THE SOUTH AFRICAN E-RETAIL CHANGE AGENDA: A CURRICULUM DEVELOPMENT PERSPECTIVE

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ABSTRACT

This study provides a broad overview of e-Retail implementation and its impact on skills development within the South African retail sector. The study interrogates the readiness of the South African retail sector for e-Retail on the basis of a selection of technology, marketing, operations and business imperatives; and provides in particular a predictive analysis of the technical skills requirement to sustain a viable e-Retail industry in the country. In this regard, a set of salient e-Retail functions, skills and services are identified that pragmatically define a set of baseline competencies for implementation. Furthermore, a proposed framework for a professional qualification in e-Retail Management is provided as a possible Higher Education curriculum intervention.

The study deploys a Design Science Research approach that informs the design and construction of various knowledge artefacts that describe the South African e-Retail experience and aspirations by highlighting salient aspects relating to (1) traditional versus e-Retail, (2) global e-Retail trends, (3) e-Retail technologies and platforms, and (4) e-Retail training imperatives. The research furthermore elucidates the environment for e-Retail deployment in South Africa with respect to e-Retail functions, services and job skills requirements and prospects of e-Retail as a career. The research methodology deployed in the study centres around the establishment of a change agenda for e-Retail within the South African landscape.

The study identified a comprehensive suite of key and breaking technologies that inform the successful implementation of e-Retail in South Africa. The study also uncovered essential business process elements that are required to drive the change agenda for e-Retail in South Africa. In this regards the study draws from salient international case studies as well as relevant national case studies. The study makes significant knowledge contributions with respect to the delineation of salient issues to be addressed with regard to the practical implementation of e-Retail in South Africa. The study makes a novel methodological contribution by deploying a Design Science approach to establish the process logic for the research and a Critical Interpretivist approach of information synthesis. This strategy allowed the research to be both suggestive of, and receptive to, opportunities and challenges within a complex environment of change and transformation. However, the nature and limitations of the data gathering process places a practical limitation on the value of the research in that generalised conclusions are not possible and information is relevant only for the purpose and within the context that it was mined.

KEYWORDS

Retail, e-Retail, Disruption, Curriculum and Praxis.

1. INTRODUCTION

The global retail industry has undergone spectacular transformation in recent times driven both by almost constant innovation of technology for enterprise and increasing virtualisation of social spaces. The transition to e-Retail as the dominant provision within the South African

retail sector is not yet a “fait accompli” and many challenges remain; and this is probably true for many emerging economies characterised by unequal economic and infrastructure distribution. This paper however will specifically pursue a business agency perspective and will provide only general analysis of the broad socio-techno-political environment.

Online shopping from a business-to-consumer (B2C) perspective is typically the purchase (or procurement) of goods and services over the Internet using a web browser. It is known by various names, including, electronic retail, e-Retail (the term used in this paper) or “eRetail”, “e-shopping”, “e-Tail” or “eTail”, and “online retail”. There are also other terms in use, including, “web shopping”, “internet shopping” or “virtual shopping”. And with the proliferation of mobile commerce, also known as m-commerce, there would probably be an "m version" for each of the aforementioned "e-versions". It is instructive to note that e-business, e-commerce, and m-commerce typically refers to the use of information and communication technology (ICT), including the Internet, to support the broader functions of business, which might include e-Retail but not limited to it.

1.1. The Objectives of the Research

E-Retail, simply stated, is retail that is largely facilitated by Information and Communication Technology (ICT) and specifically cyber technology. It is therefore logical that the expansion of e-Retail is closely coupled to trends within these related technologies. The e-Retail proposition could be seen to be a natural consequence of the universal digitisation phenomenon that has impacted almost all aspects of human endeavour. E-Retail, as discussed earlier, could be considered both to be simply an extension to traditional retail or as a "disruption" of traditional retail. It could be argued that e-Retail that plays out entirely in cyberspace could be read to be one end of the retail continuum; whereas traditional retail with no electronic support would be the other end of the continuum. E-Retail more commonly is probably considered to be retail that is facilitated by cyber technology at a sales transactional level.

This paper is referenced in a study commissioned by Wholesale and Retail Leadership Chair (WRLC) in 2015, to investigate “e-Retail in South Africa and the impact on skills development in the South African Retail Sector”, in pursuance of the following objectives:

- To establish the profile of the South African e-Retail sector,
- To identify the current, and predict future, technologies and practitioner skills required to support, sustain and develop the South African e-Retail sector towards global competitiveness, and
- To establish suitable training interventions, in support of the local e-Retail industry.

1.2. Global Perspective on e-Retail

The Klaiber & Hermanus (2014) study "analyses the influences of IT development on retail businesses" from a global perspective. They furthermore interrogate the impact of skills development resulting from the "disruption" of traditional retail from a global perspective. They argue that the impact on skills development extends beyond just the impact on sales and argue that the impact in fact will be felt across all of the business process functions. They raise concern about the threats of cybersecurity and information privacy in the modern era and that systems need to be evolved so that data and data transactions can be done securely. They argue that for e-Retail to be properly nurtured into existence, care should be taken with the "efficacy of logistics" and that special care needs to be taken especially with regard to the integrity of financial transaction infrastructure and logistics. Klaiber & Hermanus (2014) further declare that a convergence of private and business environments is starting to become commonplace. They further argue that geography is no longer a major consideration in retail

as far as access to goods and services are concerned. There will of course logically still be some impact on the delivery of goods. They further contend that there is an increasing number of IT applications to support e-Retail and even enhance business functioning. They however caution that there are risks associated with introducing technology at the rate and as intensively as required to establish an e-Retail footprint. There remains much concern about the risk of poor return on investment in some cases where operational complexity might counteract the advantages that might potentially accrue from e-Retail. The proliferation of mobile technologies is an astonishing phenomenon that seems to cut across even class borders. There is a significant penetration of smart mobile technology into rural and poorer communities. This coupled with the proliferation of social media has created an exciting opportunity for embedding e-Retail. The discourse is beyond just increasing volumes but it is more about the tailoring of products and services because data emanating from social networks could provide insight into consumer needs and social behaviour patterns. Klaiber & Hermanus (2014) suggest that the transition towards e-Retail is inevitable and that "the retail sector is confronted with substantial changes". They however reflect that there does not yet exist a "consistent understanding" of e-Retail as a new discipline and therefore there is no consistent view on the skills and training requirements to support the emerging e-Retail industry.

The Platt Retail Institute Report of 2012 is referenced in Klaiber & Hermanus (2014) where they support the contention that "rapid technological innovation has touched on almost all areas of commercial activities globally" and this has resulted in wide ranging business transformation. Although technology innovation brings about new opportunities for business, it also requires investment to participate, comes with risk, and inevitably requires new business and technical skills to support the opportunity. It is almost self-evident that the risk for e-Retail implementation would be "significantly around cybersecurity" both as an operational imperative and as a skills imperative.

