors perceived by craft distillers as differentiating their products in the market are: handcrafted production methods; smoothness and taste; the luxury goods nature appealing to consumers' high-end lifestyle aspirations, and that it is locally made.

The above issues and trends are summarised in Table 2, with threats and opportunities indicated.

The key factors of competitive advantage most commonly selected by respondents were:

1. Handcrafted methods used in manufacturing products
2. Smoothness or taste of products
3. Products are high-end or luxury goods
4. Products are locally made

On balance, it is clear that the craft spirits industry in South Africa is in its infancy. The small number of producers active in the market generates a limited range of products. With the strong bargaining power exerted by mass-market producers, craft producers would be ill advised to try to compete directly with these players. They should ideally develop a niche product aimed at a premium consumer market segment interested in

customised offerings of a handcrafted, locally-produced nature with a discerning taste and smoothness.

The focus in this article is supply-side (product) led diversification. Further demand-side market research to complement a 'blue oceans' strategy innovation process (Kim and Mauborgne 2005) are required to fully understand the opportunities highlighted above, not least the overall competitive positioning, the to-be targeted consumer segments, the appropriate product mix and key elements of a marketing and distribution strategy.

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Full Length Research Paper

Regulatory perspective for deepening CSR disclosure practice in Nigeria

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The purpose of this study is to assess the need for a regulation of Corporate Social Responsibility (CSR) disclosure practices of listed non-financial sector entities in Nigeria. Survey research method was adopted in the study. Information gathered from the primary source (questionnaire) was used to test the users' perception on the need for a regulated practice in Nigeria. Both Content Validity and Cronbach's Alpha (α) were used to test the validity and reliability of the research instrument respectively. The Cronbach's Alpha showed an appreciable level of reliability of 0.851. Results of pairwise comparison showed that both the regulators and management group agree on the need to regulate CSR disclosure practice while the opinions of the other groups (academics, information intermediaries and investors) varied significantly. The two hypotheses constructed in the course of the study tested the perceptions of the users on the need for a CSR disclosure regulation. Findings based on an ANOVA analysis of the users perceptions revealed that a voluntary CSR disclosure practice might not be effective enough in curbing the inadequacy of CSR disclosures of these entities and as such there might be a need to regulate the practice. The paper exposes the mind of users of accounting information on their understanding of the level of CSR disclosure practices of listed non-financial sector entities in Nigeria and their demand for a more regulated system of CSR disclosure practice. There is currently no research assessing how CSR disclosure practices of listed non-financial sector entities in Nigeria can be improved. It is expected that the study will promote a movement for curtailing the haphazard preparations of CSR information in Nigeria.

Key words: CSR disclosure, accounting, corporate social responsibility, non-financial sector.

INTRODUCTION

Background to the study

The social scope of accounting is widening by the day. This increasing scope has a significant effect on the manner accounting information is reported annually by companies globally. Accounting is obviously moving away from its traditional procedural base, encompassing

record-keeping and such related work as the preparation of budgets and final accounts, towards a role which emphasizes the interpretations of its social importance (Glautier et al., 2011).

The authors posit that the essence of accounting is to provide information which is potentially useful for making economic decisions that aim to assess the impact of an

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organization or a company on the people both inside and outside. Over the years, quite a number of research efforts have been devoted to corporate social responsibility (CSR) in Nigeria (Abiodun, 2012; Umoren, 2009; Akintola, 2011; Uadiale and Fagbemi, 2012; Uwuigbe and Uadiale, 2011) and abroad (Dahawy, 2009; Galani et al., 2011).

It has been observed that research into the concept of CSR is relatively recent in Nigeria. Studies in Nigeria showed that corporate entities are doing less than expected in CSR and CSR disclosure (Uadiale and Fagbemi, 2012).

Although there exists researches that have looked into the importance of regulating CSR practices of financial institutions (Achua, 2008; Sholtens, 2009), Petroleum Industry (Ihugba, 2012) and Multinationals (Amao, 2008), the importance of regulating CSR disclosure practices of non-financial sector entities as a group in Nigeria has not earned significant attention. This need comes at a time when there is agitation for companies to pay attention to emissions reductions, community welfare and living condition of the people. The quest for universally acceptable and understandable financial statements also prompted the need for a study like this.

This study tested two hypotheses on the perception of users of accounting information on the need to regulate CSR disclosure practice of listed non-financial sector organizations in Nigeria. It investigated the voluntary CSR disclosure practices of listed non-financial sector organizations in Nigeria to determine the need for regulation of the practice or otherwise. The essence of the study is to promote improvement in the quality of CSR reports and encourage consistency, transparency and accountability in CSR reporting most especially among non-financial entities in Nigeria. The research has focused on non-financial sector entities firstly, considering the peculiarity of their activities in terms of its impact on the local communities, health and safety of employees and communities, the ecosystem and other socially responsible activities; as opposed to the financial sector entities whose activities have little impact on the ecosystem, environment, or local communities. Special interest has also been drawn to these non-financial sector entities since they constitute more than 65% of the companies on the main board of the Nigerian stock market (the Nigerian Stock Exchange, 2013). Admittance of Companies to the main board is based on profitability or market capitalisation. Listed companies have been specifically considered because according to the Nigerian Stock Exchange website, these categories of companies are usually expected to maintain high standard of disclosure, transparency and integrity.

Problem analysis

Though CSR disclosure practice is a voluntary activity in

Nigeria, it is often alleged that listed companies do not fully comply with the disclosure practices stipulated by regulatory agencies (Akhtaruddin, 2005). Accounting reports of Nigerian companies have been found to be deficient over time (Adeyemi, 2006).

It appears that CSR disclosure practice in Nigeria is unregulated. Although the introduction and adoption of IFRS in Nigeria is aimed at increasing the level of accounting information disclosure, it appears that CSR disclosure level is low. The implication is that Nigerian firms, especially non-financial sector organizations, may likely abuse the weaknesses of voluntary CSR disclosures and as such it becomes imperative to ascertain the need to regulate or not to regulate the practice since the activities of these categories of entities tend to have significant impact on the wellbeing, and environment of the people.

This research is a contribution to previous research that documented the level of voluntary CSR disclosure practices of non-financial sector entities in Nigeria (Adeyemi and Ayanlola, 2014). The study therefore seeks to provide suggestive answers to the inadequacies, inconsistencies and lack of transparency in reporting CSR, which we have identified as been associated with voluntary CSR disclosures in Nigeria.

Aim and objectives of the study

The aim of this study is to assess the need for a regulation of CSR disclosure practice of listed non-financial sector companies in Nigeria. The specific objectives for achieving this aim are to:

- a. assess how users of accounting information perceive the level of voluntary CSR disclosure of non-financial sector organizations in Nigeria.
- b. explore the rationale for regulating CSR disclosure in Nigeria.

Research questions

The research objectives are guided by the following research questions:

- a. How do users of accounting information perceive voluntary CSR disclosure practices of non-financial sector organizations in Nigeria?
- b. To what extent can regulation improve CSR disclosure practices of non-financial sector organizations in Nigeria?
- c. How can the level of CSR disclosure practice of non-financial sector organizations in Nigeria be improved?

Research hypotheses

Two (2) hypotheses were formulated for the study so as

to achieve the research objectives i and ii. The research hypotheses stated in null form (Ho) are the following:

H_{o1}: There is no significant difference in the users of accounting information's perception of the level of voluntary CSR disclosure in Nigeria.

H_{o2}: There is no significant difference in the users of accounting information's perception of the need to regulate CSR disclosure practices in Nigeria.

Significance of the Study

It has been identified that several groups have vested interest in a business organization (Glautier et al., 2011). The study will therefore be of significance to the government, investors, business managers, regulatory bodies, educators, researchers, accountants, auditors and scholars in the field of accounting as well as standard setters. Researchers will benefit from the research work in that it will shed more light on the CSR disclosure practices of most non-financial sector concerns in Nigeria which would be of more advantage to them.

Scope/limitation of study

This study only assesses users of financial information's perception on the need for a CSR disclosure regulation of listed non-financial sector entities in Nigeria.

LITERATURE REVIEW

General review

Corporate entities, just like every other citizen; most importantly listed companies are expected to be socially responsible and accountable for their social actions. In essence, they should show commitment towards ensuring that the immediate environment in which they operate feel the positive impact of their activities. It seems corporate organizations now understand the importance of giving back to the society by incorporating CSR as part of their strategic management decisions. In Nigeria, this practice has been on a voluntary basis.

Corporate social responsibility could be viewed as the duty of care to give back to the society such supports (which could be in the form of contributions towards educational development of the people of the area, provision of infrastructural facilities like pipe borne water, contribution towards rural electrification projects, road construction, reducing Green House Gas emissions, promoting sustainable energy consumption, and so on.

Most companies these days disclose their CSR

activities depending on the jurisdiction in which they operate. In Germany for instance, companies are not bound by any regulation to disclose CSR information and therefore such disclosures are voluntary (Gamerschlag et al., 2011). While, other European countries such as the United Kingdom, France, and the Netherlands have some specific guidelines or practices for the provision of CSR information (Kolk et al., 2001).

The history of formalized CSR in Nigeria has been traced to the CSR practices in the oil and gas multinationals which mainly focused on remedying the effects of their extraction activities on the local communities (Uadiale and Fagbemi, 2012). There have been several studies assessing CSR practices in Nigeria. Uwuigbe and Uadiale (2011), based on their study, identified that CSR disclosure practice in building and materials industries was still at its early stage. A similar Kenyan study by Ponnun and Okoth (2009) on CSR disclosure of listed companies on the Nairobi Stock Exchange revealed that CSR disclosure received only modest attention and the theme most commonly disclosed was community involvement.

Some researchers have carried out studies on the need to regulate CSR disclosure practices. Sholtens (2009) carried out a study on the need to regulate CSR practices in the international banking industry by attempting to develop a framework for assessing CSR of these categories of institutions. Though it seems the practices have improved by applying the framework to just 30 firms, the author was still able to identify that CSR is very important to the growth, survival and performance of the sampled banks and as such the need for their regulation cannot be overemphasized. Constantina (2003) analyzed the role the government plays in promoting socially responsible behavior. Based on the study it was observed that companies under government regulations tend to exhibit ethical business behavior and act in a socially responsible manner than others.

According to a study by Frynas (2012), "voluntary environmental reporting raises questions about the reliability of self-reported company data." In the same study, instances were given in the case of BP sustainability report 2006 that reported 417 Oil spills in 2006 and still reported 300 for the same year in 2010; similar instances were given for Simopec (the largest oil company in China) and Russia's Lukoil company. Claims in the study suggest that voluntary environmental reporting raises questions about comparability. In Nigeria, Achua (2008) agitated for the prioritization of corporate social responsibility (CSR) as the foremost condition for banking stability reforms. According to the author, though self-induced vices, regulatory laxity, inauspicious macro-economic environment, and endemic corruption in the economy are major constraints to the discharge of CSR in the Nigerian banking system, external regulation will have to be blended with conscious self-regulation by

the banking institutions for any CSR reform to be effective. Amao (2008) explored the legal and institutional framework for the control of CSR practices of Multinational corporations (MNCs) in Nigeria. The study explored various aspects of company law and human rights law and argued that although CSR practice is becoming well entrenched in Nigeria, we cannot rule out the importance of a domestic framework for the regulation of Multinational corporations (MNCs). The author further identified areas of the Nigerian law that needed reform in order for a proper regulation to address the challenges raised by poor CSR practices.

Ihugba (2012) observed that in Nigeria, CSR as a voluntary practice was no longer attainable particularly in the petroleum industry and suggested the need to introduce compulsory regulation into corporate governance via the Nigerian Extractive Industry Transparency Initiative (NEITI) Act 2007.

On the other hand, some scholars criticized the need for a CSR regulation in developing countries. For instance, Reinhardt et al. (2008) indicated that the regulation of CSR is a form of legalizing 'profit-sacrificing behavior'. Their arguments is that there is no point regulating CSR when regulations can often go unenforced owing to weak legal institutions (e.g., a corrupt judiciary). As such "those laws governing CSR and the degree to which those laws are enforced may vary substantially across developing countries" (Reinhardt et al., 2008).

A brief review of the Nigerian economy and its regulatory environment

Nigeria is a country with a population estimated at 168.8 million (2012 figure), Africa's most populous nation. It has been described by the World Bank (2012) as one of the fastest growing economies in the world, with a Gross Domestic Product (GDP) growth rate of about 7 percent in 2012. The country's GDP of US\$262.6 billion (2012 figure) ranks Nigeria's economy the second largest in Africa and 41st in the world (World Bank 2011). According to Onuba and Abioye (2014) Nigeria is now Africa's biggest economy with a nominal GDP of US \$510 billion (2013 figure) which ranks it 26th globally. Nigeria is a country richly endowed with abundant natural resources, notably oil. The country being a member of the Oil Producing and Exporting Countries (OPEC) is the World's 8th largest oil-producer, 6th largest oil exporter and a nation with the world's 6th largest deposit of gas (World Bank, 2011). According to the World Bank report, though the economy remains predominantly rural and agrarian, agriculture accounts for the largest share of its economic output.

The Nigerian regulatory environment is characterized by several regulatory bodies, agencies and statutes/Acts. Three major regulatory agencies and two self-regulating

agencies have been identified by the World Bank (2011) with respect to accounting, auditing and disclosure requirements for listed non-financial entities in Nigeria. The three regulatory agencies include: Securities and Exchange Commission (SEC), The Nigerian Stock Exchange (NSE) and the Corporate Affairs Commission. The two self-regulating agencies or professional accountancy bodies identified are the Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN). Nevertheless, the Financial Reporting Council of Nigeria (FRCN) formerly Nigerian Accounting Standards Board (NASB) is a very important body in the Nigerian financial information reporting environment. In essence therefore, for the purpose of this study and in an attempt to consider the need for a well regulated CSR disclosure practice in Nigeria, all these agencies will have to be considered and consulted.

Major regulatory bodies in Nigeria

The Financial Reporting Council of Nigeria (FRCN)

The FRCN (formerly, Nigerian Accounting Standards Board (NASB)), with the enactment of the NASB Act 2003, now has statutory legal backing. The World Bank (2011) observed that FRCN lacks adequate resources to fulfill its mandate reason being that as a government agency it has relied on government subventions and has been exposed to serious budgetary constraints that hinder its performance. Despite the shortcomings of the FRCN, the institution remains a force to reckon with in a push for a regulated CSR disclosure practice in Nigeria.

The Corporate Affairs Commission

The mechanism for monitoring and enforcing requirements on accounting and financial reporting is provided for in the CAMA 1990. The CAMA empowers the Registrar of Companies i.e., the Corporate Affairs Commission (CAC) to monitor compliance with its financial reporting and disclosure requirements. Shortcomings of CAMA 1990 identified by the World Bank report are: (i.) Though the Act requires most companies to file their records with the CAC within 42 days of conclusion of the annual general meeting (AGM), in most cases, despite penalties for noncompliance, many companies do not comply with the deadlines while some do not file at all. (ii.) The audit committees' capacity to review, monitor reporting remains largely unknown. (iii.) The CAMA is outdated regarding penalties for noncompliance (World Bank, 2011). Despite the frailty of this Act, it is an important statute to be considered in establishing a regulated practice of corporate social responsibility disclosure.

The Securities and Exchange Commission (SEC)

Securities and Exchange Commission is the apex regulatory institution of the Nigerian capital market. Financial reporting and disclosure requirements for listed companies are specified in the Investment and Securities Act, 2007 which established the SEC and gave it powers to regulate the Nigerian capital market. Listed companies submit audited annual accounts and report half-yearly financial performance, interim/quarterly financial statements, quarterly earnings forecast, and half-yearly returns on unclaimed dividend warrants to the Securities and Exchange Commission. Though the Securities and Exchange Commission in 2007 established the Financial Standards and Corporate Governance Department to review financial statements of all the publicly traded companies to ensure compliance with the accounting standards and disclosure requirements it appears the initiative remains at the nascent stage (World Bank, 2011). Nevertheless the SEC is still an important regulatory body to be considered in ensuring an improved CSR disclosure practice among listed firms in Nigeria.

The Nigeria Stock Exchange (NSE)

The Nigeria Stock Exchange on behalf of SEC, review submissions by companies for compliance with the listing requirements, which include accounting standards and disclosure requirement under CAMA. The audited financial statements of listed companies in Nigeria are only published after approval of the Nigerian Stock Exchange. In addition to its responsibilities, the NSE issues sanctions for non-compliance with the requirements of the Act by way of delisting. According to the World Bank (2011), the Nigeria Stock Exchange does not have any monitoring and enforcing mechanism with respect to accounting and disclosure requirements. According to its report, NSE monitoring efforts are primarily focused on tracking timely issuance and filing of the financial statements. Even with these efforts there are companies with overdue filing of financial statements. Despite these shortcomings identified by the World Bank, the NSE should not be displaced in an attempt to encourage CSR disclosure among listed firms in Nigeria.

Self-regulating professional accounting bodies

The statutory frameworks for the accounting profession in Nigeria include the Institute of Chartered Accountants of Nigeria (ICAN) and the Association of National Accountants of Nigeria (ANAN). The two bodies are charged with the responsibility of producing professional accountants in Nigeria. According to Belkaoui (1983) "a well-developed accounting profession and system of accounting education in a given country lead to a tradition and/or effort of providing better reporting and disclosure".

In essence, these two self-regulating bodies should not be sidelined in the effort to ensuring CSR disclosure practice.

THEORETICAL FRAMEWORK

The current study was anchored on two theories, namely, *contingency theory*, and *legitimacy theory* owing to their consistency with CSR disclosure practice.

Contingency Theory: The contingency theory emerged as a framework to help explain choice, and adaptation and their effects on firm success (Ruschak, 2008). Following the publication of Lawrence and Lorsch's Organization and Environment (1967) and Thomson's Organization in Action (1967), Jay Galbraith applied the Contingency theory to his study of strategic implementation of 1973. Lawrence and Lorsch argued that the amount of uncertainty and rate of change in an environment impacts the development of internal features in organizations.

Following the Dictionary of Human Resources Management (cited in Ruschak, 2008), the contingency theory suggests that the effectiveness of an organisation depends upon managers taking into account various factors that can have a negative or positive impact on the organisation. The main contingency factors identified are the environment, technology, size, product diversity and the people employed.

Contingency theory is therefore relevant to the study because it addresses the influence of contingent factors such as firm size, structure of audit committee the organisation and other financial and non-financial factors that could influence CSR disclosure practices.

Legitimacy Theory: The development of Legitimacy theory could be traced to Prabhu *et al.*, (cited in Anbumozhi *et al.*, 2011). The theory posits that business entities as a matter of importance consider the rights of the community at large and not just that of its investors. Neu *et al.* (1998) argued that it is often easier to manage an organization's image creation through environmental information disclosure. Image creation in this context implies: (i) attempting to educate and inform the relevant public about recent corporate actions that remedy previous deficiencies; (ii) attempting to change the perceptions of other external stakeholders; and (iii) attempting to deflect attention from the perceived problem areas by changing the focus of the external public. Legitimacy theory therefore was described by Dowling and Pfeffer (cited in Deegan, 2002) as "a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part." When a disparity, actual or potential exists between the two values (that is an entity's value system and social value system), then there is a threat to the entity's legitimacy

(Deegan, 2002). In essence therefore, organizations seek to legitimize their existence to society by voluntarily disclosing social and environmental information in a range of media (Cho and Patten, 2007; Deegan and Gordon, 1996; Wilmshurst and Frost, 2000). Legitimacy theory is considered for the study because it posits that every organization should seek to evaluate their actions and see if it is in line with the norms, values and the belief system of the society. In essence, an organization will be considered legitimate if it follows socially acceptable objectives and expectations, in a socially acceptable manner.

Conceptual model

A conceptual model was fitted for the study to explore the need for a regulated CSR disclosure practice. A lever system is used to explain the model showing clearly the three (3) important components of a typical lever system: The Load, Effort and Fulcrum (or Pivot). The load represents the perception of the users of financial information. The effort represented by the arrows, shows the level of pressure, force and or need exerted by the users of financial information for a regulated CSR disclosure practice while the fulcrum or pivot is CSR disclosure practices.

This model represented with the use of a lever system as shown in Figures 1 and 2 reflects the positive and negative perception of users of financial information on the need to regulate CSR disclosure practice. Figure 1 depicts that when the perception of users of financial information on the need to regulate CSR disclosure practice swings to the left (i.e. with more load), then CSR disclosure practice will need to be regulated since more users are positive on the need to regulate the practice. Where their perception is to the contrary, then Figure 2 will apply.

RESEARCH METHOD

Research design

Survey research design was adopted in conducting the research. These design method provided primary data on the behavioural perception of users of financial information on the CSR disclosure practices of non-financial sector entities in Nigeria. Questionnaire was administered to a random sample of auditors, accountants and other accounting information users. The population of the study consisted of 400 users of financial statements who reported their behavioural perception on the need to regulate the 128 non-financial sector companies listed on the main board of the Nigerian Stock Exchange. In order to achieve this, four hundred copies of the questionnaire were administered to a random sample of the users considered for the study.

Data collection

Primary data collection method was employed in the study. This

was done to ensure that robust, reliable and quality analysis is carried out. A questionnaire was administered to company auditors, accountants and other users of accounting information (regulators, stockbrokers, financial analysts and educators) within Lagos State so as to obtain the perception of these categories of people on the need to regulate CSR disclosure practice of non-financial companies in Nigeria. Though this medium of gathering data is expensive and prone to suffer bias from respondents, its ability to provide data required for generating an optimal solution to the research questions outweighs the perceived disadvantages associated with using it (Adeyemi, 2006).

The research instrument is a 5 point likert scale questionnaire aimed at eliciting different respondents' perception on CSR disclosure practices of non- financial sector organizations in Nigeria. A large number of respondents selected were based in Lagos. The research instrument was tested for validity and reliability.

Content validity was carried out to ensure that the items in the questionnaire measure the attributes in this research. An initial draft questionnaire was distributed to 50 of the sampled respondents. The draft questionnaire was subject to scrutiny and criticism so as to ensure that the interpretations of the instructions and variables under consideration were in accordance with the intended meanings. The comments, additions and corrections were helpful in the preparation of a second (and final draft) questionnaire which was used for the study.