The Klaiber & Hermanus (2014) report clearly establishes two perspectives of e-Retail. The first relates to using technology to build the efficiency of the business while the second perspective is about realising a new business model in response to the technology-sponsored "disruption" of the traditional retail industry. It appears that, no matter which perspective is held, businesses will need to respond to consumer demands for more "flexibility, platform integration and individualisation of the retail experience". The "ICT platform and human capital development" imperative is clear whether the business strategy for e-Retail adoption is informed by a drive to improve competitive advantage or to transform the business. Some degree of socio-technical transformation of the company will be required since "technological innovation drives strategies in retailing"!

It is therefore axiomatic that much of the value of this research will be about informing the key challenges relating to job skills and training approaches.

2. KEY TENETS OF THE RESEARCH

Academically speaking, a sub-discipline of e-Retail can be considered to be an adhocracy, that is, it is still a loosely defined trans-disciplinary field that draws from several fields, including, Business, Information Technology, Psychology, and more. It therefore requires some creativity to establish specific pathways of inquiry to analyse the state of the discipline.

We need to draw relevant contributions and insights from the literature on a structured basis; we furthermore need to ascertain whether such contributions would elucidate the study; and we need to judge how valid the authors' perspective is in supporting the unfolding analysis and developing understanding of the subject of e-Retail in South Africa. A systematic review of the extant literature covering the above mentioned tenets was undertaken to expose the latest developments within the e-Retail field of study. Both popular

and scholarly literature resources were accessed in order to evaluate the status of the e-Retail field of study. This allowed for the generally greater currency and relevance of information provided by popular resources, and more scientifically validated information typically provided by academic resources. In this regard, open internet searches were conducted, and Google Scholar, in particular, was accessed to establish the popular perspective. Several electronic research databases were consulted but there currently appears not to be a vital academic discourse around e-Retail within the scientific literature.

The key tenets of this study therefore emerged through the application of abductive logic. Four key tenets are drawn from the review of mainly Internet publications, namely, (1) e-Retail skills, (2) e-Retail technologies, (3) e-Retail change drivers, and (4) e-Retail and enterprise mobility.

The literature review, in particular, provides insight into global and local market trends with specific reference to e-Retail Skills, Technologies, Change drivers, and Enterprise mobility, based on perspectives from the extant literature. The "Research Findings" section provides a detailed expose of empirical data that elucidates the context of the South African e-Retail industry with specific reference to e-Retail technologies, Marketing approaches, Operations management, and Business intelligence imperatives. The "Curriculum Proposal" section provides a detailed conceptualisation of technology and skills development to support the e-Retail industry where a wide range of key performance aspects are noted, including, e-Commerce Platforms, Search Engine Optimisation, Cybersecurity, Internet of Things, e-Retail Marketing, Multichannel marketing, IT Services Management, Web analytics, Competitive intelligence, and much more.

Based on the literature and the empirical study, "mega trends" that might inform the medium to long term trajectory of e-Retail in South Africa have been identified.

The dominant mega trend for the South African e-Retail sector is that it will continue growing. The Euromonitor International (2017) report further declares that the South African "internet retailing channel is still in its infancy" by global standards. World Wide Worx (2016) predicts that online retail sales will grow at a rate of more than 20% per annum and double over the next five years, from 2016 to 2020. Another mega trend for the South African e-Retail sector in the medium term is that it will probably continue to follow global and Western e-commerce trends. Brett Kaplan, quoted in Biz Trends (2014), says that South African retailers should focus on how to provide efficient and effective online retail services. He suggests that global trends need to be interpreted and adapted to suit local market conditions. He further contends that although South African e-Retail is not yet operating at the levels of "more advanced markets such as Europe and the United States", there is an increasing number and a general upward trend in the engagement of e-Retail.

2.1. E-Retail Skills

Harris Poll (2016) declares that the biggest concern around the implementation of any e-Retail venture is the "threat" of having to engage in new technologies. They suggest that often the first response is to consider "new product development, marketing and establishing an online presence" but the many retailers find the technology aspect of e-Retail to be quite daunting. E-Skills UK (2011) makes a compelling case for providing the necessary IT skills to support e-Retail. Although this paper is somewhat dated, it remains relevant since South Africa is now probably at the same level of technological readiness as Scotland at the time of writing the paper. It is suggested that significant investment needs to be made into training of a wide range of IT skills. The report suggests that the traditional approach of separating IT and marketing is not effective and the case is therefore made for integrating IT and marketing training as a specialist e-Retail offering. Accenture Digital (2015) urges that the customer should be prioritised within e-Retail. Often the environment for e-Retail is dominated by

technology considerations. So they highlight the need for social skills development within the virtual reality of e-Retail. Mintel (2014) suggests the increasing need to support and drive consumer demand sensibly so that "product informatics" and "market intelligence" will become central to the efficacy of e-Retail. It is therefore axiomatic that these skills should be provided and nurtured. UK Commission for Employment and Skills (2010) underscores the need for proactive engagement in providing for future skills requirements to support the economy. In an environment of radical change in its operating platform such as e-Retail, it is imperative that skills needs are prioritised. Chiles & Dau (2005) report that e-Retail is fundamentally still retail and that all the performance considerations would therefore still apply. Although this reference is now dated, it still has a ring of sobriety when it declares that success in retail is achieved through "recognising opportunity and excellence in supply chain management". Deloitte (2015a) makes the case for e-Retail as "experience retailing" and suggests that special skills will be required to make the e-Retail experience "entertaining, educational, emotional and engaging".

2.2. E-Retail Technologies

Accenture Digital (2015) suggest that the basic technologies for e-Retail are well established but that the user-interface provisions are still not intuitive enough and this creates frustrations for consumers. They suggest that technology should reduce the complexity of operations and that the notion of "services aggregation" be explored towards creating a more "natural" experience for consumers. Connectivity remains a major comfort factor in an environment of ever-increasing demand for bandwidth. Mintel (2014) underscores the need for improved bandwidth to support the "purchase anywhere, anytime" mantra that defines the e-Retail phenomenon. They furthermore profess that we need to think even beyond open networks and to consider the opportunity that wearable technologies will bring in extending the quality of consumer data to even an individual level. Pillay (2015) declares that the future of enterprise mobility in support of e-Retail lies with new technology thinking, such as, the Internet of Everything, Everything as a Service, and Technology Abstraction. Biz Trends (2014) declares that South African e-Retail sits within the global e-Retail space and profess that "Big Data" will become increasingly important in supporting the tailoring of products and services both globally and nationally. Ernst & Young (2015) supports the view that "data science will become increasing embedded in all aspects of human endeavour" and believes that other (new) technologies, such as "connected devices" and "data analytics", will contribute to the shaping of e-Retail.