In order to ensure that the consistency of scores obtainable through the instrument is maximized, it was pilot tested. Twenty Five (25) copies of the final draft of the questionnaire were administered to users of financial statements in Lagos. These users included five investors, nine regulators, three academic (Scholars and Researchers), four management and four Information Intermediaries. The result of the Cronbach's Alpha test used to test the internal consistency between variables was remarkable. The Cronbach's Alpha (α) was .851. Out of the 25 questionnaires tested, 100% were recorded as valid cases while none was excluded by the system. Guttman Split-Half was .814 while Spearman-Brown equal length test was .814 Lambda 1 (.791), Lambda 2 (.892), Lambda 3 (.851), Lambda 4 (.814), Lambda 5 (.877), Lambda 6 (.997) values all revealed appreciable level of reliability. The questionnaire is therefore considered reliable based on this result. The study also ensured that responses came from knowledgeable respondents who possess educational qualification of at least, first degree or equivalent. On the average, the questionnaire took a respondent approximately four (4) minutes to complete.

Descriptive and inferential statistics were used to analyze the data collected. Analysis of Variance (ANOVA) was used to test the two hypotheses. Graphs and frequency distribution tables were also used to enhance the presentation.

All statistical analysis were done using SPSS 17.0

DATA ANALYSIS AND PRESENTATION OF RESULTS

The distribution of the sample according to gender shows that 252 (70%) of the respondents are males while the remaining 102 (30%) are females. This result simply indicates that more male respondents participated in the survey compared to their female counterparts. Qualifications attained by respondents indicates that 10% of them are HND holders, 46.1% of them have a minimum of a first degree from the university, 43.3% have at least a masters' degree while the remaining 0.6% have a minimum of a doctorate degree.

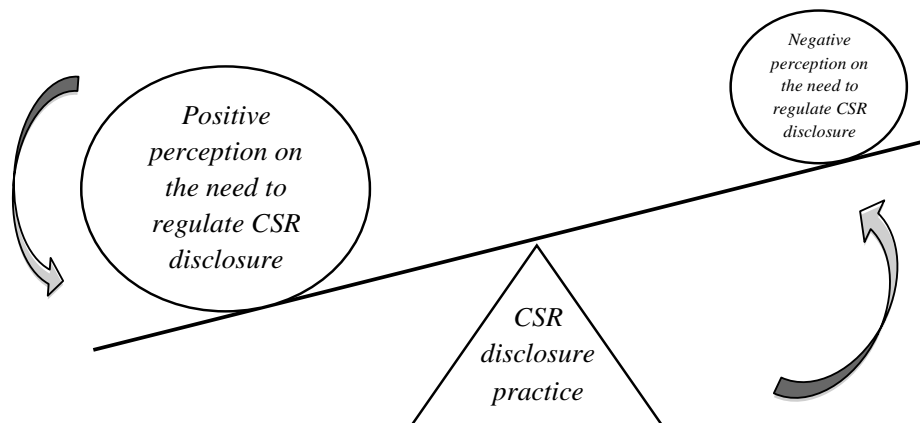


Figure 1. A positive User Perception on the Need to Regulate CSR Disclosure Practice.
Source: Developed by the researcher, 2013.

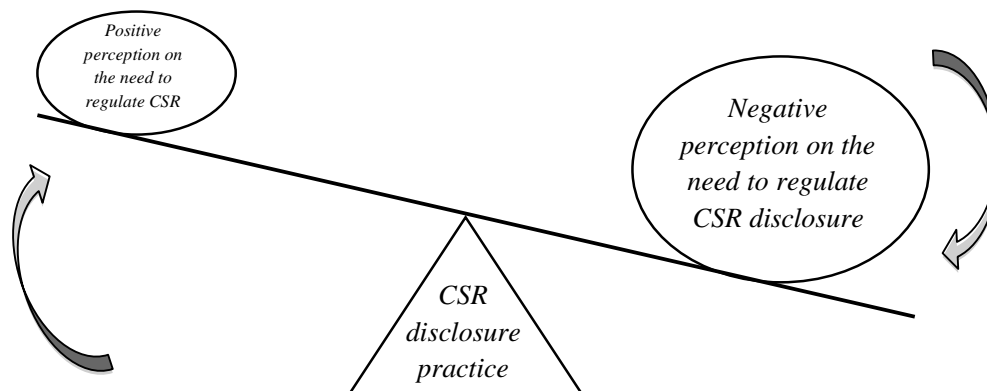


Figure 2. A negative user perception on the need to regulate CSR disclosure practice.
Source: Developed by the researcher, 2013.

In terms of the professional affiliations attributable to each of the respondents, it was observed that 59.2% of them are certified accountants, 5.3% are professional bankers while 6.4% of them are certified stockbrokers. Out of the 359 respondents, 5.6% have insurance affiliations, 4.4% are professional lawyers, and 6.4% are professional engineers while 12.5% said they have affiliations with other professional bodies not listed in the questionnaire, though the remaining 0.3% of the sample did not answer the question.

In relation to the working experience of the respondents, 54.7% which constitutes the majority had between 1 to 5 years of working experience, 18.1% said their years of experience falls within the range of 6 – 10 years. The working experience of 14.2% of the sample ranges within 11 – 15 years while 5.8% have 16 to 20 years' experience. The remaining 7.2% have more than 20 years of working experience.

It was of interest in the course of the study to determine

the group of information user that the respondents belong to. Out of the 360 respondents, 14.4% of them are investors, 30.8% said they belong to the group of regulators while 13.3% belong to the management group. Academics constitute about 35% while the remaining 6.4% are information intermediaries (that is, other users of financial information other than those previously mentioned).

From the survey, it was discovered that 56.9% of the respondents have investment(s) in a public limited company in Nigeria while the remaining 43.1% opined that they have no shares in any of such Nigerian organizations.

Finally based on the table, out of the 205 (56.9%) respondents that declared that they have shareholdings with at least a public limited liability company in Nigeria, 40% of the shareholders have 1 – 10 years' experience as investors, 8.6% said they have been shareholders for about 11 to 20 years while the remaining 8.1% stated that they have been shareholders for more than 20 years.

Table 1. Descriptive statistics on perception of users on the level of CSR disclosure.

	N	Mean	Std. Deviation
Investor	52	2.8333	.84405
Regulators	111	2.3784	.65364
Management	48	2.1181	.56069
Academic	126	3.5635	.70612
Information intermediaries	23	1.6812	.18744
Total	360	2.7796	.92234

Source: SPSS Output.

Table 2. ANOVA test for difference in perception of users of accounting information.

	Sum of squares	df	Mean square	F	Sig.
Between groups	144.202	4	36.051	79.390	.000
Within groups	161.204	355	.454		
Total	305.406	359			

Source: SPSS Output.

Research Question 1

USERS OF ACCOUNTING INFORMATION'S PERCEPTION OF VOLUNTARY CSR DISCLOSURE PRACTICES OF NON-FINANCIAL SECTOR ORGANIZATIONS IN NIGERIA

In an attempt to answer research question one, a survey was conducted. The researcher attempted to reconcile the perceptions of the users of financial information with the results on the basis of disclosure methodology. Previous researches in this area rarely reconciled theory with practice. It is one thing for statistical analysis on CSR disclosure to reflect a particular result. It is quite another for the targeted users of accounting information to have a contrary perception on the level of CSR disclosure. It thus, became desirable to appraise the level of improvement in CSR disclosure practices from the perspective of the economic stakeholders or decision makers and analysts also. Hypothesis one was used to gain an inference from the perceptions of respondents.

Hypothesis 1:

There is no Significant Difference in the User of Accounting Information's Perception of the Level of Voluntary CSR Disclosure in Nigeria

The opinions of the various stakeholders were taken. The results are presented in Table 1.

The perception of the users of accounting information was on a scale of 5, ranging from strongly agreed to strongly disagree. Hence the average score of 2.83

(approximately 3) by the 52 investors shows that they have indifferent opinion on the level of disclosure. The 111 regulators, 48 management respondents and 23 information intermediaries have average score of 2.37, 2.11 and 1.68 respectively which approximates to 2. This implies that these three groups agree with the fact that the level of CSR disclosures by the companies in the non-financial sector have improved over the years despite the fact that it is a voluntary practice. While on the other hand the average of 3.5635 (approximately 4) by the 126 Academics indicates that these group disagree on the level of CSR disclosure made by non-financial sector companies in Nigeria. In essence, about 35% of entire respondents disagree with the assertion that CSR disclosure has improved over the years; 51% believed that it has improve; while the remaining 14% of the total sample had an indifferent opinion with respect to the level of CSR disclosure practice of these companies. In order therefore to determine if the observed difference in perception was significant, the Analysis of variance (ANOVA) test was carried out. The result is shown in Table 2.

According to the decision rule in statistics, when the p -value of the analysis is less than the level of significance (0.05) at which the test was carried out, the alternative hypothesis is accepted. When the p -value is higher than the level of significance at which the test was carried out, the null hypothesis is retained. In this case, the p -value (0.000) is lower than the level of significance (0.05), hence the decision to accept the alternative hypothesis.

This invariably means that there is significant difference in the user of accounting information's perception of the level of voluntary CSR disclosure in Nigeria.

Since the ANOVA test had indicated that there is a

Table 3. Results of post-hoc test on perception of users on the level of CSR disclosure.

Multiple Comparisons						
Dependent Variable: Perception of users to disclosure of accounting information						
LSD						
(I) Financial information user-group	(J) Financial information user-group	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Investor	Regulators	.45495*	.11324	.000	.2322	.6777
	Management	.71528*	.13488	.000	.4500	.9805
	Academic	-.73016*	.11107	.000	-.9486	-.5117
	Information Intermediaries	1.15217*	.16875	.000	.8203	1.4840
Regulators	Investor	.45495*	.11324	.000	-.6777	-.2322
	Management	.26032*	.11641	.026	.0314	.4893
	Academic	-1.18511*	.08772	.000	-1.3576	-1.0126
	Information Intermediaries	.69722*	.15438	.000	.3936	1.0008
Management	Investor	-.71528*	.13488	.000	-.9805	-.4500
	Regulators	-.26032*	.11641	.026	-.4893	-.0314
	Academic	-1.44544*	.11430	.000	-1.6702	-1.2206
	Information Intermediaries	.43690*	.17089	.011	.1008	.7730
Academic	Investor	.73016*	.11107	.000	.5117	.9486
	Regulators	1.18511*	.08772	.000	1.0126	1.3576
	Management	1.44544*	.11430	.000	1.2206	1.6702
	Information Intermediaries	1.88233*	.15280	.000	1.5818	2.1828
Information Intermediaries	Investor	-1.15217*	.16875	.000	-1.4840	-.8203
	Regulators	-.69722*	.15438	.000	-1.0008	-.3936
	Management	-.43690*	.17089	.011	-.7730	-.1008
	Academic	-1.88233*	.15280	.000	-2.1828	-1.5818

The mean difference is significant at the .05 level.
Source: SPSS Output.

significant difference in the perception of users of accounting information on the level of voluntary CSR disclosure. The post-hoc test (Table 3) investigates which of the groups differ significantly. Based on the p -value (Sig.) of pairwise comparison, it is observed that all the values are less than 0.05. This means that comparing any group with the other, there is none that have the same perception totally.

Research Question 2:

THE EXTENT TO WHICH REGULATION CAN IMPROVE CSR DISCLOSURE PRACTICES OF NON-FINANCIAL SECTOR ORGANIZATIONS IN NIGERIA

The objective of this research question was the extent to which CSR disclosure practices of non financial sector

entities can be improved through regulation rather than it being a voluntary activity. In an attempt to answer this question, the perception of users of accounting information on the need to regulate the practice was considered. This is the reason for the assertion stated in hypothesis two.

Hypothesis 2: There is no Significant Difference in the User of Accounting Information' Perception of the Need to Regulate CSR Disclosure Practices in Nigeria. The opinion of the various stakeholders was taken and the descriptive statistics carried out (Table 4).

At the end of the analysis, it was observed that the average score for the 52 investors, 111 regulators, 48 management and 23 information intermediaries was 2.29, 2.44, 2.54 and 2.04 respectively which is rounded up to 2. This is an indication that a total of 234 (about 65%) constituting more than half of the respondents all agree

Table 4. Descriptive statistics for need to regulate disclosure of CSR activities.

	N	Mean	Std. Deviation
Investor	52	2.2949	.37720
Regulators	111	2.4444	.54926
Management	48	2.5451	.26125
Academic	126	2.9101	.27133
Information intermediaries	23	2.0435	.15257
Total	360	2.5736	.47212

Source: SPSS Output.

Table 5. ANOVA analysis for difference in user perception on the need to regulated CSR disclosure.

	Sum of squares	df	Mean Square	F	Sig.
Between Groups	26.657	4	6.664	44.334	.000
Within Groups	53.364	355	.150		
Total	80.022	359			

Source: SPSS Output.

with the statements that solicits for the need to regulate CSR disclosure practice. The remaining 126 academics (about 35% of total responses) have an average score of 2.91 (approximately 3). This implies that this group is basically indifferent to the need to regulate the practice. In order to ascertain whether or not the observed difference in perception was significant, the Analysis of variance (ANOVA) test was carried out. The result is shown in Table 5.

In this case, the p -value (0.000) is lower than the level of significance (0.05), hence the decision to accept the alternative hypothesis. This invariably means that there is significant difference in the user of accounting information's perception of the need to regulate CSR disclosure practices in Nigeria.

Post hoc analysis (Table 6) is carried out to show the pair wise comparison between the groups of users. It can be seen that the p -value for comparison between the group of regulators and management was 0.134 which is higher than the level of significance at which the test was carried out indicating that there is no significant difference in their perception on the need to regulate CSR disclosure. In other words, both the regulators and the management group agree on the need to regulate CSR disclosure practice. This could be attributed to the fact that both groups do basically the same thing though at different level. The management of the company has a role to play in regulating the practice internally (within the organization) while the regulators will be expected to do same externally at the sectoral level. The remaining groups however differ significantly with p -value of less than 0.05 indicating that whatever informs their opinion

varies significantly between them.

Research Question 3:

HOW THE LEVEL OF CSR DISCLOSURE PRACTICES OF NON-FINANCIAL SECTOR ORGANIZATIONS IN NIGERIA CAN BE IMPROVED.

Adeyemi (2006) suggested that answers to research questions of this sort can be provided for from two major perspectives to the study of accounting: positive perspective and the normative perspective. The positive perspective to the study of accounting theory deals with objectives and is based on facts. It is best known for explaining past financial information. It seems to focus on analyzing the economic statistics and data at hand and deriving conclusions based on those figures. Hence, research questions one and two have relied mainly on the positive approach to the study of accounting, focusing on the data from both primary and secondary sources to make statistical/scientific inferences on the level of CSR disclosure of non-financial sector entities in Nigeria. On the other hand, the normative theory is subjective and tries to describe 'what should be' rather than 'what is'. In essence normative approach unlike the positive approach is more subjective and deals with future events. In essence therefore, the normative approach was adopted in providing answers to research question three, since the aim of the question was to provide suggested answers to better ways of improving CSR disclosure level of non-financial sector entities in the future; taking into

Table 6. Results of post-hoc test on perception of users on the need to regulate the practice.

Multiple Comparisons						
Dependent Variable: Perception of need for disclosure						
LSD						
(I) Financial information user-group	(J) Financial information user-group	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Investor	Regulators	-.14957*	.06515	.022	-.2777	-.0214
	Management	-.25027*	.07760	.001	-.4029	-.0976
	Academic	-.61518*	.06390	.000	-.7409	-.4895
	Information Intermediaries	.25139*	.09709	.010	.0604	.4423
Regulators	Investor	.14957*	.06515	.022	.0214	.2777
	Management	-.10069	.06698	.134	-.2324	.0310
	Academic	-.46561*	.05047	.000	-.5649	-.3663
	Information Intermediaries	.40097*	.08883	.000	.2263	.5757
Management	Investor	.25027*	.07760	.001	.0976	.4029
	Regulators	.10069	.06698	.134	-.0310	.2324
	Academic	-.36491*	.06576	.000	-.4942	-.2356
	Information Intermediaries	.50166*	.09832	.000	.3083	.6950
Academic	Investor	.61518*	.06390	.000	.4895	.7409
	Regulators	.46561*	.05047	.000	.3663	.5649
	Management	.36491*	.06576	.000	.2356	.4942
	Information Intermediaries	.86657*	.08791	.000	.6937	1.0395
Information Intermediaries	Investor	-.25139*	.09709	.010	-.4423	-.0604
	Regulators	-.40097*	.08883	.000	-.5757	-.2263
	Management	-.50166*	.09832	.000	-.6950	-.3083
	Academic	-.86657*	.08791	.000	-1.0395	-.6937

The mean difference is significant at the .05 level.
Source: SPSS Output.

due consideration the perceived opinions of several users of financial information, investment experts, academics and economic analysts.

A major contribution from these groups of users suggested that a regulated CSR disclosure system will be a great step towards improving the practice especially for non-financial sector entities in Nigeria. In an attempt to review the Companies and Allied Matters Act of 1990, CSR disclosure could be considered as an important subject that should be incorporated into the Act. The Act should specify punishments for non-compliant firms. This is because it is time CSR disclosure has to be given serious priority just like any other accounting information report. Every non-financial sector entity should be mandated to submit reports of the impact of their activities in Nigeria. The result of this practice will enhance corporate transparency and public confidence in non-financial sector entities in Nigeria (most especially

the listed ones).

Another approach to improving CSR disclosure practices might be for the government to establish an independent body other than the Corporate Affairs Commission (CAC), which will regularly review and monitor the extent of CSR information disclosed by each company and enforce compliance in line with an applicable working CSR framework. The body should be set up by an Act of parliament with full powers to sanction and punish non-compliant companies.

In addition to a review of the level of CSR disclosure practices of organizations, a platform to reward companies that comply effectively with the established requirements could be established. This will serve as an incentive towards increased disclosure practice.

An independent, private-sector body or committee should also be created with the objective of issuing CSR policy guidelines and frameworks. This can be done in

consultation with Financial Reporting Council of Nigeria (FRCN), professional accounting firms such as Klynveld Peat Marwick Goerdeler (KPMG), Price Water House Coopers (PwC), Ernest and Young (EY), and others, engineers, environmental scientists, geoscientists, medical practitioners, energy economists and other professionals whose contributions will see to enhancing CSR disclosure level of companies, especially non-financial entities in Nigeria. Many companies might be spending a lot of money on sustainability, renewable energy, reducing Green House Gas emissions, and all other forms of CSR, but the quality of disclosures needs to be improved. This is why a CSR disclosure guideline will be very useful as a guide towards a universal, uniform and transparent manner of presenting CSR information to the public. A CSR disclosure framework issued by the private sector body or committee will also be very useful as a guide towards development of future CSR guidelines or standards.

Incorporating CSR disclosures in the Act, establishing a solid CSR framework and an independent body to review and monitor the practice and enforce compliance will force adamant companies to disclose every information required to be disclosed.

DISCUSSION OF FINDINGS

Summary of the study

There has been an increasing awareness and research into the area of corporate social responsibility reporting over the years. In addition to existing literature in the area of sustainability reporting, this research tried to consider the best alternative to enhancing CSR disclosure practices of non-financial sector organizations in Nigeria. Though most of the existing literature in developing countries including Nigeria assessed the relationships among specific firm variables such as company size, profitability, leverage and CSR disclosure, this study in addition to existing literatures has considered the need to regulate the practice. Survey design was adopted. Four hundred (400) copies of a questionnaire were administered out of which only three hundred and sixty (360) valid responses were received. The study tested the users of accounting information's perception of the level of CSR disclosure practices in Nigeria and the need to regulate the practice. Results from the survey indicate that though 51% of users believe CSR disclosures have improved over the years, there is still a significant difference in their perception. In essence, the users are of the opinion that though the practice has improved, they still have reservations with respect to the level of improvement achieved. Many suggest that a regulation of the practice will provide the needed improvement in the practice. Complimentarily a test of Hypothesis two,

indicate that there is no significant difference in the perception of the users on the need to regulate CSR disclosure practice.

Findings from the study reveal that about 65% of the respondents believed that CSR disclosure practices should be regulated in Nigeria. This therefore makes the load (as contained in our model 2; Figure 2) to drive down to the left of our lever system indicating more positive perception on the need to regulate CSR disclosure practices. Out of the 65% that requested that the practice be regulated, the same class of users that perceived that CSR disclosure practices have improved (i.e. management, regulators and financial intermediaries) also believes that a regulation of the practice will bring about the desired level of achievement in CSR disclosure; for example, in terms of an improvement in corporate accountability, disclosure, transparency, and corporate responsibility. Also In their opinion, government (especially government established regulatory bodies), the management of the companies and the private sector still has a role to play in improving the practice and ensuring adequate disclosure and transparency. Result from the pairwise comparison in hypothesis two indicates that there is no significant difference in the perception of regulators and management on the need to regulate CSR disclosure. The non-variation in the perceptions of regulators and management could be traced to the fact that both groups have similar roles to play with respect to CSR disclosure practices, though at different level. While the management is responsible for regulating the practice from within the organization (i.e. internally); the regulator oversees the regulation of the practice externally (at the sectoral level).

Undoubtedly, several studies have been conducted so far (and still on-going) on voluntary CSR disclosure as well as an examination of the need for a CSR disclosure regulation. Outcomes of these studies have produced different results. Constantina (2003) observed that companies under government regulations tend to exhibit ethical business behaviour and act in a socially responsible manner than others and as such regulation should be encouraged.

Frynas (2012) also agreed with the need to encourage CSR disclosure regulation. According to him, "voluntary environmental reporting raises questions about the reliability of self-reported company data." From the Nigerian context, Ihugba (2012) observed that CSR as a voluntary practice is no longer attainable particularly in the petroleum industry. As such his study suggested the need to introduce compulsory regulation into corporate governance via the Nigerian Extractive Industry Transparency Initiative (NEITI) Act 2007.

Contrary to findings from previous researches that looked into the need to regulate CSR disclosure practices Constantina (2003), Frynas (2012), Ihugba (2012) and Reinhardt et al. (2008) however criticized the need for a CSR regulation in developing countries. Their study

indicated that the regulation of CSR is a form of legalizing 'profit-sacrificing behavior'. Their argument is that there is no point regulating CSR when regulations can often go unenforced owing to weak legal institutions (e.g. a corrupt judiciary).

The focus of this research has been on how users of financial information feel about the current trends in reporting CSR among non-financial sector organizations in Nigeria, the reliability of information communicated, how regulation of the practice will bring about improved corporate accountability and disclosure among these entities in Nigeria as opposed to previous researches that have ignored key stakeholders perception on the need to regulate the practice (Amao 2008; Achua, 2008)'. Results of responses of respondents have indicated increased disclosure of CSR information. Though majority are still of the opinion that a well regulated practice will reduce the haphazardness in the preparation of such reports, findings from observed responses have revealed that a well-structured framework is important in curtailing the menace associated with voluntary CSR disclosure practice. These findings are however consistent with the studies of Amao (2008), Achua (2008) and Scholtens (2009)

It is obvious that most of the entities in question especially the foreign companies take advantage of the weak regulatory system to manipulate their accounts to their favour and provide less detailed information about how they are promoting sustainability activities. Donations, scholarships and employees safety (mostly in the case of manufacturing firms) have been often misconstrued for Corporate Social Responsibility. The argument of this study is that why should the society be at the mercy of these companies? Must we always be subject only to the information they show us in their CSR reports which are grossly inadequate compared to their foreign counterparts or what they publish internationally (for foreign multinationals with group head office outside Nigeria). Since voluntary CSR has failed us in Nigeria, the study has resorted to consider sampling accounting information user's opinion on alternative to voluntary system, which is the regulated system of CSR disclosure practice. This we hope will serve as a better alternative and promote the clamour for a more accountable and transparent practice of accounting information disclosure.

Another point of argument of this study is that in the world today, the issue of corporate responsibility is becoming a human rights issue. Especially when critically analyzed in the context of the effect of business activities on climate change. As Worlds are transferred from generation to generation (literarily, we inherited the one we are in from our fore fathers), it is important for businesses not only to be aware but to act fast on the effect of their activities on future generations and businesses. We must therefore ensure that there is a future to do business and a better world for our children

and children's children to live in better than ours which could be guaranteed by an effective and efficiently regulated CSR disclosure practice.

CONCLUSION AND RECOMMENDATIONS

The study which is in three parts has examined how disclosure of CSR information by non-financial sector entities can be improved in Nigeria. A regulated perspective was considered as opposed to the voluntary system currently in practice in the country. The first aspect of the study examined how accounting information users perceive the adequacy and reliability of CSR information disclosure on the basis of the voluntary system currently in practice. Though just a little above average respondents believe that CSR disclosure has increased overtime, it is obvious that CSR information disclosure is still inadequate. Information contained are identified not to be reliable enough by way of responses of the respondents which pose a signaling effect to regulators of the need to take this very seriously; especially in a time like this when there are agitations for increased transparency, accountability and improvements to disclosure of financial and non-financial corporate information.

The second part of the study has been able to establish from users' responses the extent to which regulation can promote CSR disclosure practice. More than 60% of these users have expressed the need for a regulation; most especially regulators and the management. The last study analysis sampled user responses on the best way to go about the challenges associated with the weak disclosure of CSR information of these non-financial sector entities in Nigeria. Suggestive conclusions were made based on previous researches and existing theories in accounting (specifically, the normative and positive accounting theories). The positive accounting theory is more objective in nature and based on facts. However the normative theory is based on 'what should be' rather than 'what is'. It is more subjective in nature. Though the study adopted the positivist accounting approach, having concluded based on opinions of respondents on the need to regulate CSR disclosure practice in Nigeria, the 'what should be' approach to accounting will also support this argument on the basis that it will always be appropriate and right to have a standard CSR disclosure framework for these categories of organizations. In essence therefore, a voluntary system of CSR disclosure cannot even work when there is no standard disclosure framework to guide preparers on items to disclose, how to disclose it, implications of non-disclosure to the company, society and users of accounting information.

In line with the suggestions of Constantina (2003), Frynas (2012), Ihugba (2012), Amao (2008) and Achua

(2008) the following recommendations are herewith provided which are intended to provide useful suggestions on better ways to achieving a well regulated CSR disclosure practice in Nigeria:

Based on empirical findings on user perception of voluntary CSR disclosure practice in Nigeria, the need for a regulation of CSR disclosure practice is eminent. It appears that without some form of regulatory intervention; reliance on voluntary disclosure alone is unlikely to result in a high quality and or sufficient level of CSR disclosure. This research therefore advocates for a more proactive effort from relevant regulatory bodies and agencies to intervene in ensuring increased disclosure which will complement the International Financial Reporting Standards (IFRS) efforts to enhance corporate accounting information transparency and accountability. An introduction of a standard regulatory framework for the mandatory disclosure of corporate social information should go a long way in improving the practice.

Contributions of Financial Reporting Council of Nigeria (FRCN), the big accounting firms such as Klynveld Peat Marwick Goerdeler (KPMG), PriceWaterHouseCoopers (PwC), Ernest and Young (EY) and others, environmental scientists, geoscientists, medical practitioners, energy experts and other professionals, will go a long way towards achieving a standard regulatory CSR disclosure framework. A major step like this will discourage haphazard disclosure of CSR information and encourage uniformity in CSR disclosure practices which is consistent with the recommendations.

The mechanism for monitoring and enforcing requirements on accounting and financial reporting is provided for in Companies and Allied Matters Act (CAMA) 1990 (as amended), and other acts related to the powers and responsibilities of regulators. The CAMA 1990 (as amended) is termed to be outdated; other shortcomings have also been identified by the World Bank (2011). Although there are current steps to update the contents especially considering developments with respect to IFRS, this study therefore suggests that the need for regulating CSR disclosure practice be incorporated as part of deliberations made in improving the CAMA rules. In addition, the SEC's Investment and Securities Act of year 2007 should be revisited, incorporating the mandatory disclosure of CSR information by listed firms and penalties for failure to disclose such information.

An approach to monitoring the regulation of CSR disclosure practices in Nigeria might be for the government to establish an independent body other than the Corporate Affairs Commission (CAC), which will regularly review and monitor the extent of CSR information disclosed by each company and enforce compliance in line with an applicable working CSR framework. The body should be set up by an Act of parliament with full powers to sanction and punish non-compliant companies.

In addition to a review of the level of CSR disclosure

practices of organizations, a platform to reward companies that comply effectively with the established requirements could be established. This will serve as an incentive towards increased disclosure practice.

Limitations and areas of further study

The results and conclusions of research such as this should be considered in conjunction with the limitations that are peculiar to research in developing economies. Some of the limitations as identified by Adeyemi (2006) include paucity of accurate data, reticence of respondents and volatile personal characteristics of subjects. In addition to these identified constraints, an extensive study into the behavioural perception of financial information users on the subject under consideration has been limited in so many ways:

Firstly, though the study has been limited to respondents in Lagos State owing to the fact that the state is the business hub of Nigeria and home to most professionals, business experts and analysts; it is however important to look beyond Lagos State and consider the perception of other experts outside Lagos. The study has also been limited only to listed non-financial sector entities in Nigeria, having taken into consideration the impact of the activities of such enterprises on the society, local communities and the ecosystem.

In view of the limitations of this research, future research in this area of study could be improved on by increasing number of respondents from 400 used in this study to a much higher figure including not just respondents within Lagos only but other states in Nigeria, hence reducing the subjectivity of the current study. Also though non-financial sector entities constitute more than 50% of companies on the Nigerian stock market, the research will be more robust if further studies take to cognizance other non-financial sector entities other than listed ones.

In view of contemporary CSR disclosure challenges, further studies could consider emerging issues like exploring how CSR promotional efforts and regulations may influence the attitudes and perceptions of managers. Another area to explore is how CSR standards are created through public international soft law instruments as identified by Amao (2014), with particular application to the Nigerian situation.

Conflict of Interests

The authors have not declared any conflict of interests.

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APPENDIX I

RESEARCH QUESTIONNAIRE

Department of Accounting, School of Post Graduate Studies, University of Lagos, Akoka, Lagos State, Nigeria.

PART I: (Please put an 'X' or tick the options given below as appropriate)

1. Sex: Male 1 Female 2

2. Academic and professional qualifications attained: (you may tick more than one box)

Higher National Diploma 1 Bachelor's degree 2

Master's degree 3 Doctorate degree 4

3. Professional Affiliation: If you are a member of a professional body, which profession? (You may tick more than one box)

4. Accountancy 1 Banking 2 Stockbroking 3

Insurance 4 Law 5 Medicine 6

Engineering 7

Others 8 Please indicate.....

5. Working Experience: 1 -5 years [1] 6 – 10 years [2]
 11 – 15 years [3] 16 – 20 years [4]
 Above 20 years [5]

6. I have interest in accounting information because I belong to the following group(s) (you may tick more than one box):

Investors [1]
 Regulators (e.g. SEC, NSE, FRCN, ICAN, ANAN) [2]
 Management (Public/Private) [3]
 Academic (e.g. researchers, scholars) [4]
 Information Intermediaries (e.g. financial analysts, auditors, brokerage firms)[5]

7. Have you at any time being a shareholder in any public limited company in Nigeria?
 Yes [1] No [2]

8. If your response to 6 above is yes, for how long (please tick the box where appropriate): 1 - 10 years [1]
 11 – 20 years [2] 21 years & above [3]

PART II: (Kindly indicate the extent to which you agree or disagree with the following statements. Please tick as appropriate.) Note: SA = Strongly Agree; A = Agree; U = Undecided; D = Disagree; and SD = Strongly Disagree.

SECTION A:

S/N	Items	Responses				
		SA (1)	A (2)	U (3)	D (4)	SD (5)
1	CSR reports is a publicly available document					
2	Companies in Nigeria do frequently disclose social and environmental report					
3	CSR information disclosed by companies forms a major part of company's annual report and corporate websites.					
4	CSR disclosure practices of Nigerian companies have increased over the years					
5	The extent of CSR disclosure depend to a large extent on the industry to which a company belongs					
6	Companies into extractive and manufacturing activities disclose more CSR information than other companies in the non – financial sector.					
7	Non-financial sector organizations in Nigeria are not disclosing enough information about the social and environmental impact of their activities.					
8	Most multinational corporations disclose CSR; others rarely disclose.					
9	Companies in our localities have really welcomed the introduction of Corporate Social Responsibility disclosure practice.					
10	Government and other regulatory bodies in the country play important roles in the development of policy guidelines that can encourage CSR disclosure practices in Nigeria.					
11	Regulation of CSR disclosure will boost accounting information disclosure practices in Nigeria.					
12	CSR disclosure practices of non-financial companies will improve even without a regulation.					
13	The composition of the audit committee of a company's board influences the extent of CSR disclosure of Nigerian companies					
14	The audit committee of a company's board consisting of more than 3 independent directors will disclose more CSR information than those consisting of more dependent directors.					

SECTION B: (Please kindly fill in the blank spaces with your suggestions)

15. Can you suggest ways by which CSR disclosure practices can be improved in Nigeria?
- a.
- b.
- c.
-

APPENDIX II. List of sampled companies.

S/NO	Company name	Sector
1	FTN Cocoa Processing Plc.	Agriculture
2	Cadbury Nigeria Plc.	Consumer Goods
3	Flour Mills Nigeria Plc.	Consumer Goods
4	Guinness Nigeria Plc.	Consumer Goods
5	Nigerian Breweries Plc.	Consumer Goods
6	Nestle Nigeria Plc.	Consumer Goods
7	PZ Cussons Nigeria Plc.	Consumer Goods
8	Unilever Nigeria Plc.	Consumer Goods
9	UTC Nigeria Plc.	Consumer Goods
10	Vitafoam Nigeria Plc.	Consumer Goods
11	Berger Paints Plc.	Industrial Goods
12	Chemical and Allied Products (CAP) Plc.	Industrial Goods
13	D.N. Meyer Plc.	Industrial Goods
14	First Aluminium Nigeria Plc.	Industrial Goods
15	Lafarge Cement WAPCO Nigeria Plc.	Industrial Goods
16	AG Leventis Nigeria Plc.	Conglomerates
17	United African Company (UAC) of Nigeria Plc.	Conglomerates
18	Costain West Africa Plc.	Construction/ Real Estate
19	GlaxoSmithKline Consumer Nigeria Plc.	Health Care
20	May and Baker Nigeria Plc.	Health Care
21	Neimeth International Pharmarcals Plc.	Health Care
22	Pharma-Deko Plc.	Health Care
23	Conoil Nigeria Plc.	Oil and Gas/ Natural Resources
24	Mobil Oil Nigeria Plc.	Oil and Gas/ Natural Resources
25	Oando Plc.	Oil and Gas/ Natural Resources
26	Total Nigeria Plc.	Oil and Gas/ Natural Resources
27	Airline Services and Logistics Plc.	Services
28	Interlinked Technologies Plc.	Services
29	Red Star Express Plc.	Services
30	R.T. Briscoe Nigeria Plc.	Services
31	NCR Nigeria Plc.	ICT

Full Length Research Paper

Strategic image management: The image of the City of São Paulo/SP

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Tourism has become increasingly important in the world due to its relevant role in economic and social development. As a result, this sector is now a battle ground for fierce competition between places interested in developing it. In this highly competitive scenario, tourism marketing is now important and critical to places and organizations that wish to facilitate the process of economic exchange, stay in business, and try to differentiate themselves from their competitors. In addition, the image of a tourist destination plays a vital role in obtaining satisfaction, the process of choosing the place, and possible repeated visitation to the destination area (VALLS, 1996; GUTIERREZ, 2005; MOYA and SANCHEZ, 2005). Although there are other variables that influence the buying decision of a destination by tourists, tourism centres are sold primarily through image. This paper aims to analyze the practice of strategic image management in the development/management of tourism marketing. Its specific objectives are: to discuss image as a perceived quality, as well as its popularity and relevance to the contemporary market, especially tourism market; to identify the marketing of images applied to tourist locations as part of a strategy to attract visitors (tourists), as well as its market context, features, steps, and relevance to the tourism industry; lastly, to observe the appropriateness of the images broadcast by SPTuris - Sao Paulo tourism and events office - with regard to the perceptions of tourists. We made use of a case study. Following the methodology proposed by Yin (2001), we analyzed the work done by Sao Paulo tourism and events office, São Paulo Turismo - SPTuris, with the aim of observing the marketing practices used by that office and figuring out the elements related to the city's image for tourism. The paper notes the complexity of the study of image, being a subject of several studies across different areas of knowledge, and in understanding it as a major factor for the acquisition of destinations. The characteristics of tourism product, especially its intangibility, can prevent consumers/ tourists from acquiring the product otherwise. Considering the work on tourism marketing done by Sao Paulo Tourism – SPTuris, official tourism office in Sao Paulo, we infer that it is currently engaged in creating an image of leisure and entertainment to improve tourism development by attracting tourists who travel on leisure.

Key words: Tourism, strategic image management, image, destination.

INTRODUCTION

The growing importance of tourism all over the world is due to its role in economic and social development. The countless direct and indirect benefits and advantages

brought on by tourism contribute to local development and, consequently, this segment is currently the target of a fierce competition between locations interested in

developing it.

This scenario of great competition demands efficient marketing management which includes the incorporation of marketing strategies and marketing focused on tourism: *tourism marketing*, which plays a key role as a mechanism for coordination between supply and demand. In this context, we emphasize the fact that unlike other products, the so-called "tourism product" consists of goods and services with unique characteristics since it is an experience rather than a physical product.

Understanding the image of a location as "(...) the sum of beliefs, ideas and impressions that people have of it" (Kotler et al., 1994, p.153), we see it as the simplifications of several associations and information related to the location. Image is a product of a mind that tries to process and take the essence of a series of data on the site. The strategy of locations image is to leave positive memories in the minds of tourists, so as to make them future sales agents of that location.

Alongside that, the characteristic of contemporary consumption has the image virtually overlaying the materiality of the good; people consume dreams, images, and these become the starting point for the conquest of the consumer market.

The scenario is one in which the image of a product, the way the product is presented or the promise, idea carried by it, is critical to the buying decision in today's society. This is a fact that widens when considering the unique characteristics of the "tourism product" and, hence, the relevance and interest to connect tourism marketing to strategic image/image marketing (Kotler et al., 1994).

With the increasing competitiveness of destinations, it is important to transmit a favorable image to the target market. Considering image as an important influential resource in the decision process of choosing a destination, the need of communication strategies in various existing vectors is evident. This research provides tools for applying differentiation approach to target. The employment and strengthening of these elements in destination management may lead to increased competitive position (Melo, 2013).

Basically, the issue under consideration is: what is the connection of tourism marketing with strategic image management for acquiring destinations? Finally, as a means of verifying and seeking improved legitimacy to the study, we explored the tourist image of the City of São Paulo - SP, directing our investigation to the work of institutional marketing promoted by the Tourism Office of São Paulo – SPTuris. We aim to identify and observe the

adequacy of the images broadcast by SPTuris – São Paulo tourism and event office – based on tourists' perceptions.

This article aims to analyze the practice of strategic image management for the development/management of tourism marketing.

This study will allow one to comprehend the influence of image on tourists' decision process, and will permit deep understanding of image building for marketing planning. Despite the importance of this area of research, few studies have been done on it. Some studies have focused on different cities, but none have dealt with São Paulo City, specifically. Due to its importance for the Brazilian and South American economies and its actual positioning, it is important to analyze the components of its image formation.

LITERATURE REVIEW

The image of destination

The tourism sector is becoming much sought after by the localities given its ability to generate foreign exchange which leads to an increase in competition among tourist destinations. In this competitive scenario, a destination must seek differentiation and in this sense, the image of a tourist destination seems to play a vital role in the selection process (Acerenza, 2002; Bignami, 2002; Echtner and Ritchie, 1991; Gallarza et al., 2002; Haider et al., 1994; Moya, 2005; Valls, 1996; Cruz, 2006), satisfaction and possible repeated visit (Valls, 1996; Moya, 2005).

Researches related to the image of destinations have become important to understand the tourism business. International studies on the subject started in the 70s (Hunt, 1975; Crompton, 1979). In Brazil, though still few and recent, they are conducted by researchers like Santana (2001) and Bignami (2002). The importance attributed to the image of destination, both by professionals and academics, and the fact that in Brazil this matter has generated a few studies, may represent one of the factors responsible for the low level of benefits from tourism development in the country (Leal, 2004; Chagas, 2007, 2008).

According to Perez-Nebra and Torres (2010), before the trip, tourists make predictions based on the emotions that the destination evokes in their memory, through friends' comments, by reading brochures, advertisements, etc.; so that their decision will be based on the image they have about a particular locality. Thus, the

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choice of destination will depend on favorable images that consumers have of the place (Echtner and Ritchie, 1991; and Perez-Nebra and Torres (2010).

A study aimed to discuss the importance of intentional image by using text of printed materials. The researchers analyzed tourism materials edited by the government in three Northern Coastal Portuguese towns: Vila do Conde, Povoá de Varzim and Esposende.

According to the researchers, what underlies the construction of this type of document is the behaviourist principle in which a neutral stimulus, when associated with pleasant, positive stimulus, immediately becomes positive stimulus (Tojal, 2014). In this sense, the choice of the tourist destination may also be influenced by the image formed by those small prints. One can perceive that perceptions are influenced by different stimuli, all which are important for the consumer's perception.

There is as strategic advantage to be developed from the mastering of image formation process.

Formation of a destination image

The process of forming images of tourist destinations by consumers can be divided into two main dimensions: organic and induced (Gunn, 1972; Chagas, 2008). The organic dimension refers to information with no commercial or tourist nature. This information is not primarily intended to sell or promote a particular tourist destination. The organic image is therefore formed by non-commercial sources, such as, history, artistic events, friends, family, world knowledge, whose intention is not to sell the destination to prospective tourists. The second dimension, induced is loaded with commercial appeal, with the main objective of forming an attractive image of the destination in order to sell and profit from it. Thus, the induced image aims at selling a certain destination to consumers, whether actual and/or potential, making use of marketing tools, such as advertising, sales promotion, merchandising, commercial ads, among others.

Gunn (1988) and Chagas (2008) also conceive a third dimension in the process image formation of destination: the "complex" image, which is formed after visiting the tourist destination and trying the product purchased. In the first two stages (induced and organic), consumers create their image based on external information, whereas in the latter, they enjoy it, forming a more complex and real image. According to Gunn (1988), the image, that was initially organic and then turned into induced, becomes more differentiated and, thus, becomes complex after the trip.

The three dimensions presented above are based on the work of Gunn (1972) on the seven stages of the tourist experience: accumulation of mental images of a site during a lifetime; amendment of the images during research prior to the decision to travel; the decision to

travel based on the effectiveness of the image; travel to the destination; participation in the destination; the trip back, and re-accumulation (Figure 1).

An important point that must be highlighted in this study is the case an individual who does not have an organic image and is exposed to campaigns that incite purchase of certain locations; that image, which would be called an induced image, becomes internalized as an organic image with regard to the destination (Gunn and Bignami, 2002). Thus, marketing activities have great significance, especially with regard to the uptake of niches that have not already formed an image of the destination. However, all marketing variables such as product, price, place and promotion (4Ps) must be considered to form an organic image. They must be integrated in order to outline a synergy and endorse the messages that are targeted.

Considering the above, we can conclude that the image consists of a set of impressions taken from the information that the individual has at hand, from diverse sources, including marketing communications, and also from many others that are not controlled by the market process. According to Echtner and Ritchie (1991), every tourist has an image of a destination, without even visiting it or having been exposed to a campaign. So to develop tourism, it is very important to regularly monitor the images travelers form. This is because the appearance of the motivation factor to take a trip arouses an affective interest in the consumer, forcing him to define a framework of this trip based on personal factors and the set of information collected, beginning the process of image formation (Rodrigues, 2009).