2.3. E-Retail Change Drivers

Accenture Digital (2015) argues that the next evolution of e-Retail is for the interface between the consumer and the company to become more "natural" as the real and virtual worlds start to merge. They argue that a new ecosystem for transactions be evolved where the consumer and the company are digital equals within a conducive environment. They further argue that the next wave of e-Retail would be supported by artificial intelligence that predicts consumer trends with the view of improving the quality of service. The Retail Coach (2015) concurs that e-Retail "will require more sophisticated consumer behaviour analysis" as the environment for e-Retail becomes more "natural" and more pervasive and competitive. It also noted in the report that the proliferation of social media is indicative of a "natural shift" towards e-Retail as an inevitable consequence of digital migration. Mintel (2014) makes the case for pervasive Smart technologies as the next trend to drive e-Retail that will not only improve the quality of service to consumers but will actually "spawn an era of technology driven consumerism". Smith (2015) supports the view that Smart technologies and the notion of "e-Retail anytime, anywhere" to support consumer needs, define the change agenda for e-

Retail. Hass Avocado Board (2015) proposes that specialist providers will benefit most from e-Retail since this platform provides for effective business to customer engagement; and they, not surprisingly, suggest that the speciality foods market sector could be completely transformed by e-Retail. Biz Trends (2014) contends that South Africa follows global trends and suggests that the decision to participate and the extent of participation will depend on the assimilation of technology and the consumer into the e-Retail ecosystem. They lament however that the South African e-Retail industry is still typified by "showrooming" where consumers explore products and services on the Internet but then often affect the purchase at a traditional retail outlet. The purely e-Retail aspect however is on the increase. They further suggest that mobile and smart phone technologies are vitally important for the South African e-Retail market. Daymon Worldwide (2014) advocates for the global integration of e-Retail platforms to reduce the fragmentation of the industry. As a second salient point, they suggest that e-Retail is the ideal platform for niche markets set up for specific target markets.

2.4. E-Retail and Enterprise Mobility

Accenture Digital (2015) makes the case for e-Retail to be seamlessly integrated into the "natural" lives of consumers. They make the case for availability of services on multiple platforms so that the experience for consumers is "seamless, intuitive and integrated". Hass Avocado Board (2015) declares that mobile technologies have become commonplace within the daily lives of citizens and are now transforming e-Retail. The landscape is changing as consumers are demanding quality in every respect of the retail experience. Pillay (2015) argues that successful enterprise mobility is achieved when the platform becomes invisible to the consumer; and when the consumer is a co-creator of the system. E-Retail structures need to be evolved as "network configurations" beyond the hierarchical structures that most e-Retail operations currently support. Frost & Sullivan (2014) profess about the "future of mobility" and the emergence of the phenomenon which they call "co-creation on demand". They predict that this will result in a wide range of tailored service networks to support service ventures, such as, "e-Rental" and "e-Travel". They believe that "co-creation on demand" will also become the benchmark for e-Retail. The JWT Intelligence (2014) report confirms that "customisation" or "co-creation on demand" and "tailoring of the engagement platform" will become a central value that defines quality of the online shopping experience. Biz Trends (2014) highlights the move in South Africa towards mobile based e-Retail. They furthermore suggest that consumer advocacy underpins consumer participation rates. Deloitte (2015b) concurs that the future of e-Retail lies with enterprise mobility and suggests that the dominance of the mobile platform will drive a need for pervasive Wi-Fi that will also extend into the traditional retail spaces.

This section has detailed the literature perspective on the e-Retail phenomenon. The emergence of e-Retail as a sub-discipline has been discussed and the key tenets of e-Retail as pertaining to this research have been established based on the review of a selection of salient Internet publications. The articulation of the key tenets provides a considered framework for engagement of the empirical aspect of this research.

3. METHODOLOGY

In framing the research into e-Retail in South Africa, it was important to first establish a paradigm for the research. In this study the Functionalist paradigm is indicated. The ultimate agenda within the Functionalist paradigm is to develop an artefact. The aim of the research is therefore to create a curriculum artefact to inform the scope of training that will be required to support the emerging e-Retail industry. At one level, therefore, this is a developmental study. At another level, the study seeks to explore in depth the scope and nature of the

tensions and consequent implications for a change agenda for e-Retail and this makes it also a descriptive study.

The first round of data gathering was conducted using an online survey instrument directed at the broader retail management community to establish the general perspective of the "South African e-Retail readiness". Focus group sessions informed the refinement of the landscape and skills profile for e-Retail in South Africa; and an expert group ultimately provided the definitive detail of potential training strategies. The e-Retail Readiness Survey sought to ascertain the general perception of anticipated opportunities and challenges around large-scale implementation of e-Retail in South Africa.

Specific aspects emerged from the survey that provided substantial points for deliberation within the subsequent focus group sessions. The focus groups addressed a wide range of substantive matters relating to the viability of e-Retail within the South African developing economy within the aforementioned categories of technology, marketing, operations and business imperatives. The salient points of declaration of e-Retail in South Africa emanating from the focus group discussions were synthesised into a suite of distinct propositions. These points were then further deliberated on by an expert group who validated the design of a process model to drive the change agenda for e-Retail in South Africa.

It proved to be quite challenging to secure the participation of persons who have an established business interest in e-Retail. The majority of the participants in the initial online survey and many of the focus group participants have an academic interest rather than a business interest in e-Retail. This is probably not unusual for a proverbial crystal ball study. The expert group were comprised entirely of persons who have a business interest in e-Retail. A Critical Interpretivist strategy was deployed to drive the research so that the data and submission could be moderated on the basis of context and relevance to the central theme of the study.

Design Science Research provides the philosophical and methodological underpinning for this study and defines the logical sequence of events for gathering and processing empirical data. A process model for the research is provided, the research objectives are articulated and a pragmatic approach to the operational management of the research is presented.

3.1. Change Agenda

The thematic approach of this study was to interrogate a change agenda for the South African retail sector. The focus of the study was to provide analysis of new enabling production platforms, new job skills, and training and development imperatives, in support of the emerging South African e-Retail sector. In this regard a comprehensive socio-econo-techno implementation model is presented to integrate salient aspects of environment, strategy, innovation and implementation. This is mainly informed by a critical literature review of enterprise and technology trends, and an empirical study of selected key role players of the local industry. The strategic importance of sectoral culture, structure (human and infrastructure provisions) and agency for change are specifically explored.

The methodology of the project was twofold. The first strategy was to undertake a comprehensive literature study of e-Retail to inform the scope and reach of the study; and the second was to engage a Design Science Research (DSR) strategy to realise the specific objectives or artefacts of the research as is the focus of DSR research.

3.2. Design Science Research (DSR)

DSR is a research methodology that defines a systematic design and evaluation process of creating viable technology-based solutions or constructions (artefacts) using pragmatic strategies (Hevner et al., 2004, p. 83). This study is more specifically based on the "three

cycle view of DSR" as proposed by Hevner (2007). The DSR methodology describes both the data gathering methods deployed and the information process flow in realising the artefacts of the research study. The data gathering methods deployed in the study include literature study, online survey, and focus group methods, including the expert group method.

An important consideration of DSR is that it is directed at producing (creating) technology-based artefacts or solutions from the research process (Hevner et al., 2004). The efficacy of the solution in making a contribution to the problem environment has to be rigorously evaluated. The "relevance cycle" seeks to iteratively connect the "design and construction" of the artefact to the "application domain" while the "rigour cycle" ensures that the contribution to the knowledge base is premised on a rigorous "evaluation of the artefacts and processes" of this study.