The model based on induced and organic sources is the most used in the analyses of the subject. However, another significant model of image formation of destination is the one carried out by Baloglu and McCleary (1999), based on the relationship between stimulus factors and personal factors. According to the authors, the formation of the image of a destination is influenced by two main forces: stimulus and personal factors.

The model has three levels of evaluation: cognitive, affective, and connotative (as previously mentioned), whose determining evaluation criteria are the stimulus and personal factors. Personal factors correspond to psychological characteristics (values, motivation, and personality) and social characteristics (age, education, marital status, etc..) and the stimulus factors correspond to sources of information and prior experience, referred to as external stimuli (Baloglu and McCleary, 1999).

According to Figure 2, the stimulus and personal factors are related to the formation of the image of the tourist destination.

The various stimuli are formed by external sources of information such as advertising, word-of-mouth, travel agencies and previous experience. Information sources refer to the promotion made by the destination. It is noteworthy, however, that the process of acceptance of

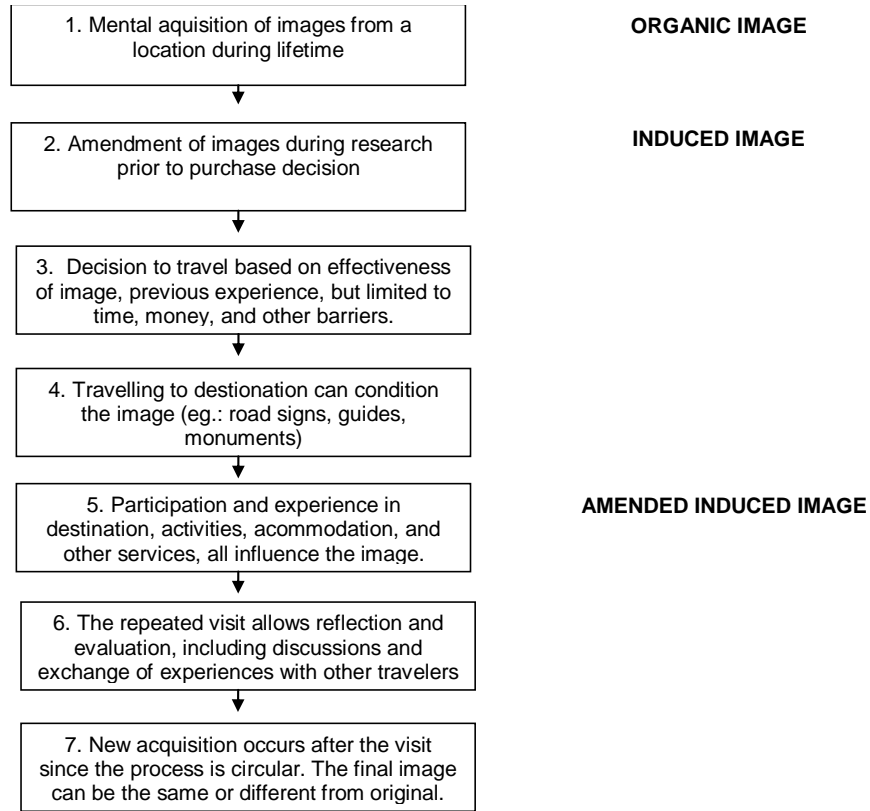


Figure 1. Theory on the stages of the destination image. Source: Gunn, 1972, p.120.

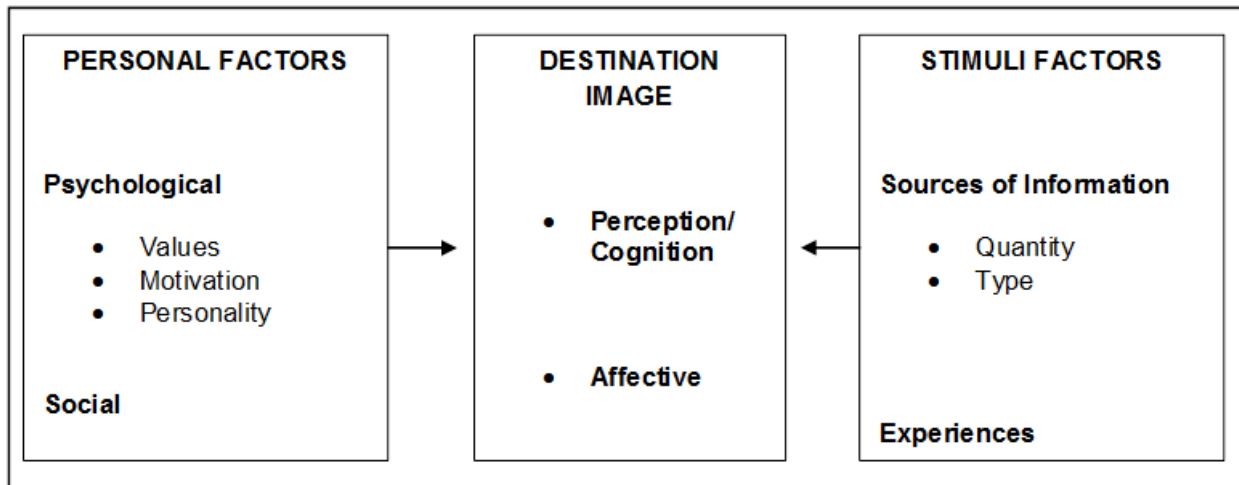


Figure 2. Factors related to the image formation of the tourist destination. (Baloglu, 1999 p.101).

the information goes through perceptions filter. This means that even with a big role in shaping the image of destinations, the means of obtaining the information are not fully passively accepted by tourists, since they handle the information they receive based on their perception,

prior knowledge, and always tend to leave aside that which is not supported by their prior knowledge.

Gartner (1993) further argues that among the stimuli factors, word-of-mouth is perhaps regarded as the most reliable of all possible sources of information.

The role of agencies and operators, according to Chagas (2008), is also significant as they are a relevant source of information and, consequently, influence the image of destinations, especially with regard to international destinations.

Santos (2013) studied the influence of communication media on imagery, using a hotel in Brazil as a case study. The hotel chain uses website, travel agency and facebook as the main communication channel to get to customers. It is found that at the first time, guests get information from word of mouth; also, basically they use online social media, travel agents and websites. Businessmen use primarily travel agents. So it suggests that the media influence depends on customers' motivation to visit (Santos, 2013).

Thus, we conclude that the existing theory is mixed, since the same elements are used to explain the formation of the destination image in the minds of consumers, and especially as they demonstrate that image formation is the consequence of several variables that culminate in the creation of an image. This image represents the mental destination of travelers, gives them a pre-trial of the destination (Echtner and Ritchie, 1991) and determines the likelihood of choosing the location. Citing Crompton (1979), Echtner and Ritchie, 1991, tourists will choose, among their possibilities, a destination that is compatible with their most favorable images.

Another study with the objective of analyzing the image of several South American countries was conducted by a group of Brazilian researchers. According to these researchers, country image is one of the aspects that interferes with tourists' loyalty before a given destination is chosen. Consequently, it directly depends on the way communication in the country is conducted abroad. "Therefore, a favourable image not only serves to induce desire of visiting the country but also to do so repeatedly" (Souza et al., 2014, p. 13). This study also points out that a positive image must be always preserved for present and future planning success.

Planners follow a two-step process to evaluate the image of a location: the selection of a target audience and the measurement of the image itself (Kotler et al, 1994).

The image of strategic management requires examining five issues (Kotler, et al., 1994):

1. What determines the image of a site?
2. How can we measure the image of a site?
3. What guidelines should be followed for rapid development of a local image?
4. What Q instruments are available to transmit an image?
5. Can a local image correct a negative message?

The answers to these questions will allow adequate strategic choice. It should be remembered that the strategic administration of image requires a constant

upgrading of the image for proper positioning. Kotler also suggests criteria to be followed in order to form good image (Kotler, 1994):

Validity: the disclosure of a very different image has minimal chances of success.

Credibility: even that the image is properly transmitted it may not immediately be accredited

Simplicity; Many images cause confusion. Image messages must be simple

Attractiveness: suggests why people would want to visit the place

Distinguished: image work when melhor is distinguished from other common themes. For Bignami (2002), the selection of the target audience that is economically interesting generates positive results in the strategic positioning, and also the more specific the audience is, the more specific the results will be, and that will determine the strategic decisions about the image.

We analyze the case based on the theory and factors related to the formation of a destination image and the theories on its stages (Gunn, 1972), as well as (Baloglu, 1999) the interview statements.

RESULT

Case study

Using a case study and following the methodology proposed by Yin (2001), we analyze the work done by the office responsible for promoting tourism and events in the City of São Paulo, São Paulo Turismo - SPTuris, aiming to observe their marketing work and obtain elements related to the image formed by tourists for the city.

To this end, we made use of secondary material: research and indicators obtained and supplied by SPTuris; and primary material: interview with two (02) of their directors. That gave us a comprehensive view of tourism in the City of São Paulo, as well as the identification of the location positioning, promotion strategies and image consolidation, among other elements, that will be presented herein.

São Paulo Turismo - SPTuris is the office that promotes tourism and events in the city of São Paulo. It performs tourism planning, research, fosters the creation of new products and itineraries, maps attractions, encourages new events or consolidates those with tourism potential, develops relationship with businesses focused on tourism, and promotes destination in Brazil and abroad, among various integrated initiatives (SPTuris, 2008).

The official bureau of tourism and events in the City of São Paulo (Figure 2) was established since July 11, 1977

when the Department of Tourism and Development of the City of São Paulo was eliminated. SPTuris then took on all responsibility for the initiatives related to tourism in the city, from structuring tourism to the promotion of São Paulo as a tourist destination. In addition to representing the city's tourism initiatives, it is also responsible for managing and renting facilities such as Parque Anhembi, Interlagos Racetrack, and the Tourist Shopping Terminal, on 25th March (PLATUM 2007-2010). PLATUM is the Municipal Tourism Plan that sets the initiatives to foster and promote tourism growth in São Paulo. To perform the planned initiatives, SPTuris is responsible for their implementation, and Comtur's legal department establishes partnerships with the private sector (Comtur, 2010).

The image of the City of São Paulo promoted by SPTuris

Initially, as can be read in SPTuris publications, "positioning the city as a major hub for leisure and entertainment, SPTuris has obtained favorable results that reveal the greatness of São Paulo as a tourist destination" (SPTuris, 2008, p. 6). However, considering the image of a location as the sum of beliefs, ideas and impressions that people have of it (Kotler and Andreassen, 1991) and that the image of a destination, in principle, plays a vital role in the selection process (Acerenza, 2002; Bignami, 2002; Echtner and Ritchie, 1991; Gallarza et al., 2002; Haider and Kotler, 1994; Leal, 2002; Ryglova and Turcinkova, 2004; Moya and Sanchez, 2005; Valls, 1996, Cross and Camargo, 2006), we have to admit, although empirically, that it is a big challenge when we think of Sao Paulo, a city whose image is invariably associated with labor and business.

This becomes clear when we consider the data relating to tourist demand in the municipality. While they show a decreasing trend, both with regard to the amount of tourists and the revenue obtained, the motivation of visits to the city is primarily linked to business (Figure 3).

According to Figure 3, 56.1% of visits to the municipality are mainly motivated by business; leisure accounts for 10.9%.

This is corroborated by Mr. Fabio Montanheiro (courtesy interview) who argues that "drawing a general profile of the tourist, one can see that the share of businesses and events is much larger than that of leisure."

Considering the theoretical aspects related to the formation of tourism image of a destination, we conclude that personal and stimuli factors are responsible for forming image. Based on motivation, which is influenced by significant personal and stimulus factors coupled with the advertising and promotion of the city as a business destination in Latin America (Figure 4), we can assume that the image of the city is basically related to business

and that the objectives set out in Platium 2007/2010 consist of ambitious goals, requiring a significant marketing effort to change the perception of tourists into an image of leisure.

Other factors are also considered as having an influence over the formation of the image of the city of São Paulo, such as the concentration of large companies and economic investment decision-making centers, the movement resulting from executives travelling on business, the large influx of people coming for technical trade events, in addition to an appropriate infrastructure for such events, involving convention centers, exhibition halls, etc., forming a set of conditions that end up representing the main factor.

Still, the finding of the business image meets the assumptions of Kotler et al. (1994), who state that the image of a place consists of a basic determinant of how citizens and businesses react to a place, which is the case of São Paulo and its image linked predominantly to business. The city faces difficulties in attracting a significant demand for leisure travel tourists, although it has a wide range of attractions linked to that.

Vaz (1999) argues that in order to make the most out of a location's tourism potential, other attractiveness factors should be worked on and, thus, "along with the principal and broader picture of the location, other images should be cultivated among specific smaller audiences, but important to boost tourism" (Vaz, 1999, p.96).

Besides the above, research conducted in the city's Tourist Information Centers points leisure as the main travel motivation (57.9%), while businesses are left with 17.2%. The contradiction is explained by Mr. Fabio Montanheiro (courtesy interview) who shows that the data obtained through TICs do not reflect reality as visitors seeking the centers and who make up the sample are leisure tourists. This invalidates the research in a way, serving only to point the profile of the public seeking information in the centers. Figure 4 shows the main motivations for visiting Sao Paulo.

However, making use of the data we can consider the TICs an important information and distribution channel of the city attractions, and that they must be used in order to promote the image of leisure and entertainment, intended by SPTuris. And also that the centers represent an important source of information for tourism marketing, as they can provide data related to the needs and desires of leisure tourists, allowing efficient and targeted market initiatives.

One difficulty pointed out by Ms. Andrezza Serra (courtesy interview) regarding image is that research conducted to identify tourists' perception has shown a wide range of results, making it difficult to establish a single reference. There are countless images that permeate visitors' minds with regard to the city, which complicates the identification of a single element, be it visual or sensory.

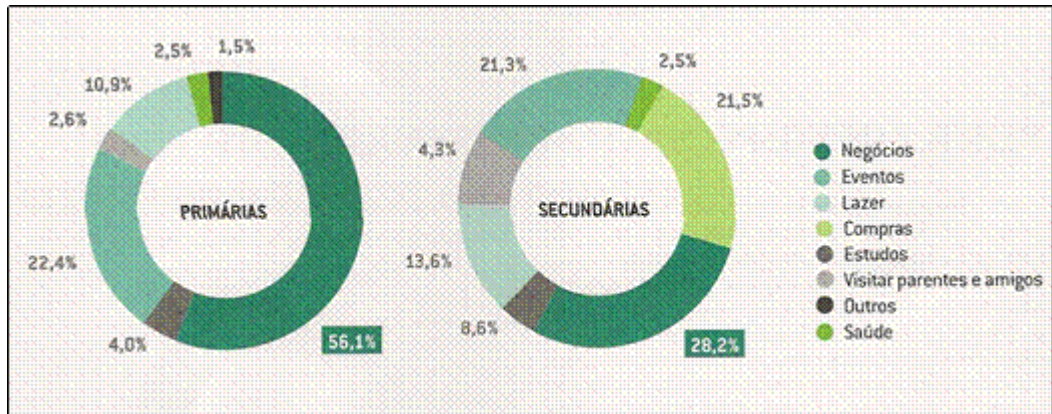


Figure 3. Motivations to visit Sao Paulo. Source: Observatório do Turismo da cidade de São Paulo – SPTuris, 2009.

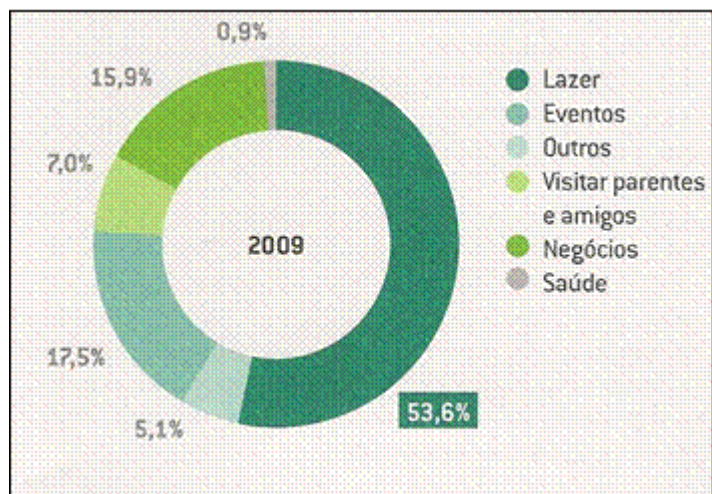


Figure 4. Motivations to visit São Paulo obtained at Tourist Information Centers – TICs. Source: Observatório do Turismo da cidade de São Paulo - SPTuris, 2009.

Some events have been adopted by SPTuris towards strengthening the image of leisure and entertainment and the initiative called "Stay another day" is one of them. According to Ms. Sierra Andrezza, a tourism promotion analyst at São Paulo Turismo (courtesy interview), considering that the main motivation for visiting the city is business and / or events linked to business, the initiative focuses exclusively on the business and event tourist, aiming at motivating them to extend their time in the city and enjoy a selection of attractions available in an activity guide.

According to Ms. Andressa Serra (courtesy interview), "the project was developed based on the perception that this type of tourist did not know what the city and its real dimension was. During the visit, tourists went from the hotel straight to the event." Observing that it is incomplete

for those visitors, SPTuris, in partnership with Abril publishing, developed a guide that offers a number of attractions related to the city's cultural and natural wealth: food, museums, parks, nightlife, etc.

Considering the above, the strategy aims to turn the business tourist into a leisure tourist and, thus, develop a more representative demand for the segment in the city. And, we infer that, through this strategy it is possible to present them with leisure and entertainment options in the city, changing their perception, as solely linked to business, labor and industry.

SPTuris (courtesy interview) finds it difficult to convince people not to spend their vacation or holiday in a significant tourist destination and come to São Paulo instead, especially in light of the business image that the city has. So, the office encourages those visitors, who are

coming to Sao Paulo anyway to close a deal or attend a trade show or event, to know a little bit of the city and realize that it offers interesting attractions; and consequently awaken in those visitors the possibility to include the city in their vacation itinerary.

The program "Stay another day" is a strategy for promoting the image of leisure in the city, and it falls within the concept of Gunn (1988), who conceive a third dimension in the process of destination image formation beyond the organic and induced dimension: the "complex" image, which is formed after the visit to the tourist destination and trial of the product purchased. That represents a more complex and real image of the destination.

Through SPTuris (courtesy interview), the city also has a strong concern in offering a total tourist product, which, according to Mrs. Andrezza Serra, requires work with the tourist trade, in order to prepare it to receive the visitor.

Corroborating that, tourism service providers influence and / or can significantly influence visitors' image formation especially when we consider that there is a wide variety of variables responsible for that formation. As acknowledged in the literature review, all marketing variables must be considered to form an organic image and must be integrated in order to outline a synergy and endorse the message .

In this sense, according to Mr. Fábio Montanheiro (courtesy interview), SPTuris prepared a manual entitled "Destination of São Paulo – A Handbook for Tourism Professionals"; it focused on operators and travel agencies , where the service provider is encouraged to sell the location and receives relevant information about the city (its history, climate, food, culture, etc), and alternative itineraries (theme itinerary and itinerary for specific audience).

Seeking to form the second dimension that forms images (the induced image of the city) (Gunn, 1972), SPTuris also invests in leaflets seeking to highlight the attractions of the city. It uses both bright colors and objective writing to attract and convey a modern, avant-garde and distinctive character, as described in the macro-program "Marketing and Tourism Promotion" in Platum 2007/2010.

(...) In official advertistment, avant-garde, economic importance, and center that generates trends in various segments will always be considered. This is because the dissemination of all segments connected to visitors may encourage their extended stay and consumption. This will help the city to present itself as real quality destination, and as a result generate more revenue from visitors' extended stay (Platum 2007/2010, p. 46).

SPTuris' marketing and tourism promotion work also includes the production of maps of São Paulo as a destination, which are distributed free of charge in tourist information centers. The maps are attractive, sophisticat-

ed, and easily handled and put away. This initiative reverberates Tojal (2014)'s finding that small print can also influence image of tourist destination.

Another market initiative by Sao Paulo Tourism is "TurisMetrô". This project involves the creation of six itineraries involving the use of the subway as the mode of transportation. The most recent project implemented by São Paulo Turismo aiming at strengthening the city's image as a destination for leisure and entertainment is "SPExperience" and "Map of Sensations". "SPExperience" consists of a city guide whose itineraries are based on the five human senses: sight, hearing, touch, taste, and smell. Thus, we can find, for example, tips and addresses of parks, avenues, buildings, museums (vision), concert halls, nightclubs, and festivals (hearing), massages, therapies (touch), bars and tastings, regional cuisine (taste), and cafeterias, flower shops, markets (smell).

Dozens of tourists were taken to those places and had their level of emotion "measured".

The realization of "tests of emotion" occurred in partnership with Truster Brazil, specialized in vocal decoding technologies. After visiting the attractions, tourists gave testimonials about their feelings as they were tested with software that translates, through voice, physiological changes and generates a graphical representation of the variations of emotions. This initiative is also congruent to Tojal (2014)'s in the sense that it corresponds to a behaviourist principle, or a neutral stimulus, which when associated with pleasant, positive stimulus immediately becomes positive stimulus.

Based on the above, we consider that São Paulo has been developing consistent initiatives to strengthen its image of leisure and entertainment, and that they are not formed from a distorted view of tourism marketing. That is the positioning of the city has been achieved through a marketing effort that involves the entire marketing mix.

Conclusion

One of the objectives of this study is to identify the connection of tourism marketing with strategic image management for acquiring destination. Overall, the study of the image proved to be quite complex especially due to the amount of variables that are related to the construct; however, it was observed that the image construct is subject to various studies related to several areas of expertise.

Essentially, it is assumed that the image is an essential factor for the acquisition of destinations, since the characteristics of the tourism product, especially its intangibility, prevent the consumer/tourist from purchasing the product otherwise. Thus, the tourist gets a mental image of the destination, which can only be proven after the acquisition.

In this sense, the destination image becomes an important point to be considered by locations interested in developing through tourism, which generates an extreme competition.