The DSR design is illustrated in Figure 1, depicting the key tenets of the study.

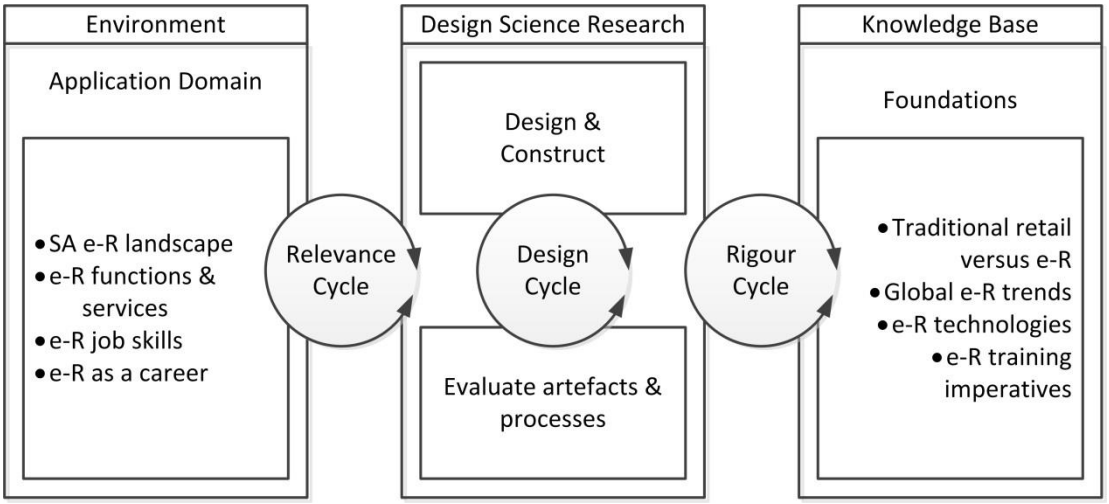

Figure 1: The DSR Design (Adapted from Hevner 2007)

The "design cycle" of the DSR design is comprehensively explained by Peffers et al. (2007). They profess that the "design cycle" is an iterative process as follows: (1) identify problem and motivate, (2) define objectives of a solution, (3) design and develop artefacts, (4) demonstrate efficacy of artefact, (5) evaluate effectiveness and efficiency of artefact, and (5) communicate outcomes.

The implementation of the "relevance cycle" and the "rigour cycle" within the context of this study suggests a strong relatedness to participatory design (to be distinguished from co-design). Participatory design (or participatory action research) is a form of action research in which researchers operate as full collaborators with role players within the study to transform the environment. It is an ongoing learning process, a research approach that emphasises co-learning, participation, and organisational transformation. Among the key features of participatory design are - (1) collaboration, (2) incorporation of local knowledge, (3) eclecticism and diversity, (4) case orientation, (5) emergent process, and (6) linking scientific understanding to social action (Greenwood et al., 1993).

The DSR methodology of this study is illustrated in Figure 2.

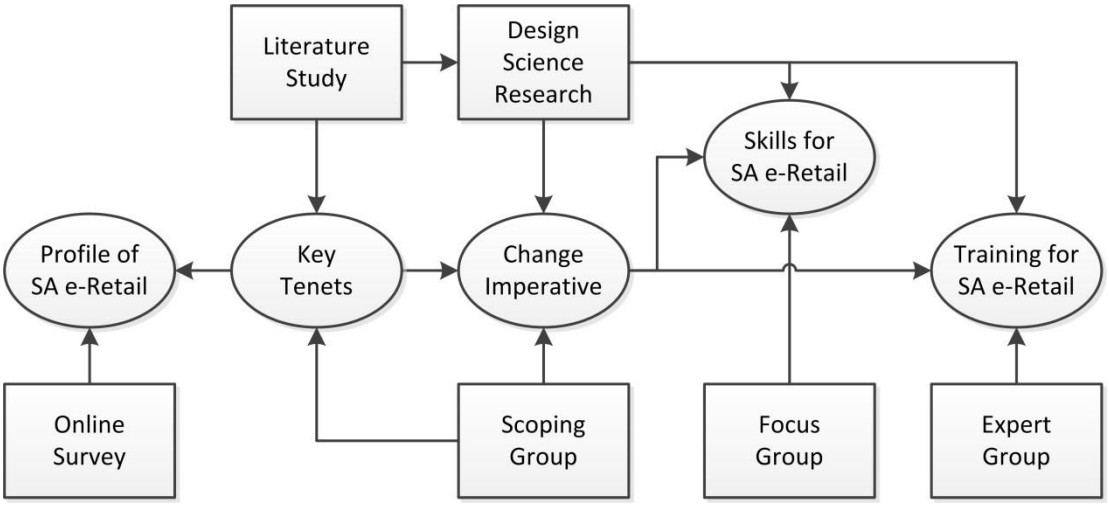

Figure 2: The DSR Methodology

It was noted that there currently is a dearth of scholarly engagement of e-Retail as a disruption of the traditional retail ecosystem; and therefore much of the discourse was accessed from more informal online blogs and content packages for commercial consumption. The lack of a coherent e-Retail body of knowledge was the main reason for adopting DSR as the research platform.

It was deemed prudent to conduct a "scoping group" session to establish the "key tenets" and the dimensions of "change imperatives" for the research, as two of the artefacts to be delivered by the research. The aforementioned artefacts, in turn, are essential in guiding understanding and definition of three further research artefacts, namely, "profiling the South African e-Retail" industry, establishing the "priority skills requirement", and establishing the "training needs" requirement.

DSR is a creative process where the researchers go beyond deductive and inductive reasoning approaches to realise research outputs. DSR specifically encourages the use of retroductive and abductive reasoning to establish creative propositions to be tested in the environment. The online survey method was used to validate the profile of the South African e-Retail industry; the focus group method was used to validate the skills requirement; and the expert group method was used to validate the training requirement (refer to Figure 2).

3.3. Data Collection and Sampling

Smith et al. (2009) advise that the process of uncovering knowledge is essentially about "seeking meaningful and symbolic content in the qualitative data". The research process is directed towards exposing relevant empirical data to synthesise into novel perspectives and knowledge about the phenomenon of e-Retail in South Africa. Guest et al. (2013) elucidates the data gathering process by proposing that data mining should be focussed on two distinct strategies. The first approach is to "deploy text as a proxy for human experience", and the second to "focus on individual experiences, beliefs and perceptions". Both these strategies are deployed in this study. They further suggest that "face-to-face in-depth interviews" are ideal for data collection but make provision for alternative less personal engagement, as is evidenced by their approval of the use of "text as proxy for human experience". This study extensively explored the latter option.

A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging (Henderson, 2009). In this study an extended focus group modality was deployed, where a core grouping was initially engaged within a traditional

focus group session but then interaction within the target group was continued after the initial event. The expert (or Delphi) method is a structured communication technique originally developed as a systematic, interactive forecasting method which relies on a panel of experts. In the standard version, the experts answer questionnaires in two or more rounds. After each round, a facilitator provides an anonymous summary of the experts' forecasts from the previous round as well as the reasons they provided for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after a pre-defined stop criterion (e.g. number of rounds, achievement of consensus, or stability of results) and the mean or median scores of the final rounds determine the results (Rowe & Wright, 1999).

Further insights provided by the scoping group, together with the data emanating from the review of the literature, allowed for the establishment of several subcategories of inquiry. An online survey instrument was evolved to support each of the subcategories to determine the readiness of the South African e-Retail sector to effectively participate in the e-Retail revolution. A set of statements were provided to which respondents indicated their bias on a binary basis, that is, "yes" or "no". This strategy was adopted to bring about clarity in response and also to make the process of collating data easy. The online survey was designed to explore the perspectives of the broader South African retail sector on its readiness for e-Retail against the aforementioned key tenets. Therefore no specific target group was identified within the sector.

The initial invitation to participate was broadcast within the established retail networks of the researchers and these included members of special interest groups and the Retail programme advisory committees of the Cape Peninsula University of Technology and Sol Plaatje University. When the response to the initial call for participation did not yield adequate participation, further calls to participate were directed to specific persons and organisations within the aforementioned networks. This may or may not have compromised the integrity of the data in that coercion to participate is not ideal. This step however was deemed necessary since data saturation was not established after several weeks of the online survey being launched against the first open invitation. Data saturation was indeed achieved after the second more directed call for participation.

In this study the samples for the Scoping Group, the Focus Group, and the Expert Group, were established to reflect a cross-section of the broader e-Retail community, including, retail and IT practitioners, academics and strategists. This type of sampling is referred to as purposive sampling. The ideal of a balanced sample was not always possible and often a more pragmatic approach to constituting the participants needed to be adopted, as is often the case in academic and social research. Sample size is also a key consideration. Nastasi (2008) says that sample size cannot be predetermined but that it is an in-process consideration. He states that the ideal sample size needs to "display the variation in the population" and allow "data saturation or redundancy to be reached". Bowen (2008), cited in Marshall et al. (2013), suggested that data saturation is achieved when "the research gathers data to the point of diminishing returns".

The sample size and composition of each of the data gathering interventions of the study are provided in Table 1:

Table 1: Sample Size and Composition

	Retail practitioners	IT practitioners	Academics	Strategists	Total
Scoping group	5	3	4	2	14
On-line survey	33	17	14	0	64
Focus group	9	4	3	4	20
Expert group	9	2	0	4	15
Total	56	26	21	10	113

The face and context validity or "trustworthiness" of the data collection instruments and processes are ensured by the design and deployment of the DSR methodology (refer to Figure 2). The DSR methodology prescribes the engagement of a comprehensive range of respondents, namely retail practitioners, IT practitioners, academics and strategists (see Table 1) within a phased data mining approach incorporating a scoping group, an on-line survey, a focus group and an expert group. Their candid input ensured the validity and trustworthiness of this study. Therefore, the findings are generally believed to be credible and trustworthy because of source triangulation (respondent categories) and the phased checking of data and information via industry focus and expert groups (Padgett, 1998).

The study was conducted in formal compliance with research ethics norms and standards; and all participants were informed about the purpose and objectives of the study and their role and voluntary participation in the study.

4. RESEARCH FINDINGS

The findings are arranged in the four areas of methodological engagement, namely, the (1) Scoping Group, (2) e-Readiness Online Survey, (3) Focus Group, and (4) Expert Group. The fifth area relates to the creation of a curriculum model.

4.1. Scoping Group Report

The scoping group met on an open agenda basis to discuss the implementation of an e-Retail implementation strategy in concert with global trends to augment traditional retail engagement. The discussion was referenced in the Business Process Framework of Brown (2008) which provided a considered platform to interrogate various aspects of an e-Retail implementation strategy. The primary concern of the scoping group was to establish the key tenets and change agenda to govern the reach of the study. The key tenets were discussed in the Methodology section above and the change agenda will be discussed in the Conclusion section of this report. The scoping group was furthermore charged with delineating salient e-Retail functions and service and the e-Retail job skills needed to bring the industry to maturity within a South African context. A secondary aim of the scoping group was to interrogate a potential e-Retail career pathway model that extends the current traditional retail career pathway model of the Wholesale and Retail Seta (W&RSETA).

The scoping group established the revised key tenets for this study to support the implementation of an e-Retail strategy for South African to be (1) Technical, (2) Marketing, (3) Operations, and (4) Business Intelligence, and these formed the main categories of inquiry for the research.

This study sought to elucidate the state of the South African e-Retail sector against a backdrop of trends within the global e-Retail industry. The study also sought to explore the separation between traditional retail and e-Retail. The research also addressed the following specific considerations of e-Retail within a South African context, namely, e-Retail functions and services, e-Retail job skills, e-Retail as a career, and e-Retail training imperatives.

The key tenets of the research are illustrated in Figure 3:

Figure 3: Key Tenets of the South African e-Retail Landscape

4.2. Online Survey Report

The online survey returned results that may be considered to be somewhat counter intuitive: The findings from the target group indicated a significant lack of confidence in both the technology readiness and business readiness. The former would have been predictable whereas the latter perhaps not!

The outcome of the online survey on e-Retail Readiness in South Africa is illustrated in Figure 4 below where positive (above zero) values imply "readiness", whereas negative (below zero) values imply "not ready".

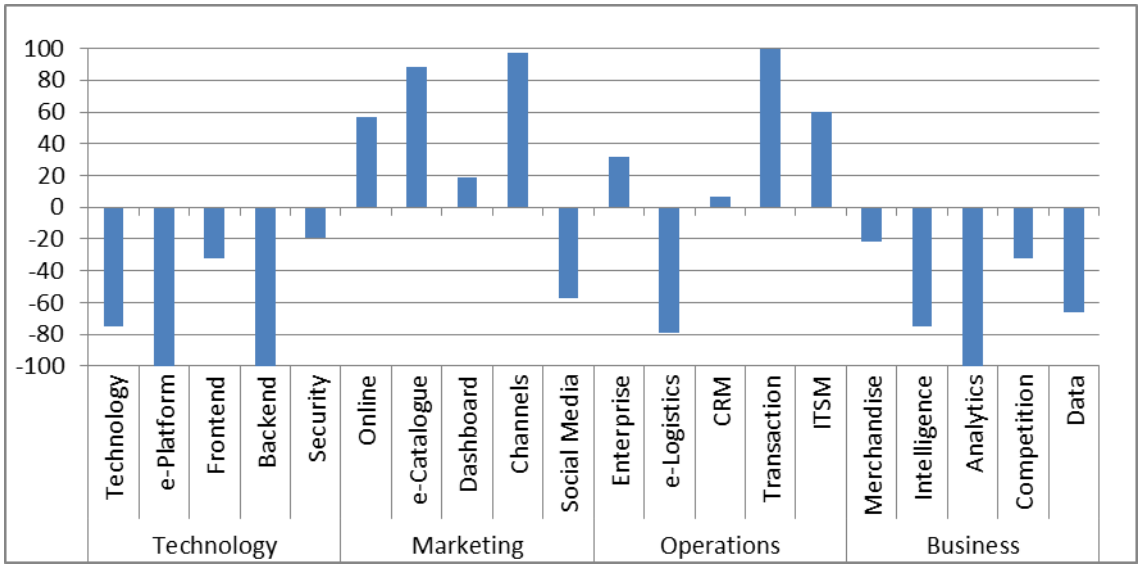

Figure 4: South African e-Retail Readiness Survey

The South African e-Retail Readiness (Online) Survey returned rather interesting results. It should be reemphasised that data collection process was not specifically targeted and that some pressure was brought to encourage respondents to participate. We will