To manage their image, locations must do what Kotler et al (1994) called strategic image management, which consists of the constant process of searching for the image of a place among its visitors, segmenting and targeting its specific image to finally positioning it to the intended audience, conveying its benefits.

It was found that strategic image management covers a larger area of marketing, specifically tourism marketing, in this case.

Thus, image management comes within the context of marketing as an important part of the tourism marketing mix (marketing mix), determining the perception and attitude of tourism demand / tourists towards destinations.

In this context, we emphasize that strategic image management associated with tourism marketing demands that managers understand how destination images are formed, their concept, dimensions, and characteristics.

During this work, the reference showed that the complexity of the image construct and the studies connected to it pointed to different directions; and therefore, there is no precise definition, let alone a formation model and dimension accepted by all.

However, in summary, we conclude that image generally is the mental representation of beliefs, feelings, and impressions that people have about a certain location, featuring complex, multiple, dynamic, and relative characteristics.

Their formation process, as previously explained, does not have a single acceptance among authors. However, we admit that they are formed from the combination of personal factors and the set of collected information that can come from sources with a social aspect, i.e., influence of friends and family and a symbolic dimension, which in turn refers to aspects of promotion and dissemination performed by the interested destination. This combination culminates in the formation of a mental image loaded with affection and cognition and also subjectivity.

In this context, we emphasize that the sources of external information, formed primarily by marketing communication, may in this sense be controlled by the market process, allowing management of at least part of the imaging process. And yet, the influence of marketing communication is considered by many authors as a significant factor for the formation of the image that individuals create from their perceptions towards destinations.

Thus, from the research, two points should be emphasized and that answer the question posed by the research that guided this whole study: the first refers to

the fact that when it comes to the market, it is evident that the image of a tourist destination is a key variable for its choice among the range of possibilities offered to consumers today (Acerenza, 2002; Bignami, 2002; Echtner and Ritchie, 1991; Kotler et al., 1994; Leal, 2002; Gallarza et al., 2002; Perez-Nebra and Torres, 2010; Vaz, 2003; Trigueiro, 1999; Cobra, 2004; Cooper, 2002) and also its possible repeated visit; the second is that the image management of destinations requires understanding that it is linked not only to marketing communications, but to tourism marketing in general, requiring that all market process be performed based on the image that the target has been positioned around.

The positioning / image adopted by a location determines how individuals will perceive it and that, therefore, the creation or positioning of images will be guided by the principles of validity, reliability, simplicity, attractiveness, and differentiation as proposed by Kotler (1994). The creation and consequently the diffusion of images that do not strictly follow those principles may have serious market consequences for the destination.

Thus, image management, after the selection of the target audience, requires the measurement of the location's current image through the application of various techniques, which for purposes of these final remarks, we can summarize in quantitative and qualitative analyses. This in time will assist the manager in determining the current image of the locality and finally in preparing the desired position and promotion to the target audience.

Based on what was presented herein and considering the case study on the tourism marketing work done by São Paulo Turismo – SPTuris, São Paulo's official tourism office, we infer that it is currently engaged in a process of creating an image of leisure and entertainment aimed at developing tourism through the attraction of a tourism demand made up by those traveling on leisure.

It is noted, however, that the mental representation of individuals in relation to the city is linked to an image of business and labor, which consequently determines the attitudes of consumers regarding the destination, i.e., around the image of a business city, corporate events and work. The city's tourist flow is basically made up of people in this segment, accounting to approximately 80% of the annual demand of tourists in São Paulo.

However, the city has enough tourist attractions and infrastructure (essential for tourist consumption), capable of offering and attracting leisure tourists; but, due to a perceived image that does not link to leisure, it ends up being underutilized.

Based on the observation and analysis of the work done by SPTuris, we infer that, stemming from the observation of favorable current trends with respect to leisure tourism in several segments, and the finding of a leisure and entertainment offer, that was under-utilized due to a lack of identification of the visitor with the city, the city's official tourism office, through its Municipal

Tourism Plan, set a goal to strengthen the image of the city of São Paulo as a destination for leisure and entertainment, developing comprehensive tourism marketing work.

Thus, it was observed that currently, the city stands in favor of optimizing leisure tourism and that in this sense, it has been developing different initiatives aiming at consolidating an image of leisure and entertainment, and therefore, attract a significant demand for the city.

It should be highlighted that the initiatives taken by SPTuris in order to consolidate the city as a representative tourist destination with regard to leisure, are guided by a Municipal Tourism Plan, which, according to the authors studied, is essential for the success of such initiatives.

Also, when comparing the initiatives outlined in PLATUM 2007/2010 against the initiatives taken to date, we observed that they are in line and mainly that both planned initiatives and those already carried out seek to strengthen the city's image of leisure from a broad view of tourism marketing, involving strategies related to product, place, price, and promotion of the destination.

Ultimately, we have to consider that the positioning of the city image is difficult to attain, especially when the size and diversity of the city is considered; however, the initiatives are showing positive results, even though the results have not yet been officially presented by São Paulo Turismo.

Conflict of Interests

The authors have not declared any conflict of interests.

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Full Length Research Paper

The effect of option framing on consumers' decision-making efficiency: Evidence from online service customization

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Based on Loss Aversion theory, this article analyzes and examines the effect of option framing (additive vs. subtractive) on consumers' decision-making efficiency (customization results and customization time) and the boundary conditions for the option framing effects: service importance, service type and individual expectation. Our experiment under the context of online information service customization produces the following findings: (1) Compared with the additive option framing, consumers in the subtractive option framing tend to choose more service options with a higher total option price; (2) Online option framing and service importance (important vs. less important) impose a significant interaction effect—the less important options will be more selected in the subtractive option framing and the important ones are more likely to be chosen in the additive option framing; (3) consumers' expectation plays a regulatory role in the relationship between option framing and decision time: consumers with low expectation tend to take more time when they use subtractive versus additive option framing; while those with high expectation prone to taking more time in the additive versus subtractive option framing. In addition, the interaction effect of online option framing and service type is not significant, but it presents the expected direction. These findings, in turn, offer interesting public policy and future research implications.

Key words: Online service customization, option framing effects, consumers' decision-making efficiency, boundary condition, service importance, individual expectation.

INTRODUCTION

With growing demand for personalization and rapid development of the Internet technology, it is necessary for enterprises to provide a network platform in which customers can design unique product or service they desire (Gilmore and Pine, 1998; Chen and Hao, 2010).

Thus it can be seen online customization is becoming an important channel for enterprises to build competitive advantage and create profits (Cui et al., 2013), which has the effect of increasing the perception of value and consumer satisfaction (Wang and Han, 2012; Lou, 2010;

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Park et al., 2000), in turn leading to improved consumer loyalty and higher purchase intentions (Franke et al., 2010; Kurniawan et al., 2006).

Due to the bargaining advantage of customization, product or service customization has attracted extensive attention from the academia. Park et al. (2000) found consumers made conflicting decisions in two different customization conditions: compared with the additive option framing, consumers in the subtractive option framing will choose more options with a higher total option price, which is known as Option Framing Effects. Previous studies have mostly examined the option framing effects of tangible goods in the offline context, such as automobiles (Park et al., 2000; Biswas and Grau, 2008; Park and Kim, 2012) and pizzas (Levin et al., 2002), which rarely involved the option framing effect of service customization in the online context (Jin et al., 2009; Wang et al., 2009; Jin et al., 2012; Hsu-Kuan and Liwen, 2011). Compared with the offline customization, online customization has stronger experience, autonomy and uncertainty (Cui et al., 2013).

In addition, with the development of information technology, information consumption has become an important approach for country to expand domestic demand and stimulate economic growth. There is a trend to focus on information service online customization for companies to win more customers and advantages over other competitors, which is worthy of study. Then under the online service customization context, is there any difference between consumers' decision in the above two different option framings?

For various information service options, according to the attribute, there are important service options (e.g. the internet flow package) and less important service options (e.g. the animation package); while classified by the service type, the service options can be classified as positive options (e.g. the weather forecast) and negative options (e.g. the flow monitoring). Park et al. (2000, 2012) speculated the importance of the product options had a significant influence on option framing effects. Chitturi et al. (2008) confirmed that the type of product options had remarkable effects on decision. Then does consumers' perception of service importance and the type of service also have an effect on the relationship between option framing and their choice results?

Furthermore, under the guidance of the concept of time, what the consumers concern in the process of decision-making is not only the decision results, but also the decision-making efficiency. Based on the offline customization condition, Park et al. (2000) and Jin et al. (2009) suggest that consumers tend to spend more time in the subtractive than the additive option framing. Will it come to the same conclusion under the online service customization context? In addition, does consumers' expectation on the number and price they ultimately choose have an influence on their decision time?

Based on Loss Aversion theory, the study analyzes and

discusses the effect of option framing on consumers' decision efficiency and the boundary conditions for the option framing effects: service importance, service type and consumers' individual expectation. The study examines the regulatory effect of three variables above on option framing effects by means of online experimental research method, which provide some corresponding methods and theoretical basis to service enterprises majoring in the design of online customization mode.

RELATED RESEARCH AND HYPOTHESES

The effect of option framing on customization results

Prospect theory (Kahneman and Tversky, 1979) posits that people should exhibit different judgments and preferences in mathematically identical decisions contingent on whether the decision is framed negatively (in terms of a loss) or positively (in terms of a gain). Specifically, people tend to be risk-prone when facing losses but risk-averse when facing gains, which is in accordance with framing effects. Framing effects occur when alternative frames for a given decision problem influence both the way information is processed and the nature of the ultimate decision (Zhang et al., 2011; Tversky and Kahneman, 1981). Currently, various studies have found empirical evidences to support the effects of framing in sociology, psychology, behavioral economics and consumer decision-making. Levin et al. (2002) find that consumer's evaluation and purchase intention are affected by whether a product attribute is positively (80% lean) or negatively (20% fat) framed. Zhang et al. (2007) focus on the impacts of percentage and dollar-amount discount presentations on consumers' perceptions of discount amount and purchase intention. Gamliel and Herstein (1967) indicate consumers show more purchase intentions of a product offered in a price deal, and perceive their monetary gain as higher when they are presented with a negative rather than positive framing. Mishra et al. (2012) demonstrate negative frames interacted with situations of high need produce particularly elevated levels of risky choice. Cassotti et al. (2012) put forward that a positive emotional context can reduce the improvement of framing effects on decision-making.

Among all the researchers, Park et al. (2000) are the first to introduce framing effects into the study about the influence of different presentations of product customization on consumer choice; they also define the different presentations as additive (hereafter +OF) and subtractive (hereafter -OF) option framing condition. In the +OF condition, participants are exposed to a base product and asked to add options, more options they add, higher price they should pay; whereas in the -OF condition, participants are exposed to a fully loaded

product and deleted undesired options, more options they delete, lower price they should pay. According to the automobile customization experimental research, they find consumers tend to choose more options with a higher total option price when they use subtractive versus additive option framing, which is called as Option Framing Effects. In addition, many prior researches have confirmed the existence of option framing effects in the customization experiment of automobiles (Park et al., 2000; Biswas and Grau, 2008), pizzas (Levin et al., 2002) and mobile communication service (Jin et al., 2009).

Prior literature has attributed the effects of option framing to some forms of loss aversion (Wicker et al., 1995; Kahneman and Tversky, 1979), which suggests that a loss is perceived as more intense than a gain of the same objective magnitude and consumers should be more sensitive to utility losses than monetary loss. The greatest difference between the +OF and -OF conditions is what consumers lost in the process of decision-making. In the +OF condition, consumers compare gains in utility (i.e. the increase in value incurred by adding an option) against monetary loss in expense. In the -OF condition, consumers compare a loss in utility (i.e. the decrease in value incurred by deleting an option) against an economic gain in price savings. Thus, consumers engaged in subtractive framing may be more reluctant to delete an option (a loss in utility) than consumers engaged in additive framing would be to include that option (a loss in economic income) (Levin et al., 2002). In that case, consumers will keep more options.

In addition, endowment effects, which is built upon the loss aversion theoretical framework, suggests that people are reluctant to part from assets that they currently possess and always give higher evaluation to them. Thus, compared with the +OF condition, in the -OF condition, the full-options model leads consumers to a position of seeming to have once "owned" all the options, thereby inducing them to value the options more highly and making them more reluctant to let them go. Besides, Johnson (1993) posits that consumers tend to make decisions by selecting rather than rejecting, so they usually experience more negative emotions in the -OF condition, in which they customize their desired products or services by deleting certain options. Therefore, consumers tend to keep more options in the -OF condition.

Another difference between addition and subtractive option framing is the different reference points, which therefore influences consumers' perceptions of gains and losses. Consumers engaging in +OF condition regard the basic product as a reference point, those engaging in -OF condition take the fully loaded product as a reference point. Thus they think the economic cost because of adding an option in the +OF condition is bigger than the economic gain on account of deleting the same option in the -OF condition.

In conclusion, option framing effects have been clearly

explained by many different accounts based on the endowment effect or reference points as a result of loss aversion (Biswas, 2009; Biswas and Grau, 2008; Levin et al., 2002; Park et al., 2000). In consequence, compared with the +OF condition, consumers in the -OF condition show a stronger tendency of loss aversion, accordingly they tend to choose more options with a higher total option price.

Meanwhile, previous studies have examined the option framing effects of tangible goods in the offline context, but the study focusing on service customization is seldom dealt among scholars. Online customization have become an important channel of consumer shopping, besides it will turn into a key way for companies to build competitive advantage and create profits. Compared with offline customization situation, online customization possesses much stronger network experience, independence and uncertainty. Thus, whether consumers are equally affected by the option framing effects in the context of online service customization or not, it needs further verification. Based on the above arguments, we propose the following hypothesis:

H1: Under the online service customization context, consumers tend to choose more service options with a higher total option price in the -OF than +OF condition.

The interaction of option framing and service importance

For consumers, various options that have already been attached or are to be added later to defaults can be perceived as relatively more important or less important. For a laptop buyer, for instance, features such as hard disk capacity, RAM capacity and CPU speed may be considered relatively more important than colorful laptop skins. Then for important and less important products or services, whether consumers' selection results have differences between two customization framings? Park et al. (2000) speculate the importance of the product options has a significant influence on framing effects, especially with regard to less important option, this framing effects are more obvious.

According to differential loss aversion theory, individual's loss aversion to different choice situations and product properties tend to be different. In other words, not only decision framing can affect individual's decisions, but also product attributes (Kahneman et al., 1990; Johnson et al., 1993). Especially, the product importance attributes affect consumers' purchase decision mainly through the different influence on consumers' purchase certainty and attention of options. On the one hand, the more important the service is to the decision maker, the higher their purchase certainty is. Compared with less important options, consumers have more certainty to choose the option which is more important. Accordingly,

the influence of the option framing on consumer decision-making is relatively small (Johnson et al., 1993). On the other hand, consumers' attention to the important and less important options is different. Consumers will pay more attention to the important option both in additive and subtractive framing. However, there are some differences between the attentions of consumers paying to less important options in two different option framings. In the -OF condition, which is a negative frame and can bring negative emotion, consumers tend to pay more attention to the less important options (Park et al., 2000), so that they are prone to do more processing of option information and motivate more thinking (Carmon and Ariely, 2000). Thus, they can excavate more potential function and value of less important options, accordingly keep more (Werthenbroch, 1998). In addition, consumers are more willing to seek risks in the subtractive framing, which is a negative frame, so that they tend to choose more less important options (Tversky and Kahneman, 1981). Hence, in line with the above arguments, we propose the following hypothesis:

H2: Under the online service customization context, compared with consumers in the +OF condition, those in the -OF condition are more likely to choose less important options; while consumers more tend to choose important options in the +OF than -OF condition.

The interaction of option framing and service type

Fishbach and Dhar (2005) point out that consumers not only aim at utility maximization in the decision-making process, but also focus on some other multi-objectives, such as product types (Maheswaran et al., 1990; Bertini et al., 2009). Chitturi et al. (2008) confirm for us that the type and attribute of product option have remarkable effects on decision. Furthermore, Gamliel and Herstein (1967) find that negative description frame can promote consumer's buying behavior and perceive value more than positive description frame. Hence, we try taking the description frame into consideration, and then we divide the product into positive and negative options. Positive options can bring direct and positive utility to consumers, such as weather forecast service, by customizing which consumers can get timely weather forecasts directly. While negative options can prevent the damage of consumers' rights and interests and provide indirect value to consumers, such as flow monitoring, through which consumers can monitoring the usage of flow, so that they can avoid flow overrunning. In that way, does the impact of the positive and negative option on consumer choice have differences in two different framings? There is yet no scholar carrying out to explore this theory and practical problems.

We regard the definition of the positive and negative option as the materialization and discretization of the positive and negative option framing. Positive and

negative options affect the option framing effects by inducing consumers' information processing and risk perception. Kahneman et al. (1990) indicate that once the individual process an article, his evaluation of it will greatly increase. That is, deleting an option in the -OF condition tends to be more difficult than add it in the +OF condition. In the -OF condition, consumers are likely to spend more time dealing with the function and value of the product option (Meyers-Levy and Maheswaran, 2004), so that they will excavate and magnify it. Positive option is less affected by the option framing which can directly make consumers perceive utility of the option.

While specific to negative option, consumers only doing more information processing and prefactual thinking (Carmon and Ariely, 2000) can they find what its value is. In consequence, compared with the +OF condition, consumers are easier to find potential utility and value of the negative option in the -OF condition, and thus keep retaining more negative options.

The function of the negative option is always represented in the way in which it can prevent the damage of consumers' rights and interests. For example, only when flow overruns can flow monitoring fully play its role. Otherwise, the money paid for the service customization will not get the corresponding utility. In other words, it is risky to choose this option. In addition, according to prospect theory, individuals tend to be risk aversion faced with positive frame, while they prone to risk seeking faced with negative frame (Kahneman and Tversky, 1979). Hence, compared with the +OF condition, in the -OF condition which is a negative frame, consumers are more willing to seek risks and likely to choose more risky option (Meyers and Maheswaran, 2004).

Furthermore, negative options are more likely to pass more risk awareness onto the consumers, which strengthen the consumers' negative emotions. It also makes consumers behave risk seeking and do more intensive information processing of negative option. Therefore, negative option has more significant effect on framing effect than positive option. Thus, the following hypothesis is proposed:

H3: Under the online service customization context, compared with consumers in the +OF condition, those in the -OF condition are more likely to choose negative options; while consumers more tend to choose positive options in the +OF than -OF condition.

The effect of option framing on decision time: the regulatory role of individual expectation

According to the study of car customization, Park et al. (2000) suggest that consumers tend to spend more time in the -OF than +OF condition. Similarly, Jin et al. (2009) also demonstrate the same viewpoint through an experimental research of mobile communication service customization. But according to our observation, in prior

empirical researches, the proportion of option number which consumers ultimately choose to total number is relatively low whenever in the +OF or -OF condition, which result in the neglect of the time consumers spend adding or deleting options in the process of choosing. As the previous studies show, in the online information service customization process, customization decision time is comprised of two parts: the thinking time (time to consider whether to add or delete options) and the operation time (time to add or delete option) (Neisser, 1963; Ahituv et al., 1998; Haynes, 2009; Edwards, 1954). The thinking time is to measure the time that consumers spend in browsing and weighing whether to choose an option or not. The operation time means the time consumers spend on specific action (add or delete an option), which is closely related to the number of options consumers ultimately choose. In general, individuals' expectation on the number and total price of ultimate customization options will influence their final choice (Godet and Degenhardt, 1994; Ernst et al., 2004). Besides, the number of options consumers ultimately choose has an effect on the thinking time and operation time they spend in the decision-making process. So under the online service customization context, individuals' expectations will have an impact on the relationship between the customization mode and the decision time. This theory and practical problems are worthy of our in-depth study.

As we all know, consumers with low expectation ultimately tend to choose relatively fewer options, which leads to short operation time. So the time they spend in customizing mainly depend on their thinking time. On the other hand, as loss aversion theory mentioned, consumers should be more sensitive to utility losses than monetary loss (Kahneman and Tversky, 1981). In addition, endowment effect shows that consumers always give higher evaluation to assets that they currently possess (Kahneman et al., 1990). Therefore, based on the above theories, we make a prediction that consumers' pain perception caused by deleting the "owed" options in the -OF condition is higher than the entertainment consumers perceive in the +OF condition because of acquiring the option value through adding options (Park and Kim, 2012; Biswas and Grau, 2008; Krishna and Krishna, 2005; Levin et al., 2002; Park et al., 2000). That is to say, consumers engaged in -OF (versus +OF) tend to perceive the task of making option choices as more difficult and mental conflict (Park et al., 2000; Park and Kim, 2012), so that they will spend more thinking time doing more information processing on product options (Luce and Bettman, 1997; Carmon and Ariely, 2000; Park et al., 2000; Jin et al., 2009), which should lengthen the decision time consumers spend in the -OF condition.

As we have mentioned above, individuals' expectation has a positive influence on the number and total price of ultimate customization options. For consumers with high expectation, they are likely to choose more options,

which is usually more than one-half of the total number. In this case, the operating time they spend in the decision-making process cannot be ignored. In the +OF condition, consumers with high expectation not only need to consider the value of options, but they have to inevitably add the selected options in successive, which leads to more operating time. In contrast, consumers with high expectation in the -OF condition tend to spend less operating time, because the number of the options they ultimately choose is larger, they only need to delete a few options. Besides, the thinking time the consumers with high expectation spend in the +OF and -OF condition have no significant difference. This, we predict, is because consumers with high expectation ultimately choose so many options that they have to spend enough time on almost every option whenever in the +OF or -OF condition. In additive, based on bounded rationality theory, consumers tend to be so tired that they spend less time dealing with the option information in the latter part of the decision-making process. Under this circumstance, compared with the operation time, the thinking time is insignificant. According to the above analysis, we put forward the following hypothesis:

H4: Under the online service customization context, consumers' expectation plays a regulatory role in the relationship between the customization mode and the decision time: consumers with low expectation tend to take more time in the -OF than +OF condition; in contrast consumers with high expectation tend to take more time in the +OF than -OF condition.

In conclusion, based on loss aversion theory, the study investigates and discusses the boundary conditions for the option framing's influence on the customization results (the number and total price of options) and customization time under the online service customization context, which reveals the intrinsic mechanism of the effect of option framing on the consumer choice (H1). Specifically, the study mainly tests how the importance and types of service affect the relationship between the option framing and the results of consumers' choice (H2, H3). In addition, the study investigates if consumers' expectation of the number and price they ultimately choose has a moderating effect on the relationship between the option framing and the decision-making time (H4) and provide the companies majoring in information services with some reference recommendation about the design of the online customization context.

EXPERIMENT

Experimental purpose and design

To verify the hypothesis, experimental research method was introduced to study the influence of option framing on consumer choice under the online service customization context and the boundary conditions for the option framing effects (Figure 1). In this

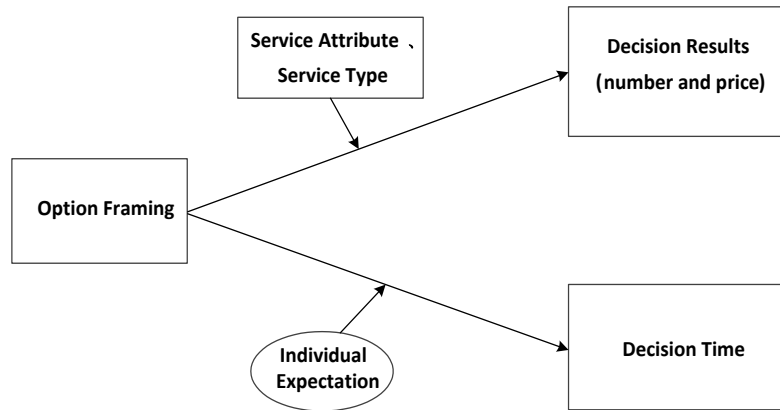


Figure 1. Schematic overview of option framing effects.

study, we used a 2 (variables between groups, addition/subtraction) \times 2 (variables in the group, important/less important, positive/negative) situation-character simulation experiment under online customization context. Subjects were randomized to different condition of option framing. Then, subjects were told that their task was to add (delete) the options they wanted (did not want) from a certain website. We recorded their selection and decision time to analyze whether the results (number and price of selected options) are of significant difference in different option framing context and to examine the influence of framing effects exerted by the importance and type of options.

Mobile communication service was selected as the research object of online customization mainly for the following four aspects. Firstly, for three major telecom operators, apart from phone service, their main sources of income include a multitude of value-added services, which lays a solid foundation for the experimental option settings. Secondly, operators have been established online business hall, which is available for consumers to customize different types of services including positive and negative options. Thirdly, as an indispensable communication tool in daily life, mobile communication service is known well by consumer in terms of consumption and purchasing patterns. In addition, most subjects with college history have experienced e-commerce and customization. At last, for the need of increasing personality, telecom carriers are initiating the discovery of individual customization.

Pretesting and website development

To identify the reasonability of customization experiment on the website, we selected 30 mobile communication services with higher purchasing frequency from the online business hall of three major telecom carriers, China Telecom, China Mobile and China Telecom, and then created a pretest questionnaire. Considering the effectiveness of pretesting, we finally randomly chose 80 undergraduates from a west coast national key university in China to respond to the questionnaire. Except 8 invalid questionnaires, we ended up recycling 72 questionnaires. We employed the seven-point Semantic Differential Scale, which is commonly used and effective for the survey of consumer behavior, to rate the preference (1 = not like at all, 7 = very like) and perceived importance (1 = not like/important at all, 7 = very like/important) of 30 services. In the meanwhile, they were required to fill in their monthly mobile communication consumption. According to the principle of preference above 4.4 and service importance, we finally screened out 20 services (i.e. Internet flow package), whose score

of preference and perceived importance is above 4.4. In order to ensure the accuracy of classification, these 20 services were analyzed by K-means cluster analysis on the basis of perceived importance. The result shows that there are two cluster centers (5.284, 3.976) and there is a significant statistical difference between them ($F(1,18) = 50.009, p = 0.000 < 0.001$). Based on the previous stated category of the service importance, these two types of service are defined as important option and less important option. The ratio of important to less important option is 13:7. In addition, according to the character of the service itself, the ratio of positive to negative service is also 13:7 (Table 1).

For the situation-character simulation experiment of online customization, the requirements of website function and layout were provided to web developers from the beginning of July 2013. With the development of 90 days, our final site could offer the evaluation and customization of mobile communication service to consumer. The simulating situation of this study is subjects are activating their new phone and designing mobile communication package for themselves. Subjects were required to design their packages in the additive and subtractive framing respectively. The additive framing is to ask consumers to add service they want from 20 optional services to the basic service package valued 10 RMB (US\$1.60). Each time subjects add an option, the cost will rise correspondingly. In contrast, the subtractive framing provides 20 integrated options valued 70 RMB (US\$11.21), and then let consumers delete undesired options. Each time subjects delete an option, the cost will reduce correspondingly. In September 2013, 60 postgraduates from a key laboratory of Chongqing were selected for web stress testing and inspection of operational process. To ensure the reliability and credibility of this experiment, the staffs working on experimental demonstration and explanation were trained for one week.

Participants and procedures

Shuptrine (1975) indicates that sample of students, who are suitable for exploratory study, has great homogeneity and can avoid the bias introduced by income, occupation and so on. Besides, extant literature has reported no significant difference between student samples and target samples in framing research. For instance, based on a meta-analysis of 136 studies, Kühberger (1998) found that although student samples dominate framing research, the behavior of student participants does not differ from that of non-student participants (Clawson et al., 1997). In addition, Park and Kim et al. (2012) chose undergraduates as subjects and got satisfactory outcome in the research about product and service

Table 1. Service attributes and type.

Service	Importance	Preference	Attribute	Type	Service	Importance	Preference	Attribute	Type
Internet flow package	5.2	4.98	important	positive	Calls list weekly	4.75	5.03	important	positive
Two cities one home	5.2	5.44	important	positive	Weather forecast	5.08	5	important	positive
Missed call alert	5.44	5.65	important	negative	Ticket network	4.95	4.95	important	positive
Book assistant	5.36	5.09	important	positive	Part-time job seeking	4.06	4.52	less important	positive
Flow monitoring	6.2	6	important	negative	SMS receipt	4.14	4.42	less important	negative
Harassment intercept	6.11	5.98	important	negative	phonological store	4.03	4.47	less important	negative
Call waiting	5.44	5.68	important	negative	I music	4.38	5.44	less important	positive
Mobile navigation	4.93	5	important	positive	7 color tone	3.8	4.59	less important	positive
Call back on busy	5.23	4.95	important	negative	Joke encyclopedia	3.85	4.58	less important	positive
Mobile payment	4.8	4.62	important	positive	Animation package	3.57	4.47	less important	positive

customization. Being consistent with former scholars, 120 undergraduates from four classes of a west coast national key university in China participated in the experiment.

There are four phases in the process of online service customization experiment: the first stage is to let subjects enter the website, register an account and fill in their personal information which includes name, age, gender, class, student ID and phone number, etc.; The second stage is to make subjects be familiar with the background information and rules of the customization task and the function of every option, at the same time they were asked to assess the preference and perceived importance of a variety of service options, as well as the expectation for the number of options they planned to choose on a seven-point scale; The third stage is the formal customization process, the subjects need to add or delete options, and eventually form their own mobile communication package; The fourth stage is to ask for suggestions and express our sincere gratitude to subjects.

One of the major concerns in a lab experiment lies in its unnatural setting; i.e. the participants act as decision makers in a simulated consumer scenario. To ensure decision quality in the current study, we adopted the incentive-aligned mechanism suggested by Ding (2007). The participants were told that they would have the chance to receive rewards both spiritually and materially based on comprehensive evaluation for the consistency of customization outcome and questionnaire results. The material reward is personalized color changing mug in different levels, and the spiritual reward is giving the subjects 3-10

credits rewards.

Measurement of variables

According to the survey of 80 undergraduates, we found the majority of undergraduates' monthly mobile communication consumption is around 50 RMB (US\$6.40). Thus we control the price of communication package in two conditions ranging from 10 to 70 RMB. Park et al. (2000) suggest that the price of products and services has a significant impact on the framing effects, thus in order to avoid the impact of price on the study results, we convert the price of each service 3 RMB (US\$0.48) per month by reference to the pricing standards of three major telecom operators, for example the price of internet flow we actually employ is 5 RMB (US\$0.80) /30M, and in line with it we convert the price into 3 RMB/20M, which is nearly of equal value with what we use. Then we chose a class of 120 undergraduates taught by a professor as our test subjects, including gender ratio of 59:61. Although there is few documents show the effect of gender on the results of this study, we try to randomly assign the 120 undergraduates to two conditions on the principle of equal proportions of men and women. The variables measured during the experiment as follows.

Customization mode. Customization modes are set as "addition mode" and "subtraction mode". "Addition mode" is to add options that they want on the basis of a basic

service package; "Subtraction mode" is to delete undesired options on the basis of a fully loaded package.

Option attribute and type. On the one hand, we classified options into important and less important options. Subjects used a seven-point scale (1 = not important at all, 7 = very important) to rate the degree of perceived importance of service options. On the other hand, it can be categorized into positive and negative options based on the description and nature of options. For instance, the flow monitoring belongs to the negative option since it always reminds consumers the flow usage in order to effectively prevent overuse of flow.

Decision time. Decision time is mainly recording the time of customization process in the third phase, which includes thinking time and operating time. We measured how long each subject took to complete the additive/subtractive customization process. Specifically, when subjects had finished reading the general instructions and background information about the customization task, we asked them to click the begin button. Respondents were then instructed to configure their service package by adding/deleting options. Upon finishing the customization process, respondents were asked to click the end button. In this way, the total decision time for an additive task or a subtractive task can be measured in seconds automatically by computer.

Individual expectation. To test the moderating effect of individual expectation (H4), before the experiment, subjects were asked to use a seven-point scale to do the expectation assessment for the number of options they planned to choose under the online customization context

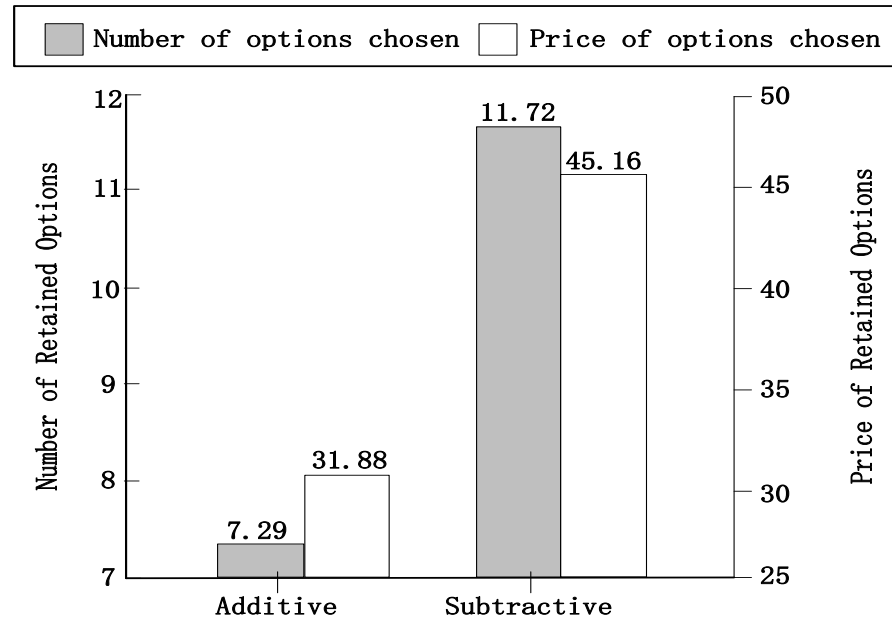


Figure 2. Effects of option framing on customization results.

(1 = very low expectation, 7 = very high expectation).

Customization results. The computer automatically record the total number of options, including the number of different attributes and types of options (important/less important; positive/negative) the subjects chose under different customization mode, and calculate the total price of options and the proportion of different options. The number and total price of options will be used to test the impact of option framing on consumers (H1) as well as the interaction between option framing and types of service (H2, H3).

RESULTS

Five participants failed to follow the instructions or complete the whole questionnaire. We synthetically analyze the data and delete five invalid samples based on the attitude and serious degree of subjects, the regularity of scale, the consistency of consumers' preference, perceived importance of the options and the results of their choices. Thus the final sample for this study was 115, with a +OF/-OF ratio of 58/57.

The effect of option framing on customization results

An analysis of variance (ANOVA) was performed to test H1. First of all, the results of homogeneity of variance test on the number consumers chose revealed that there was no significant statistical difference between the +OF and -OF condition (Levene = 3.129, $p = 0.08$). Then according to the analysis of variance, we found option framing differentially affected the number of options selected as expected. Subjects engaged in -OF condition selected

more options ($M = 11.72$) than those engaged in +OF ($M = 7.29$; $F(1, 113) = 53.056$, $p < 0.001$). Total option price was also higher for subjects engaged in -OF ($M = 45.16$) than those engaged in +OF ($M = 31.88$; $F(1, 113) = 53.056$, $p < 0.001$) (Figure 2). Thus, as expected, we observed that option framing affects the number and the total price of options selected. Hence, H1 received good support.

The interaction of option framing and service importance

Based on the importance of 20 options, we carried out the K-means cluster analysis, the result of which showed there are two clustering centers (5.197, 3.360) and there was a significant statistical difference between them ($F(1, 18) = 32.359$, $p = 0.000 < 0.01$). Through comparative analysis, we found the sort result (important versus less important) was completely consistent with the result which we got in the pretest, which showed the classification criterion and result had high reliability.

An analysis of variance (ANOVA) was performed to test H2. First of all, the results of homogeneity of variance test on the number consumers chose revealed that there was no significant statistical difference between the important and less important options that consumers chose (Levene = 0.249, $p = 0.619$). Then according to the analysis of variance, we found the option proportion (important versus Less important) that consumers ultimately chose in the +OF condition was significantly different from that in the -OF condition ($F(1, 113) = 8.774$,

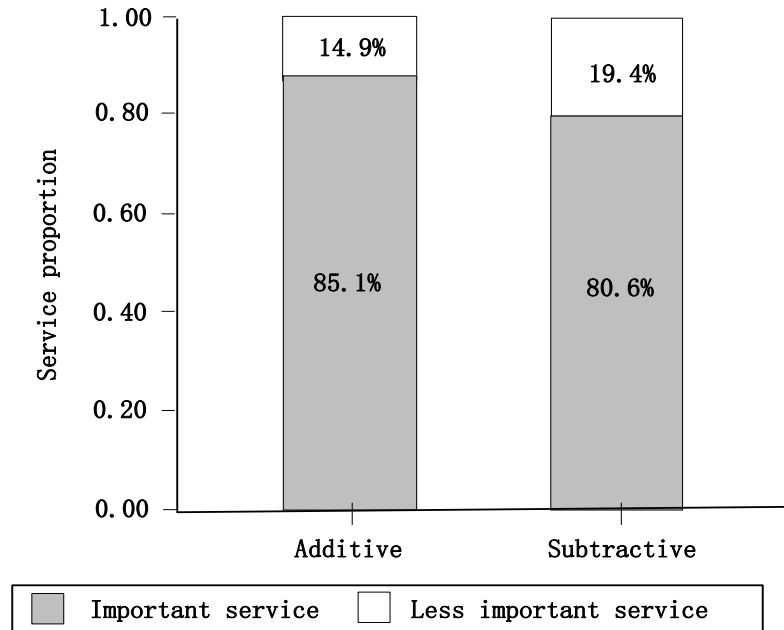


Figure 3. The interaction of option framing and service importance.

$p = 0.004 < 0.01$; Figure 3). As expected, the proportion of important options in the -OF condition ($M = 0.806$) was lower than that in the +OF condition ($M = 0.851$), while with regard to less important options, the proportion in the -OF condition ($M = 0.194$) was higher than that in the +OF condition ($M = 0.149$). That is to say, the effect of option framing on the customization results tended to vary because of the importance of options. In consequence, an interaction between the importance of options and the option framing statistically existed, thus H2 was supported.

The interaction of option framing and service type

An analysis of variance (ANOVA) was performed to test H3. First of all, the results of homogeneity of variance test on the number consumers chose revealed that there was no significant statistical difference between the positive and negative options that consumers chose (Levene = 6.308, $p = 0.013$). Then according to the analysis of variance, we found the effect on option framing had no significant difference between the positive and negative options ($F(1, 113) = 0.445$, $p = 0.506 > 0.01$; Figure 4). The proportion of positive options in the -OF condition ($M=0.627$) was lower than that in the +OF condition ($M = 0.644$), while with regard to negative options, the proportion in the -OF condition ($M = 0.373$) was higher than that in the +OF condition ($M = 0.356$). That is to say, the interaction between option types and the option framing indeed appeared to the expected trend, the effect of option framing on the customization results of

consumers tended to vary because of the type of options. Therefore there was an interaction between the type of options and the option framing, but it was not significant, thus H3 only got partial support.

The effect of option framing on decision time: the regulatory role of individual expectation

Before the test of hypothesis H4, we carried out the K-means cluster analysis based on consumers' expectation, the result of which showed there were two clustering centers (5.438, 2.706) and there was a significant statistical difference between them ($F(1, 113) = 340.235$, $p = 0.000 < 0.01$), which is correspond to classification as stated earlier.

Multivariate analysis of variance (MANOVA) was performed to test H4. First of all, the results of homogeneity of variance test on the number consumers chose revealed that there was no significant statistical difference between consumers' expectation and option framing (Levene = 0.000, $p = 0.989$; Levene = 1.056, $p = 0.306$). Then we separately tested the main effect of option framing and consumers' expectation on decision time, the results did not show significant difference ($F = 0.468$, $p = 0.495$; $F = 0.084$, $p = 0.772$). Finally, we explored the interaction of option framing and consumers' expectation. We conducted a MANOVA analysis using the option framing and consumers' expectation as the dependent variables, we found the interaction effect of option framing and consumers' expectation on decision time is significant ($F(1, 111) = 4.558$, $p = 0.035 < 0.05$;

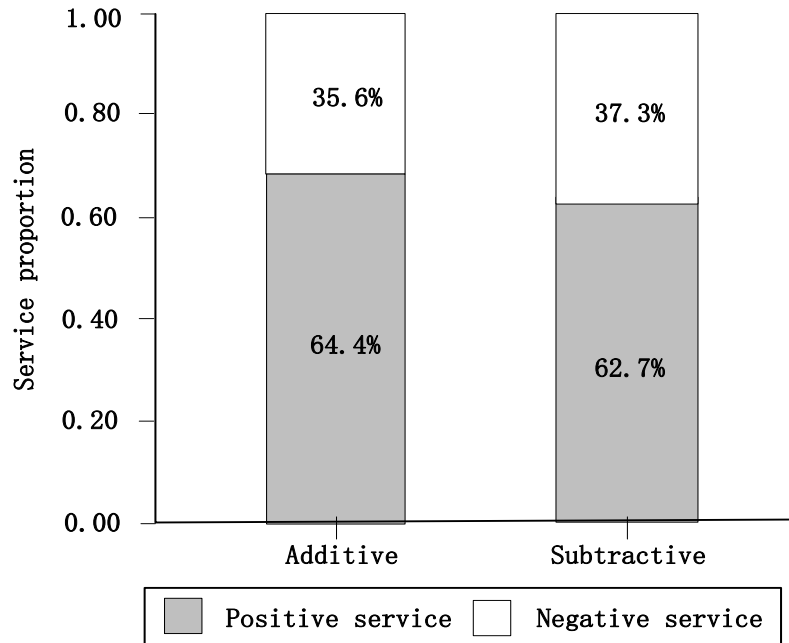


Figure 4. The interaction of option framing and service types.

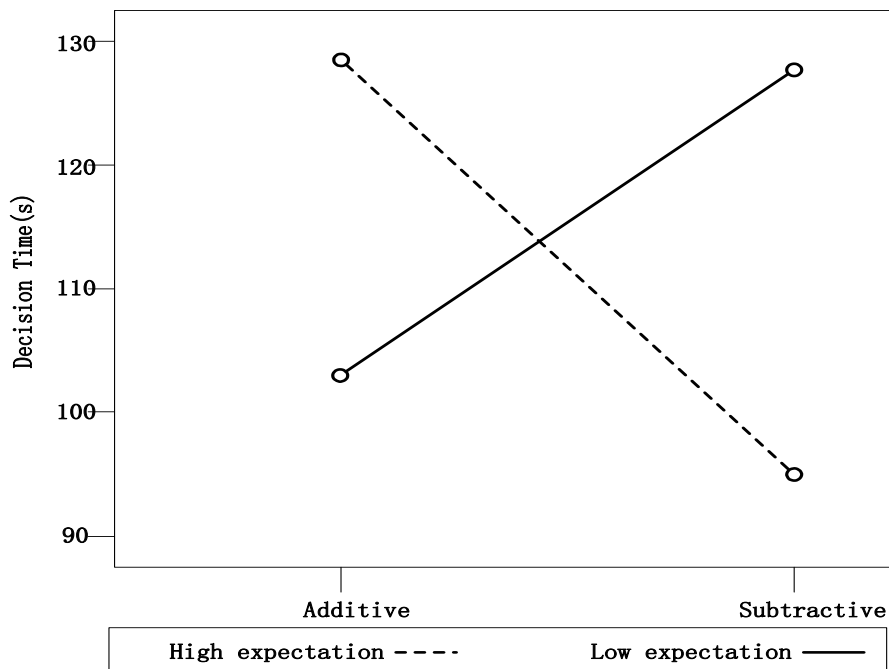


Figure 5. The regulatory role of individual expectation.

Figure 5). As expected, the decision time consumers with low expectation spend in the -OF (M = 127.65) condition was obviously more than that in the +OF (M = 103.29) condition. While consumers with high expectation tended to take more time in the +OF condition (M =

128.42) than -OF condition (M = 95.15). That is to say, the effect of option framing on consumers' decision time tended to vary because of consumers' expectation. Consequently, consumers' expectation had a moderating effect on the relationship between the option framing and

consumers' decision time, thus H4 was supported.