therefore not draw too fine a conclusion from the survey results. It is however not uncommon in survey research for researchers to have to contend with some reluctance in securing participation. The survey results indicate a clear separation between perceptions of readiness in those areas based on human interaction and those that are reliant on technology provisions. The former aspect is also more aligned to traditional retail while the latter aspect comes with the new e-Retail phenomenon. It is interesting but understandable that the "technology" and "business intelligence" aspects returned consistently negative perceptions of readiness; while the "marketing" and "operations" aspects returned mixed but significantly positive perceptions of readiness. Perhaps the strongly negative perception of readiness for the incorporation of "social media" and "e-logistics" is most surprising. The indications around "dashboards" and "customer relations management (CRM)" are probably insignificant within the provisions of the online survey since these indications fall within the sampling-error band. Based on the informal management approaches to the survey, a sampling-error band of +/- 20% has been adopted for the online survey. The significant positive perception reported on "IT Services Management (ITSM)" is somewhat surprising. The results of the online survey were then refined within the subsequent "Focus Group" and "Expert Group" interventions.

4.3. Focus Group Report

The technology and professional skills that define the e-Retail sub-discipline have been deliberated and scientifically established by the Focus Group. A draft proposal for an e-Retail curriculum, based on the requirements of the National Qualifications Framework (NQF) (Commission for Higher Education, 2004), is presented in Table 2. Academic standards were rigorously pursued to ensure NQF compliance; and relevance to the e-Retail industry needs.

Table 2: Proposed Curriculum Topics

	Level 5 **Higher Certificate**	**Level 6** **Diploma**	**Level 7** **Advanced Diploma**	**Level 8** **Postgraduate Diploma**
Curriculum coverage / **Topics**	• Awareness • Taxonomy • Phenomenology • Tools	• Practices • Technologies • Governance and Policy • Ethics	• Change Agenda • Strategy • Integration • Evaluation	• Ontology • Metacognition • Innovation • Reflexivity
Technical	• Technology and process development • Cloud computing • Web technologies and services	• E-Commerce architecture • E-Commerce hosting • E-Commerce payment	• Cybersecurity • IT Services Management • E-Commerce platforms	• B2B and B2C networks • Web platform and connectivity • Secure transactions
Marketing	• Marketing, sales, and accounts • Customer and aftersales services • Multi-channel marketing	• E-Retail Marketing • Marketing dashboards • Online targeting	• Media and communication • Search Engine Optimisation • Online reputation management	• E-Retail media design • Mobile marketing
Operations	• Procurement, logistics, and distribution • General management and infrastructure • Human resource management	• Supply Chain Management • Products and services delivery	• E-Retail distribution • E-Retail logistics • Transactions management	• Operations management • Enterprise management • Smart SCM
Business Intelligence	• Product and/or service development • Merchandise planning	• Risk analysis • Funnel analysis • Data integrity	• Business analysis • Financial management • Information security	• Data analysis and management • Data visualisation • Web analytics

4.4. Expert Group Report

The research methodology deployed in the study centred on the establishment of a change agenda for e-Retail within the South African landscape. The study was duly cognisant of the socio-techno-economic divide that characterises the South African society and therefore foregrounds the training imperative as a vital aspect of the viability of e-Retail in South Africa. The first round of data gathering was conducted using an online survey instrument directed at the broader retail management community to establish the general perspective of the "South African e-Retail readiness". Focus group sessions informed the refinement of the landscape and skills profile for e-Retail in South Africa; and the expert group ultimately provided the definitive detail of potential training strategies.

One of the declared objectives of this study was to produce a 5-year trajectory of the South African e-Retail industry by evaluating e-Retail markets and salient technology trends. The trajectory or predictive trend analysis of the South African e-Retail sector is a majority consideration of this report and was given due consideration by the Expert Group.

Skills development is a mega trend, and investment in training is imperative for developing, sustaining and building competitive capacity within the South African e-Retail industry. The UK Commission for Employment and Skills (2010) report on "skills for jobs - today and tomorrow" makes the case for "right skilling" for an emergent e-Retail industry. They declare that, in order to sustain an e-Retail industry and to extract optimum performance, it is imperative that individuals with the right skills be developed. They argue that business success is a direct function of the right skilling of individuals. The changing needs of the retail industry require a corresponding commitment to "economically valuable skills".

The Expert Group adopted a pragmatic approach to realise a macro curriculum model for e-Retail training that incorporates e-Retail skills, e-Retail technologies, e-Retail change drivers, and e-Retail and enterprise mobility considerations. The method involved an iterative engagement of the curriculum development task using a design-and-review approach. In this manner, objectives, structure, practice, and implementation mechanisms for establishing a sensible e-Retail curriculum were considered. At this stage, only inputs from academics have been considered. It would, of course, be important, within the more formal process, to also consider inputs from the e-Retail industry.

All formal curricula that are offered by the university and TVET (Technical Vocational Education and Training) college sectors need to comply with the prescriptions of the South African "Framework for Qualification Standards in Higher Education". The framework details the need for vocational and professional curricula to cover "knowledge skills, technological (application) skills, and metacognitive (attitudinal, thinking and creative) skills". The aim of this broad education agenda is to provide for a skill set that is relevant to current practice and to prepare students to also be prepared for possible future challenges. Curricula in e-Retail should promote the transfer of knowledge and practice competency of specific technical concepts and practices that define the e-Retail sub-discipline and industry. The curriculum should also support the development of effective communication, teamwork, and problem solving approaches that are demanded by the e-Retail vocation. The curriculum must promote skills transfer that would allow the e-Retail practitioner to act professionally and ethically in delivering services and/or products.

Curriculum development is an exacting process. It is beyond the scope of this research to formally evolve a comprehensive e-Retail curriculum. It should be noted that what is proposed here is for illustrative purposes only. A formal curriculum development process will involve a systematic process of interrogation that covers the following aspects:

- The specific issues and requirements that need to be addressed within the South African e-Retail landscape must be identified,
- The characteristics and needs of trainees, i.e. the target audience, must be determined,
- The objectives or intended outcomes of the curriculum must be established,
- The important content that is relevant to the training of e-Retail practitioners within the target group must be identified,
- The training methodology and methods to achieve the intended outcomes must be established, and
- Evaluation strategies and performance standards must be determined to set the benchmark standard for the training.

This paper will no doubt contribute to the understanding of several of the above referenced elements of curriculum development. It is however imperative that a formally constructed effort be launched to do justice to the importance of e-Retail curriculum and training as has been indicated in this paper. The following values are recommended: academic and industry benchmarking, vocational focus, and integrated internship strategies. It is important to develop real practice skills that provide unique occupational context for e-Retail practitioners as distinct from information technology and traditional retail practitioner training within a broader occupational continuum. It is foreseen that internships would become a most relevant strategy for promoting quality and practice performance standards. A curriculum framework is provided in Table 3 for the purposes of reference as a first draft curriculum. The broader curriculum considerations and values are more tentatively offered since these have not yet been formally established.

The Expert Group concurs and unequivocally declared that “industry-referenced skills training could enhance the capacity of the e-Retail industry in South Africa and certification courses, such as SAP Retail Associate and CISCO Cybersecurity could be useful.”

A strongly emerging mega trend that impacts all digital platforms is “Big Data” and Data Science. Gary Hadfield, quoted in Biz Trends (2014), professes that “big data” will become a major factor in e-Retail by providing intelligence that is not generally available within a traditional retail setting. The efficacy of a business can be improved by tuning in to consumer needs and big data can enable this. Within an e-Retail environment supported by big data, it would be possible to provide “more targeted and relevant suggestions to shoppers”.

The “breaking” mega trend that will start impacting the South African e-Retail sector in the next period is “wearable technologies”. The Mintel (2014) report also makes reference to the emergence of new trends in wearable technologies. In a recent UK survey, it appears that there is strong approval for wearable and pervasive technologies. Indications are that this trend will have a significant impact on e-Retail as attitudes and behaviour and integration of technology into our lives continue to manifest. Pillay (2015) argues that the nature of enterprise will be changed fundamentally by the emergence of enterprise mobility technologies. The impact of the transformation of enterprise will be felt at organisational, leadership, strategic, procurement, vendor and customer levels. The future of enterprise mobility lies within "Everything as a Service", "the Social Internet of Everything", "Enterprise Wearables", and "Technology Abstraction" as the new catch phrases in the technology space and by extension the e-Retail space.

Table 3: Features of the Proposed Professional Qualification in e-Retail Management

Curriculum Focus	Academic Exposure	Industry-referenced Certification
• Vocational Focus • e-Retail Technology • e-Retail Marketing • e-Retail Operations • e-Retail Business Intelligence	• e-Retail Technology • e-Commerce Platforms • Search Engine Optimisation • Cybersecurity • Internet of Things	• SAP Retail Associate • Retail basics • Organisational structure • Requirements planning • Purchasing basics • Logistics • Retail master data (*) • Store connection (Retail store) • Merchandise distribution • Promotion management • Retail pricing (Multichannel) • Sites & business partners
• Student Experience • Focused and relevant engagement • Adult education • Interactive environment	• e-Retail Marketing • e-Retail Catalogue • Marketing dashboards • Multichannel marketing • Social media monitoring	• CISCO Cybersecurity • Introduction to Information Security • Operating system & network security • Cybersecurity policies, plans & procedures • Cybersecurity design & management
• Teaching Methodology • Blended teaching approach • e-Retail Simulation	• e-Retail Operations • e-Retail Logistics • Customer Relations Management • Secure transactions • IT Services Management	• PRINCE2 Foundations (*) • Key principles • Structure of a PRINCE2 project • The PRINCE2 process model • Process, activities, risk and information flow
• Assessment Approach • Online formative assessment • Controlled summative assessment • Competency-based assessment • Performance monitoring	• e-Retail Business Intelligence • Business intelligence • Web analytics • Competitive intelligence • Data management	• PRINCE2 Practitioner • Business case simulation • Organisation simulation • Quality simulation • Management of risk simulation
• Delivery Platform • Computer-based instruction • Real & virtual classrooms • LMS (Blackboard or Moodle) • Web Portal • Mobile Technology	• e-Retail Project • Work-integrated Learning (WIL) project • Service Learning Project	• ITIL Awareness (*) • Basic ITIL for IT managers
• Courseware Provision • Information brochures • Learner guides • Textbooks and Reference Books • Course Manuals • Rich Media (Multimedia), incl. simulation, animation & video • Online Portfolio of Evidence	• Quantitative Techniques • Mathematics for e-Retail • Problem solving using MATLAB	• ITIL Foundations • Basic ITIL for IT practitioners
	• Strategic Communication • Professional development • Information Literacy • Portfolio of Evidence	
	• Business Practice • Introduction to Commerce • Retail Management • e-Retail Case Studies • e-Retail Trends	

*Notes

- Retail master data: The business objects focussed on retail which are agreed on and shared across the enterprise.
- PRINCE2: An acronym for "Projects in Controlled Environments", version 2; the project-management methodology encompasses quality management, control and organisation of a project with consistency and review to align with project objectives.
- ITIL: An acronym for Information Technology Infrastructure Library; it is a set of practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business.
- HEICTA: The Higher Education ICT Association.

5. CONCLUSION

This paper provides a broad overview of e-Retail implementation and its impact on skills development within the South African retail sector; and interrogates the readiness of the South African retail sector for e-Retail on the basis of a selection of technology, marketing, operations and business imperatives. It furthermore provides, in particular, a predictive analysis of the technical skills requirement to sustain a viable e-Retail industry. In this regard, a set of salient e-Retail functions, skills and services were identified that pragmatically define a set of baseline competencies for implementation. Furthermore, a proposed framework for a professional qualification in e-Retail Management is provided as a possible Higher Education curriculum intervention.

The study deployed a Design Science Research approach that informed the design and construction of various knowledge artefacts that describe the South African e-Retail experience and aspirations by highlighting salient aspects relating to (1) traditional versus e-Retail, (2) global e-Retail trends, (3) e-Retail technologies and platforms, and (4) e-Retail training imperatives. The research furthermore elucidated the environment for e-Retail deployment in South Africa with respect to e-Retail functions, services and job skills requirements and prospects of e-Retail as a career.

5.1. E-Retail Change Agenda

This paper delivers a praxis model for enhancing service delivery, sustainability and competitiveness of the South African e-Retail sector within a disruptive global environment. The model provides a comprehensive and systematic framework for specifically evaluating the potential impact of disruptive social, business and technology trends.

The schema for the e-Retail change agenda is shown in Figure 5.