IMPLICATION AND CONCLUSION

Based on Loss Aversion theory, this article examines and verifies the effect of the option framing on consumers' decision efficiency and the boundary conditions for the option framing effects through the situation-character simulation experiment of information services online customization, which produces the following findings: (1) Compared with the additive option framing, consumers in the subtractive option framing tend to choose more service options with a higher total option price (H1); (2) Online option framing and service importance (important versus less important) impose a significant interaction effect—the less important options will be more selected in the subtractive option framing and the important ones are more likely to be chosen in the additive option framing (H2); (3) consumers' expectation plays a regulatory role in the relationship between option framing and decision time: consumers with low expectation tend to take more time when they use subtractive versus additive option framing; while those with high expectation prone to taking more time in the additive versus subtractive option framing (H4).

Theoretical contributions

The findings above expand the existing research conclusions and enlarge the applicable area of option framing effect. According to previous research, the option framing effect is mostly found based on offline product customization, while its mechanism of action in the online service customization has not been studied. The study has examined the effect of option framing on the consumers' customization results in the online service customization context and verified the option framing effect in this context, which enriches and extends the application situation of the option framing effect.

More specifically, according to the identification and discovery of the boundary conditions for the differential effects of option framing on choice, the study empirically demonstrates that the option framing effect differ depending on the characteristics of attributes in the defaults (i.e. the importance of attributes that constitute the defaults). Compared with important options, less important options expand the option framing effect, which provide some theories for reference to the further study of the option framing effect. Meanwhile, it tests and supplies the research carried out by Park et al., in which he proposed there were a significant influence of option framing on framing effect. The study further demonstrates the importance of service options affect consumers' choice results mainly through various degrees of attention and information processing on options in different conditions.

The study has recognized and found that the effect of option framing on consumers' decision time in the online customization context depended on consumers' expectation on the number and price they ultimately chose. Besides the study experimentally verified the consumers' expectation has a moderating effect on the relationship between the option framing and consumers' decision time, which detailed and extended the research conclusions Park et al. (2000) and Jin et al. (2009) drew.

Managerial implications

The findings from the current study have important managerial implications for companies. Firstly, the study brings enterprises majoring in the information service new perspectives to create value. For service enterprises, customization is a critical weapon in differentiating their own service from that of competitors. Besides, we confirm the attractiveness to service enterprises of service customization through subtractive framing. As the above results demonstrate, consumers usually end up paying a higher total price for the service package, thus increasing sales revenue. Therefore, on the condition of not considering the limitation of other factors, we suggest information service providers had better to present the service in subtractive framing, allowing consumers to delete undesired option on the basis of the full-options model, so that they will choose more options with a higher price, which bring more profits to enterprises.

Secondly, the study provides an important reference value about the combinational design of the online customization context and the service importance to information service enterprises. The study suggests that there is a significant effect of service importance on option framing effect. Hence, we propose the information service providers should combine the option framing with the importance of service when they choose the best mode presented to the consumer, so that they will achieve the goal of higher profits. For example, if the enterprise aims to promote the less important service, the enterprise can add more less important options to the package and provide the subtractive framing to the consumers at the same time, which is beneficial to boost sales of less important services.

Thirdly, the study provides the information service enterprises with some practical significance to improve the efficiency of customers' decision. The study finds the effect of option framing on consumers' decision time in the online customization context depends on consumers' expectation on the number and price they ultimately choose. For "time-compressed" (i.e. busy) consumers, if they are with low expectation, we tend to advise them to adopt additive mode, otherwise we tend to suggest the subtractive mode. In consequence, the enterprise should pay attention to consumers' time resource when they design the online customization context, so that they can meet customers' demand at the most.

Limitations and further research

The study also raises several issues relevant to further research on option framing. First, this study's hypotheses were tested in the context of a single service category (i.e. mobile communication service), limiting the generalizability of findings in this research because of the big difference between different service industries. Besides, the study is based on the online customization context, but there are some differences between online and offline customization. Thus, future research is warranted to replicate the results by using other service categories in the online customization context, in order to expand the applicable scope of research conclusions and draw on the universal conclusions.

Second, the study tests the interaction effect of the importance of service options and option framing. In the experiment, the proportion of important options to less important options is 13/7, not 1/1. Though according to logical calculus, if we adjust the proportion to 1/1, the number of less important options consumers choose in the -OF condition will increase, so that proportion of the chosen unimportant options to all the options will increase in the meantime, which provides a more powerful evidence to H2. But in order to obtain a more stable conclusion, the adjustment of proportion to 1/1 is needed for further research.

Third, as stated above, the interaction effect of the type of service and option framing is non-significant ($F(1, 113) = 0.445, p = 0.506 > 0.01$), but the experimental result presents the expected direction. On the one hand, it may be caused by the description of the positive and negative options. If the description of negative options is inappropriate, consumers will not pay enough attention to the options and can't find their potential value, so that they will not choose the options. On the other hand, it is likely to result from the relative proportion of positive and negative options. As mentioned in the experiment, the proportion of positive option to negative option is 13/7, the number of negative option is significantly less than that of positive option. Hence, future research should reconsider and amend the description of options, highlight the differences between different types of options, so that consumers are prone to perceive the risk of positive and negative options. Meanwhile the relative proportion of different types of options should be adjusted to 1/1 so as to increase the accuracy of experimental results. In addition, it would be beneficial to investigate other factors that may moderate the differential effects of option framing on choice.

Fourth, in our exploratory examination, 20 alternative options are randomly displayed in the online customization website, not considering the ranking of options with different attributes and types. According to previous researches, the choice, rating and ranking tend to affect consumer choice (Kühberger and Gradl, 2013). In consequence, our future research can focus on the influence of ranking on the option framing effect, identify-

ing and finding the boundary conditions of option framing effect and then enriching and detailing the application context of option framing effect.

Fifth and finally, in the study the price of every option is converting to 3, through which control the effect of option's price. However, actually what the three operators implement is the differential pricing strategy. Though we make the price conversion to the extent that the price is nearly equivalent with its value, which is not the same as what the consumers perceived, that is to say the price still have a tiny impact on the consumer choice in our experiment. Future research can take price into consideration, studying the option framing effects in different pricing strategy.

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Conflict of Interests

The authors have not declared any conflict of interests.

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Full Length Research Paper

Scenario of business practices in competitive intelligence within the telecommunication industry

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The present paper sought to apply the theoretical framework of Wright-Pickton on Competitive Intelligence (CI) to the business practice reality within the telecommunications industry in Brazilian firms. The aim of the study was to examine the current Brazilian scenario, which is to contribute to the improvement of that model. With this in mind, we devised a set of managerial advice in view of enhancing the Competitive Intelligence function, thus acknowledging such feature as being vital to the strategic decision-making process. Herein, the telecommunications industry has been thoroughly investigated in its value chain. To this end, the data collection was conducted through in-depth interviews with the executives in charge of the areas or functions that were comparable to the concept of Competitive Intelligence in their respective companies. Finally, the conclusions show that both aspects "data collection" and "use of CI outputs" are distant from what the Framework recognizes as ideal. Consequently, those points still need effective betterments to approximate the practice as much as possible of the company's strategy. Ultimately, this paper brings to light some pivotal discussions towards what CI is and its applications in business decision-making processes to add new insights to the theoretical framework of practice.

Key words: Competitive intelligence, Brazilian scenario, market analysis, Wright-Pickton, telecommunications.

INTRODUCTION

In recent years, the global competitive scenario has increasingly sent clear signs of fierceness and utmost intricacy. Some phenomena such as globalization, the rapidly changing consumer behavior, the shortening in the life cycles of several products, among others point to a gloomy and hard-to-foresee panorama. In this context, Argote and Ingram (2000), Heinrichs and Lim (2008), and Karim (2011) agree that knowledge is the main

source of competitive advantage. Thus, having access to the information used to create and generate knowledge, as well as the organizational process of collection, retention, dissemination and application of such knowledge are essential elements for corporate survival in the midst of such a tempestuous and dynamic environment as the 21st Century. Therefore, the use of Competitive Intelligence (CI) in companies seeks to

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obtain such knowledge of the market. Moreover, as Kohli et al. (1993) positioned in their seminar paper on market orientation model, intelligence generation and dissemination plus the responsiveness provoked by the specific external pressure is fundamental to a company to improve its business performance.

Given the relevance of the topic to the field of Management, the present work aimed at diagnosing the practice of Competitive Intelligence in Brazilian companies within the telecoms sector. The tool of choice for diagnosis and analysis is the typology of Wright, Pickton and Callow (2002), being called here from now on WP Model. The construct establishes a framework of the CI practices expected in the organizational setting. The typology categorized the companies under four criteria: 1) attitude, 2) data collection, 3) use of information, and 4) the location of CI functions. For each of these, it is possible to establish a systematic arrangement and then identify the actual gap between the current situation and the model considered by the authors as "ideal." The choice of this model is justified due to its previous application in various industries and countries by different authors, Badr (2003), April and Bessa (2006), Liu and Wang (2008), and Hudson and Smith (2008) - thus enhancing its importance in academia.

It is worth mentioning that, more recently, the WP model has been applied in other industries, with different purposes and having some adaptations being suggested. For example, Wright et al. (2013) applied the model in Turkey analyzing the status and barriers for technology adoption related to competitive intelligence. Bisson (2014) has applied the model for the French public chambers of agriculture to examine their ability to provide information and knowledge for competitive and strategic purposes, as a support for farmers to become more entrepreneurial, and suggest adaptations when dealing with public organizations.

The project was carried out through in-depth interviews with managers responsible the functions of Competitive Intelligence in the firms, and also with the executives impacted with the outputs generated by that activity as in Wright et al. (2009). The survey sought to verify all the instances of the theoretical framework, and comprised eight companies within the telecommunications industry. The firms were placed in distinct stages throughout the value chain: infrastructure providers, device manufacturers, and carriers. In addition, this paper also seeks to contribute to improve WPmodel in line with the more recent studies such as Wright et al. (2013) and Bisson (2014).

In this sense, the questioning that the present work aims to answer is: Which is the stage of usage of concepts and tools for Competitive Intelligence in Brazilian companies within the telecommunications industry?

Accordingly, to answer such questioning, a literature review over CI and its ramifications in organizations shall be undertaken. Therein, the WP model will be introduced

as the analysis method, and the main results of interviews with executives will be shown. Finally, as a final result of this study, the conclusions and managerial implications of CI in the cited firms will be presented.

THEORETICAL/EMPIRICAL SUPPORT

Definition and evolution of the field

There are several definitions to Competitive Intelligence; each author establishes his or her own approach, according to the due purpose. However, there is no universal, broadly accepted definition in the literature over the theme. For the purpose of this paper, the most appropriate definition refers to Wright et al. (2009). According to them, Competitive Intelligence comprises the process by which organizations gather information about competitors and the competitive environment, ideally using such information during their decision making process, and internal process planning. Thus, it is understood that CI has the aim of improving decision-making when bringing precise knowledge concerning the market and competition.

The early relevant articles about Competitive Intelligence date back from 1984. A survey conducted by Wright et al. (2002) identified that until the 2000s, about 700 articles have been published in far-reaching academic journals. Over the first fifteen years, the studies chiefly focused on the reality of either the United States or Canada; with a rather scanty scope concerning other regions of the globe.

The evolution of the field shows a conceptual change in the research approach over the competitive scenario. The first publications define the term "competitor intelligence," as defined by Lendrevie and Lindon (1990), as the activities companies employ to determine and understand their competitors, their strengths and weaknesses, and anticipate their movements.

The term "competitive intelligence" emerges as an extension of that scope since it includes the response of the competitor and the company itself towards the changes in consumer habits into the strategic decision making process (Lendrevie and Lindon, 1990). In this way, the competitive environment is also considered in the analysis.

Thus, competitive intelligence stands as the evolution of competition monitoring for having also incorporated such activity into the company's strategic management. The most recent articles now tend to focus on "how" to practice CI, instead of discussing "why" to do it, since that phase seems duly overcome.

Another author depicting the conceptual evolution of Competitive Intelligence is Prescott (1995). He performs a gradation into three eras: before 1980, the period between 1980 and 1987, and from 1987 until the present date of his study. In each one, the CI scope evolves

Table 1. Evolution of competitive intelligence.

	Before 1980	1980-1987	1988-Present (1999)	Future
Phase	Data collection	Analysis of Competitors	Competitive Intelligence	CI as a key competence
Formality level	Informal	Partially formal	Formal	Formal and Informal
Orientation	Tactical	Tactical	Tactical / Strategic	Strategic
Analysis	Little or none	Predominantly Quantitative	Qualitative and quantitative	Emphasis on Qualitative
Attention of senior executives	Low	Limited	Moderate	High
Influence on the decision-making process	Little	Weak	Strong	Direct input
Location	Library/ Marketing	Planning / Marketing	Planning / Marketing / CI Unit	Planning/ Marketing / CI Unit

Source: Adapted from Prescott (1995).

accordingly to fit the corporate requirements regarding its function. Table 1 summarizes this trend.

The table shows the evolution of the field over the past decades, starting from a reduced scope, with little exposure and power within the company, to becoming a highly influential activity on corporate decisions, with robust techniques of analysis and greater attention of senior executives. It is noteworthy that the "future" appointed by the author referred to the year of publication of his article (1995).

Key Concepts in Competitive Intelligence

One of the main concepts of CI is the Intelligence Cycle, understood as the process by which raw information is transformed into knowledge (Kahaner, 1996). Figure 1 comprises the four phases presented by the author for this cycle:

The first phase comprises Planning and Direction, where there is scope definition of CI activities, objectives and the expected outcomes through its practice. The second phase is the Data Collection, which involves gathering the desired information from the previous selection of sources, whether primary or secondary. The third phase involves the Analysis of data, which is considered the most intricate stage, where CI practitioners need to evaluate the data, seeking for patterns and delivering, as the outcome, different scenarios / answers based on what they learned. Finally, the fourth phase corresponds to Dissemination, which includes the knowledge spread throughout the areas of the company that initially had expressed the need for the answers

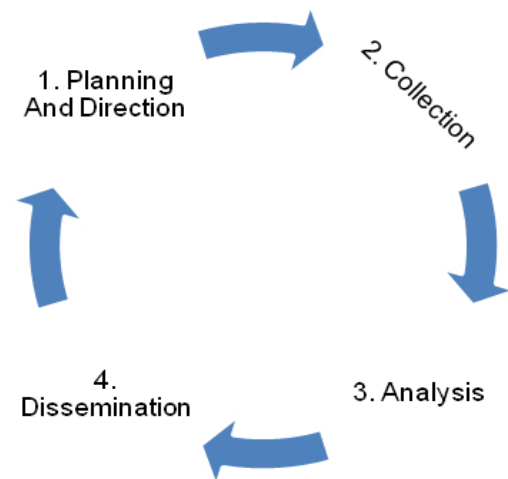


Figure 1. Competitive Cycle. Source: Kahaner 1996.

therein obtained from CI. This cycle is restarted, because the dissemination of knowledge generates new questions and questionings that once again shall be addressed.

Under a more methodical viewpoint, another conception of CI resides in the Competitive Intelligence Process of Gray (2010). Figure 2 illustrates this step-by-step guide elaborated by the author.

Properly, the process indicates the function on the practice of CI which is lead raw data through a "machine" of the organization, analysis and selection of such data, until the created intellect can be valuable to the decision-making process. In fact, the results obtained from the

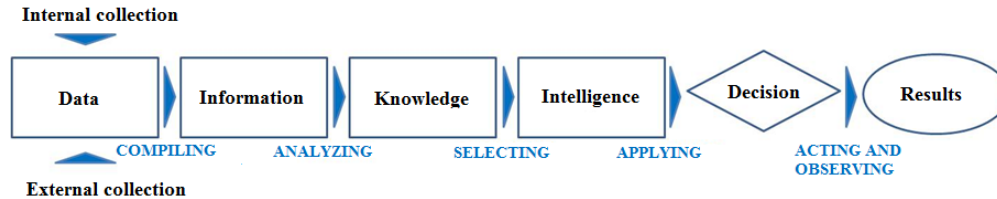


Figure 2. Competitive Intelligence Process. Source: Gray (2010).

Table 2. Description of different behaviors regarding attitude and understanding of the companies on the practice of ci.

Attitude type	Description
Immune attitude	Too busy thinking about today to worry about tomorrow. Thinks that CI is a waste of time. Minimal or no support from either top management or other departments.
Task driven attitude	Finding answers to specific questions and extending what the firm knows about its competitors, usually on an ad-hoc basis. Departments more excited about CI than top management who don't see the benefits.
Operational Attitude	A process, revolving around the company as its center, trying to understand, analyze and interpret markets. Management tries to develop positive attitudes towards CI for short-term and personal bonus gain.
Strategic attitude	Integrated procedure, competitors are identified, monitored, reaction strategies are planned and simulated. Gets top management support, co-operation from others, seen as essential for future success.

Source: Wright et al. (2009).

decision should be applied valuable inputs for IC process in the future, which will interpret such results throughout its chain.

The Wright-Pickton Best Practice Model

As to the practice of CI in firms, Wright et al. (2002) conducted a study motivated by the "imminent risk" of consumer needs only to be considered the main input for strategic planning in corporate marketing. In other words, the authors felt that there was a scholarly knowledge opportunity for the process of market diagnosis to incorporate, in addition to the client-oriented perspective, the movements of competition within the competitive environment.

Therefore, to address this issue, the authors conducted a survey in the United Kingdom with both top management executives, and particular professional practice of CI. Respondents belonged to a vast myriad of business segments, to create a framework for the classification of IC activities of companies, keeping in mind their ideal goal: to provide support to the strategic decision-making process. The framework,WP model, was designed upon four objectives:

(a) Determining both attitude and understanding towards the practice of CI in companies;

- (b) Identifying information gathering methods;
- (c) Assessing the use of CI practice outputs for strategy formulation;
- (d) Identifying where the responsibility for the functions of CI within the organizational hierarchical structure is allocated.

The categories designed for each of those factors are outlined in Tables 2 to 5.

The categories show a threshold variation within the firms' reality, ranging between a poorly integrated structure of IC processes and the level of nearly perfect integration with the practice towards the strategic decision-making flow. Therein, to classify the answers of respondents in those categories, the following factors were used: intelligence lifespan, terminology for functions of CI, and attitudes of the leaders regarding the activity of CI.

Another dimension of the model is the information gathering process, ensuing to the following rationale:

Two categories differentiate and measure the robustness of the processes of information gathering towards intelligence activities. In this sense, to classify the respondents' replies, two aspects were taken into account: types of intelligence collected and sources used.

A third dimension in the model involves the use of knowledge generated by the practice of CI in organizations:

Table 3. Description of the different behaviors in the firms towards the collection of information for the CI process.

Gathering	Description
Easy gathering	Firms which use general publications and/or specific industry periodicals and think these constitute exhaustive information. Unlikely to commit resources to obtain difficult or costly information
Hunter gathering	Firms that realize that CI needs extra, sustained effort than Easy Gathering. Resources are available to allow staff to act within reasonable cost parameters. Intellectual effort is supported.

Source: Wright et al. (2009).

Table 4. Description of the different behaviors regarding the USE of the knowledge produced by CI in the companies.

User type	Description
Joneses User	Firms trying to obtain answers to disparate questions with no organizational learning taking place. Has commissioned a CI report from a consultant because that is what everybody else has done.
Knee-jerk User	Firms which obtain some CI data, fail to assess its quality or impact, yet act immediately. Can often lead to wasted and inappropriate effort, sometimes with damaging results.
Tactical User	CI mostly used to inform tactical measures such as price changes, promotional effort, competitor activities in the market or segment, yet is acutely aware of its potential value to the business.
Strategic User	CI is used to identify opportunities/threats in the industry and address "what if" questions. All levels of staff know the firm's CSFs, open management culture which displays trust and encourages involvement.

Source: Wright et al. (2009)

Table 5. Description of the different behaviors regarding location of ic activities in the companies.

Location type	Description
<i>Ad-Hoc Location</i>	No dedicated CI unit. Intelligence activities, where undertaken, are on an ad-hoc basis, subsumed into other departments, with intermittent or nonexistent sharing policies.
Designated Location	Firms with a specific intelligence unit, full time staff, dedicated roles, addressing agreed strategic issues. Staff have easy access to decision makers, status is not a barrier to effective communication.

Source: Wright et al. (2009).

Table 4 displays the categories that differentiate the motivating factors for the use of intelligence, and how close to the strategic decision making it is. Then, to classify the answers given by respondents within this framework, the following criteria were considered: a) purpose of intelligence activities, b) methods used for analysis and dissemination, and c) mechanisms to check information accuracy.

Finally, the model includes the type of location of CI practice within companies into their hierarchical and functional structures:

The two categories of allocation take into account a more objective look at the time that the company establishes their process of intelligence acquisition, i.e.,

what the company does towards the needs of knowledge resulting from CI. Consequently, there are two possible pathways: the company may either perform cluttered and fragmented intelligence "functions" or concentrate efforts into a specific department, with a full-time staff, properly designated this end, having as outcome a comprehensive and broader view of the competitive scenario.

Consequently, within this framework, the ideal model appointed by the authors refers to the company classified in the last category of each criterion. In other words, for intelligence activities to fulfill their goal, they should have a strategic approach with a thorough collection of information that would be used for strategic decision making; this process should be allocated in the

Table 6. Set of questions versus WP model

Attitude	Gathering	Use	Location
Practice longevity	Type of data collected	Reasons for engaging in CI activities	Processes involved in intelligence acquisition
CI practice Terminology	Sources of the information used	Major areas serviced	
Senior Management Support		Analysis tools employed	
		Knowledge Dissemination methods	
		Information Accuracy mechanisms	

Source: Elaborated by the author

Table 7. List of respondents.

Business	Position held
Mobile Telephone Carrier	Director
Landline and mobile telephone, and TV service provider	Director
Landline and mobile telephone, and TV carrier service provider	Senior Manager
Electronics manufacturer, mobile telephone devices	Manager
Electronics manufacturer, mobile telephone devices	Manager
Landline and mobile telephone, and TV carrier service provider	Director
Mobile Telephone Carrier	Senior Manager
Telecommunications Infrastructure manufactures	Director

Source: Elaborated by the author.

department devoted to that end.

METHODOLOGY

The project used a qualitative approach, since the application of the theoretical model of Wright et al. (2002) involves a thorough investigation of perception and attitude of managers of companies in IC practice. Such analysis requires an exploratory perspective, because the interaction between researcher and respondent is essential for adapting the obtained responses to the framework.

The data collection was conducted through in-depth, face-to-face interviews. The set of questions followed the same line of questioning used by Wright et al. (2009), with the addition of a final question about the central issues that, according to the perception of respondents, currently challenge CI teams practically.

1. What is the longevity of CI practices use in your company?
2. What terminology is used for the CI gathering process?
3. What are the processes and/or procedures for acquiring intelligence?
4. What are the main reasons for CI activities in your company?
5. What are the main areas serviced by CI in your company?
6. What is the commitment level of senior executives towards CI practice?
7. What types of intelligence is gathered?

8. What sources of intelligence are used?
9. What methods of analysis are used?
10. What dissemination methods are employed?
11. What accuracy mechanisms are employed?
12. What are the main challenges faced by your CI area today?

Each question addresses one of the blocks of the WP model. Table 6 summarizes this correspondence.

In this way, each response obtained fits the company of the respondent into one of the categories presented in the previous chapter, within the four blocks of the model evaluation. The classification took into account the degree of maturity of the practice displayed by the company, regarding the use of CI concepts and tools – in accordance with the research questioning. Therefore, the higher the degree diagnosed in the responses, according to the structured interview, the nearer to the ideal scenario, predicted by the model-Wright Pickton, the company would fit in.

Eight executives, CI practitioners within organizations were interviewed, which held different positions and level of seniority. Table 7 shows all respondents and their hierarchical positions. It is important to mention that the 8 respondents represented 8 companies and they together represented an important share of the Brazilian telecommunication market, indicating that although the sample was small it represented quite all the industry being analysed.

The coding process to interpret and categorize all the content

Table 8. Coding of answers.

Classification	Question	Example of answer	Author's analysis
Attitude – Strategic Attitude	What is the commitment level of senior executives towards CI practice?	<i>“(Name of the company’s president) is a person that always has some time in his agenda for you. That’s the success factor of a CI department: to have a key sponsor that wants this kind of work and values our inputs and takes you forward. He is our spokesman when we do an analysis with important recommendations that need to be addressed by our internal clients.”</i>	In this case, we clearly see that the CI department has a big support from the company’s president in its projects, which means that this specific organization has a strategic attitude towards the practice of CI
Gathering – Easy Gathering	What sources of intelligence are used?	“We have a lot of sources, such as news clippings, media, government agencies numbers etc. However, this huge information outline could be useless, once that we don’t have the capacity to process it or analyze it. We are looking for some technology supplier that could help us to extract, consolidate and organize all this information in a user-friendly platform, but it is hard to find an affordable one.”	In this case, we understand that the company tries to compose an interesting structure of information sources, but has a problem to use it properly. So, despite the effort, the sources are misused which means that the organization has an easy gathering method
User Type – Knee Jerk User	What dissemination methods are employed?	“We used to try to present in a meeting all our studies, but we failed at most of the times due to agenda problems. The department that asked us some analysis almost never had time to schedule a conference. So, we quit this initiative and started to send our reports by e-mail and if there is some doubt they call us.”	According to Marin and Poulter (2003) and Kahaner (1996), the electronic methods of dissemination do not address properly the objectives of the CI practice. In this case, we see that the company pursues a method that doesn’t allow the dialog and feedback among areas, which indicates an example of knee jerk use
Location – Ad-hoc Location	What are the processes and/or procedures for acquiring intelligence?	“Our department is specific to the CI practice, but we are still building our reputation within the company. So, there are other departments that do some functions, in an unstructured way, that we should do, generating rework and waste of effort.”	In this case, despite the existence of a CI department, there are a lot of other CI activities being done by other areas. So the CI effort is not concentrated, which sets an Ad-Hoc Location

Source: Elaborated by the author.

extracted from these interviews was followed as indicated by Nogueira (2001). The sentences were transcribed and classified within the conceptual framework. Table 8 gives us some examples on how this interpretation was made to fit the answers in the WP model. Some words are in bold within the respondents' statements to demonstrate the process of classification:

RESULTS

Based on the interviews, there was an adjustment of the responses to classification categories that are specified in the model-Wright Pickton. Figure 3 points out the panorama of the telecommunication industry in the practice of Competitive Intelligence:

As for the first block, the industry was diagnosed as *Operational Attitude*, a prior stage to the ideal WP model. The strengths included the aspects of *notion of the history / evolution* and *terminologies used* to describe the

practice of Intelligence within companies. On the other hand, the aspect of *senior management support to IC activities* was identified as the drawback.

Although few respondents were able to cite the exact date of the start of activities in the field of CI, it was noted that the history and the evolution of the practice of CI within the companies were well known by the managers. Still, in some cases, the short time working in the company or occupying the position were not obstacles for leaders to know which way to point out that the function of IC followed in past years. This evident temporal contextualization is crucial to demonstrate that managers understand the positioning of CI within the company.

As for the terminology used, it can be noticed that companies have an adequate overall understanding of the activities of the IC. Nevertheless, it was observed that firms still make slight dissonances naming such as "Competitive Intelligence" or "Market Intelligence." There

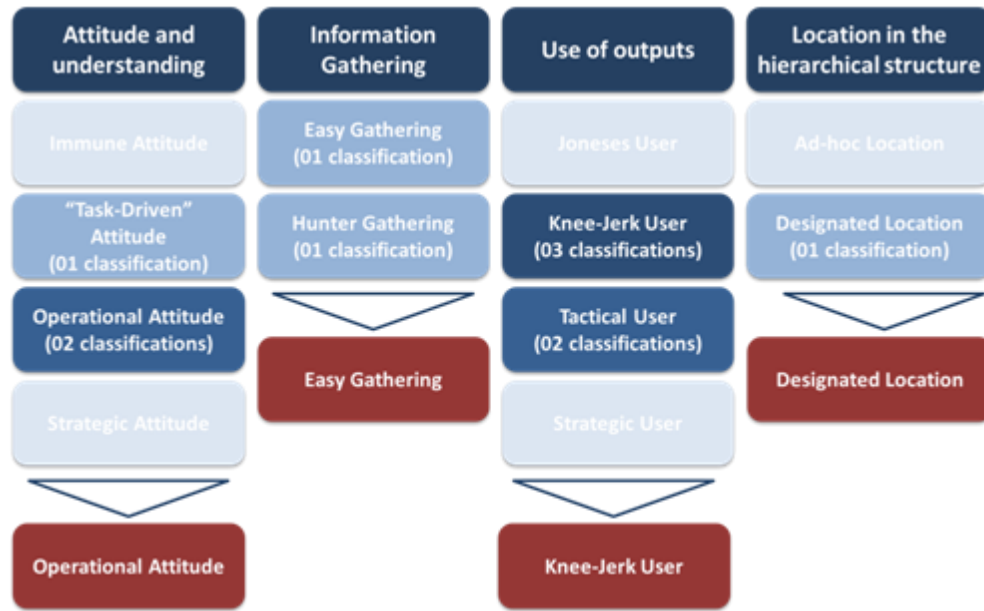


Figure 3. Final Diagnosis within the WP model. Source: Elaborated by the author according to the structured interviews.

was only one exception, in which the area responsible for the CI functions received the denomination "Market and Consumer Research." That is an interesting case because, in addition to strengthening the inclusion of the market environment the scope of competitive intelligence, it also shows a cultural trait of that company, which is strongly customer-oriented.

However, at the time of diagnosis on the support of senior management to IC activities, it was concluded that the outlook is still far from ideal. Although there is some support in all cases, there are issues about its intensity, e.g., whether IC leaders perceive it as "high" or "medium". The "Medium" support provided by senior management was reported as a "space" that the area still needs to build, and then secure a high relevance status towards pivotal /strategic projects of the company.

The level of support given to the CI activities is intrinsically linked to the mindset shared by the key managers of the company. In this sense, what is thought for the whole company ends up influencing what is expected as output from the practice of CI. Kahaner (1996) also indicates that some managers are still stuck in the age of information, failing to see their difference in relation to intelligence and thus limiting the understanding of the real benefits of the CI practice.

The classification on the second block, thus, means that the process identified in the organizations exists, trying to understand, analyze and interpret markets. It supported the view that managers have tried to develop positive attitudes towards CI for short-term and personal bonus gain and not yet a strategic role existent in the company as the highest stage would indicate, supporting

the proposed form of classification suggested by the WP model.

About the second block of information gathering, the industry was assessed as belonging to the classification "Easy Gathering". In this case, some positive and negative points were identified in relation to the best-case scenario predicted by the model.

Among the types of positive information, the types listed by IC areas are highlighted, varied and complementary. Closer data, such as information about competitive products and market indicators are complemented with consumer perceptions and international benchmarks that may convey a more comprehensive view of the market.

Nevertheless, the questionings on the degree of depth of content collection from each source show differences that vary according to the availability of information and the delivery of the sought knowledge. The amount of data is directly related to the low depth of information gathering for analysis. Essentially, that happens due to the dynamic stance of the industry; the majority of respondents believe that market timing is hectic, and the CI areas tend to deal with situations of low gathering depth.

On the other hand, regarding the sources used, it was found that companies seek different sources of information to work in their analyzes. However, shortcomings over that process are evident: the given "Waste" of internal information, recognized by many respondents from other areas of the company and the great difficulty in processing and relating the sources for intelligence generation. Therefore, this indicates that the data

analysis funnel can be flawed and lead to losses in collection quality.

Regarding the third block, we understand that the industry is on the Knee-Jerk stage. Some issues identified in the survey count against the proximity of an ideal Strategic Use situation. In this context, the CI team tends to display a reactive stance towards strategic projects undergoing in the company, predominantly acting as a contact point that meets a roll of internal demands, most of them of a tactical nature, under a short-term horizon. Ultimately, intelligence practice ends up assuming an "order taker" attitude before the client-areas, not exerting effects on the decision-making process in a more proactive and decisive manner.

Still in this context, in some instances, there is a tendency for mechanization and the "routinization" of the activities in the area. That is because, in some companies, it accounts for generating of the official market figures for the entire company, which seeks to use information from a single source for standardization and error mitigation. Such information reporting happens oftentimes, ultimately conveying periodic reports that are disseminated to other areas.

Another aspect consists of the allocation of CI outputs that, eventually, services with greater emphasis three main areas - Marketing / commercial, planning and communication. Therefore, assuming a more operational status, the data gathering has assumed a more a easy gathering process than a hunting process. It is clear that there is a tendency that being more operational oriented means using easier data collection procedures. Thus, it seems clear that there is most probably a relationship among the classification blocks in WP model.

Regarding the methods of analysis, respondents exhibited modest precision and assertiveness to identify the most used tools in the studies. The most frequent response argues that such tools "depend on the type of intelligence" to be used at a given moment. Thus, we note that the existing analysis techniques are occasionally employed, according to each need. Accordingly, the portfolio of tools was limited, and a comparison with other studies showed significant gaps. In some studies, it is observed that the area of CI predominantly performs a consolidator / organize function, even more than information analysis functions. Another highlighted point was the lack of references to the control mechanisms concerning information accuracy. The concern with this issue appeared recurrently. However, the check is usually done mechanically / manually and is performed by analysts according to their own criteria.

However, we identified some attempts to adopt a more proactive stance, not only to inform decision makers, but also to influence them with the opinions and recommendations issued by analysts and managers of CI. In more than one firm, managers pointed out that their area was seen as "an internal consulting" which can propose

suggestions and opportunities for improvement from market analyzes they performed. In this sense, the area was considered an entity apart the day to day of the business.

Subsequently, there is an additional bright spot regarding the mechanisms of information dissemination. The most observed model consists of the areas of CI, which tend to show their work interpersonally - Through formal presentations and meetings - for decision makers should make use of such information. However, there are also cases in which the areas favor the electronic model of dissemination, either by sending materials via email or via intranet portals to endow content sharing.

Nevertheless, despite the understanding of many respondents about the importance of the interpersonal model of dissemination, factor "timing" is the main criterion of choice on what will be the means employed to communicate the knowledge generated. If the message needs to be delivered within a short time and there is no schedule for structured communication between departments, the electronic medium is readily triggered. The difficulty to "make room" in the departments' schedules which had requested CI knowledge is another factor apparently related to the partial lack of visibility of the practice within organizations.

It is clear that if CI in most cases has not achieved a strategic level, the purposes of the applied analysis is to support tactical decisions, where more simple analysis techniques should be required as WP model indicated.

Finally, the fourth assessment block of the model indicates that the telecom industry is the most appropriate setting, which is Designated Location. Accordingly, the firms in the field have realized that defining an area with unique roles and responsibilities for CI is crucial. Although the 8-year history of those areas, they earnestly strive towards gaining space within organizations, so they can work consistently to provide the company with the benefits of concentrating market knowledge into a single framework.

Apart from "fitting" structured interviews to the WP model, the last question on the survey sought to understand what are, according to the opinion of the respondents, the main challenges that the practice of CI shall face in the coming years. Thereupon, the main challenge is to improve the collection of information, including current sources to also encompass internal areas within the organization. Another challenge lies upon the effort to raise the visibility of the CI function within the companies. That shall maximize the results and impact of their outputs, consequently avoiding activities in duplicity. Finally, another significant challenge refers to the development of skills of the people working in the areas of CI. This is in line with the idea that CI activities within the industry being studied in Brazil should develop and prove itself of strategic value to the top management and that should be a matter of time and

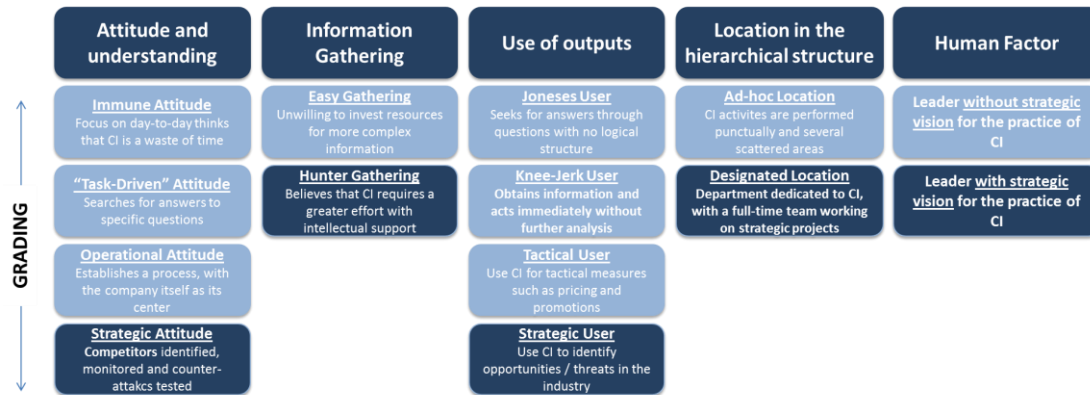


Figure 4. WPframework with the suggested improvements.
Source: Elaborated by the author according to the structured interviews.

management expertise.

DISCUSSION

Initially, the paper sought to trace the managerial implications of efforts to improve the practice of CI in Brazil, which necessarily means to list the main points to address the shortcomings observed in the diagnosis of the industry based on the WP framework (Figure 4).

The first step is to approximate the CI departments to strategic projects of the company, and consequently, their key decision makers. This part belongs to the practice leader, regardless of their position. Making an approximation to Competitive Cycle (Kahaner, 1996), this position would ensure that the first stage of planning and direction were properly fulfilled. The leader should be the primary "seller" of CI practices in the company, defending its importance, and securing its place within the strategic planning.

Thus, by taking advantage of the commercial analogy of looking at the CI leader as a "seller," another key point is that the product of such area is valuable for those who buy it, i.e., the decision makers. Something that had been previously discussed throughout the present work is that the area of CI has to demonstrate credibility on a recurring basis, delivering relevant knowledge to the entire company. Thus, leaders also have to concern about what their teams produce. Transform raw information into knowledge should be a mission Kahaner (1996) and Gray (2010) pointed out.

The third point is the challenge of deepening the process of gathering information. Managers engaged in CI practices need be attentive to the richness of existing information in the organization itself. For example, the commercial area, which daily supply products to customers, receives constant feedback from consumers

about their perception in relation to offers made by competitors. Vendors intimately know the positioning of competitors from the perspective of customers. These are rare information that does not appear very clearly in external data sources, such as news, market reports, and the like.

The fourth point, also to enhance data collection, consists of taking maximum advantage of data for knowledge generation. That means that the areas of CI must improve their funnel in the knowledge production process - i.e., make their analytical capacity process the large volume of data with objectivity and assertiveness. To this end, the CI leaders may follow two possible directions, they can: (a) use technological tools / software which facilitate processing multiple data sources, and the reading of these data by industry analysts through friendly and didactic interfaces; or (b) select staff with analytical and synthesis skills as core competencies. It should be said however that attracting and retaining skilled labor is a challenge commonly faced in developing markets, and therefore this point should be mentioned when thinking how to develop the company (and its people) towards a better CI performance.

Regarding the use of the outputs, it is worth mentioning that there is no great warning for a radical change at the focus of CI, from tactical issues to strategic issues. "Competitive Intelligence comes in many flavors" (Fuld, 2012), i.e., it can have different meanings depending on who will use it as a basis for decision making.

Nevertheless, the area of CI needs to go even further than that. The knowledge generated is crucial to the strategic decision makers with a long time horizon. The alignment of the CI practitioner manager along to the organizational leaders is essential for this to occur. The CI area must combine a reactive posture, of meeting tactical decisions as need areas, with another, proactive, seeking to develop projects and studies that are aligned

with the strategic agenda of the company.

In this sense, that combination is critical because the tactical support is essential for the work of CI to be quickly evaluated and recognized by the organization. Thus, the area gets conditions to work on strategic projects since its performance has been evaluated by other organizational actors. The leader's role is to ensure the implementation of such a combination, allocating the effort of their team to do so.

The sixth and ultimate managerial implication comprises tighter discipline of CI managers to pursue the interpersonal communication model and a more robust checking system of processed data. Herein, it is understood that the high turbulence of the telecommunications industry is the primarily responsible for preventing executives from adopting the most suitable approaches to these two criteria since there is great pressure for delivery of the work requested in the areas of CI in a very short time. This so-called "rush" of client-areas eventually make some executives adopt some action which is not recommended according to the WP best practice model. This probably is a result stressed by the choice of industry and market of this study.

Another conclusion of this effort, which may be understood also as a research result, is the window of opportunities to improve the WPmodel in future research. As an example, the the article of Wright , Bisson and Duffy (2013), that applied the model in small and mediun enerprises in Turkey, also have included suggestions of other dimensions related to technological support and information technology support. This paper, once WP model applied, had other additional opportunities for improvement.

The first contribution refers to the insertion of the human factor as an additional block to be included in the Scope of Review. The framework evaluates processes that explain how companies fall Competitive Intelligence in their decision making. However, some conclusions from this study reveal the great importance of the human factor plays in the success of the area as a strategic influence in the company - both through the leader, as the analysts who prepare studies. Almeida and Fonseca (2014) have studied factors related to the decline of CI practices by an organization. Stands out from their results coming from multiple case studies is the key role that the sponsorship coming from key leaders in the organization in implementing and developing the CI practices into amore fundamental and strategic role in the organization.

Another important contribution is the approach for assessing Attitude. According to the script used, it is measured through the understanding of three factors: (a) longevity of CI activities in the firms, (b) terminology employed in the practice, and (c) support from senior management. However, through the interviews, another extremely relevant factor was perceived. This element can also be evaluated in view of the diagnosis of the

attitude of the organization over the CI, which is the proper fulfillment of the first stage of the Competitive Cycle - Planning and Direction. Firms without discipline to carry it out with due attention can generate works that will fail to add value to decisions in the future.

Lastly, another important contribution to the model involves the difficulty of classifying cases in some categories. This happens mainly in the case of the Gathering block, in which the model predicts only two types - "Easy Gathering" and "Hunter Gathering". After the interviews, some classifications were more accurate if they were placed in between two types, closer to one of them.

Therefore, an improvement is to avoid the "obligation" of finding a specific category for each block. Hence a gradation could be created to signal the proximity with some class already provided for in the model. Thus, the readings would be more accurate, there would be no need to forcibly assign a unique label for the segment under study.

Conclusion

In conclusion, the paper first could classify the telecommunication industry in Brazil according to the WP model being operational in terms of attitude, easy gathering processes in terms of information collection, of tactical use and, finally, as having a designated location in the organization.

As discussed the model is shown to be appropriate for a classification in a developing market in a telecommunication industry. Clearly, a lack of strategic vision for the area indicated that more tactical and operational use is being the case. Six improving opportunities were commented, not ignoring however, management and industry specific context that somehow contributes to the actual status of CI to be as it is in the companies studied.

As a contribution the authos also suggest that the humam factor could be anoter dimension, such as the inclusion of Planing and Direction in the Attitude Dimansion and finally the possibility that the model includes some grading with a scale type measure.

With regard to the limitations of the present study, there are limitations. First the study had only 8 members being interviewed due to the fact that few people worked in this specific position in the telecommunication industry in Brazil. It is known that these companies represented well the industry as indicated in the method's part, however it should be considered that a larger sample would strengthen the results.

Secondly, the method of coding objectively the results was an alternative to reduce the researcher subjectiveness from the results, but the decision to classify ambiguous or hard to define sentences were ultimately made by the researchers as well the interpretation,

indicating that a portion of subjectiveness is always present and should be taken into account.

This study was done specifically applying the WP model in the Brazilian telecommunication industry. Similar results may be found in related industries, such as technology consumer goods like computers, smart-phones and so on, being an opportunity to compare results across industries in future studies. Indeed, the expansion of the diagnostic for other sectors, competitive in different contexts, can be quite interesting in order to draw conclusions about how external factors influence the structures and processes within the areas of CI. Likewise, the use of the framework with the contributions proposed in this paper is an auspicious opportunity to measure their practical gains.

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