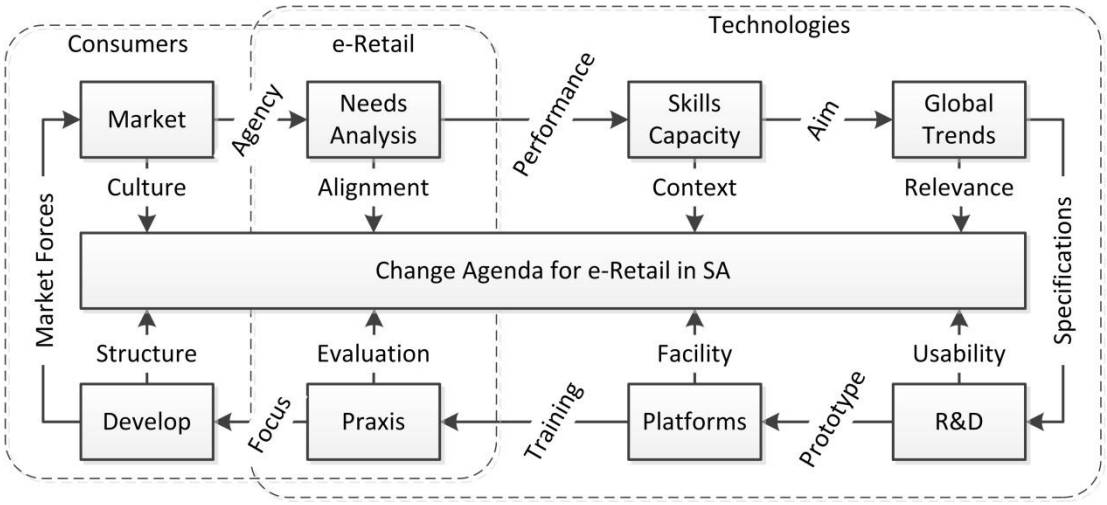

Figure 5: e-Retail Change Agenda

The relationship model supporting a "Change Agenda for e-Retail in South Africa", as illustrated in Figure 5, brings into clear focus the complexity of the environment. It is evident from the model that the realisation of an efficacious e-Retail industry demands that new synergies be established between "new age" consumers and constantly evolving technology platforms - with e-Retail being forged at the interface and melting pot of socio-econo-techno engagement. It is therefore not at all surprising that innovation is the order of the day as new technology platforms drive new opportunities for e-Retail as it develops into dominance within the global retail sector. The Change Agenda cuts across all aspects of the

continuum. As technology evolves, so consumers will evolve, and so the e-Retail industry will redefine itself.

On the consumer front, market forces will shape structures and establish new consumer cultures. With the Internet having turned the world into the proverbial "global village", it is foreseen that these dynamics will play out within niche, local, regional, national and global networks. Consumer and market demands will provide the agency for the retail industry to respond. E-Retail becomes an extremely competitive endeavour within the aforementioned networks and has to respond to consumer needs and align to best practices that are now readily communicated over said networks.

E-Retail, at every level, needs to establish a praxis that becomes the tacit and de facto service level agreement between the industry and consumers. The praxis is continuously evaluated and adjusted to the industry benchmark standards and the evolving change agenda. The industry through its praxis focusses on developing novel infrastructure to support consumers. This then makes consumers co-designers of the e-Retail experience.

On the technology front, the e-Retail needs analysis and performance requirement drive the skills demand for technological intervention. The sustainability of the South African e-Retail industry will be defined by its ability to match relevant global trends. The competiveness of the local industry will be a function of its R&D prowess that will be focussed on bringing innovative utility and usability to bear within the change agenda for the industry. Prototypes will evolve into new platforms, and new platforms will require a new training regime, that in-turn brings about praxis renewal.

This report therefore establishes a starting point for engagement of a very complex unfolding discourse on e-Retail in South Africa.

5.2. Limitations of the Study

The nature and limitations of the data gathering process places a practical limitation on the value of the research in that generalised conclusions are not possible and information is relevant only for the purpose and within the context that it was mined.

After several unsuccessful attempts, over a prolonged period of time, at setting up a comprehensive face-to-face focus group session with a representative group of participants, it was decided that a more pragmatic approach was indicated. The data of the several "non-quorate" focus groups was collated and synthesised into an information grid that was subsequently presented to all participants using an online platform as an "online focus group session". As with the face-to-face focus group sessions, the moderator seeks to promote exchange between participants to promote deeper engagement of the subject matter. The online focus group session takes place over a predetermined period of time. Online focus groups are deemed to be valid if sufficient interaction between participants is made possible (Hughes & Lang, 2003). The online focus group event was conducted using Google Forms, which allowed information to be updated and published as participants made their individual contributions. In some cases where participants experienced some difficulty with connectivity or access, the moderator engaged the participants via email and then posted these contributions.

5.3. Conclusion

The study identified a comprehensive suite of key and breaking technologies that inform the successful implementation of e-Retail in South Africa. The study also uncovered essential business process elements that are required to drive the change agenda for e-Retail in South Africa. The study also highlights aspects of business and social change associated with the global phenomenon of e-Retail and recognises the evolution of e-Retail functions, skills and

services. In this regards the study draws from salient international case studies as well as relevant national case studies.

The study makes significant knowledge contributions with respect to the delineation of salient issues to be addressed with regard to the practical implementation of e-Retail in South Africa. The study makes a novel methodological contribution by deploying a Design Science approach to establish the process logic for the research and a Critical Interpretivist approach for information synthesis. This strategy allowed the research to be both suggestive and receptive to opportunities and challenges within a complex environment of change and transformation.

Several mega trends impacting the e-Retail industry in South Africa have been identified. These include cybersecurity as an imperative to ensure that data management and financial transactions can be done securely. Big Data will become a major factor in e-Retail by providing intelligence that is not generally available within a traditional retail setting. It also appears that there is strong approval for wearable and pervasive technologies.

6. REFERENCES

Accenture Digital. (2015). Trends 2015: Trends Impacting Design & Innovation. http://insights.ecommerceexpo.co.uk/wp-content/uploads/2015/03/11.00-Fjord-James-Deakin.pdf

Biz Trends. (2014). Biz Trends 2014: Multi-Industry Business Trend Predictions. http://www.bizcommunity.com/f/1402/BizTrends2014.pdf

Brown, S.P. (2008). Business Processes and Business Functions: A New Way of Looking at Employment. *Monthly Labor Review*, 131, 12, 51-70.

BusinessTech. (2015). SA Online Shopping Only 1% of Retail Sales. https://businesstech.co.za/news/internet/86720/sa-online-shopping-only-1-of-retail-sales/

Chiles, C.R. & Dau, M.T. (2005). An Analysis of Current Supply Chain Best Practices in the Retail Industry with Case Studies of Wal-Mart and Amazon.com (Master's Thesis, Massachusetts Institute of Technology, United States).

Council for Higher Education (CHE) (2004). Criteria for Programme Accreditation. http://www.che.ac.za/sites/default/files/publications/CHE_accreditation_criteria_Nov2004_0.pdf

Daymon Worldwide. (2014). Global Consumables Retailing and Private Brand Leader Daymon Worldwide Releases 2015 and Beyond Global Retail Trend Predictions to Address "The Year of Retail Fragmentation". http://www.prnewswire.com/news-releases/global-consumables-retailing-and-private-brand-leader-daymon-worldwide-releases-2015-and-beyond-global-retail-trend-predictions-to-address-the-year-of-retail-fragmentation-283049201.html

Deloitte. (2015a). African Powers of Retailing: New Horizons for Growth. https://www2.deloitte.com/ng/en/pages/consumer-business/articles/ng-african-powers-of-retailing-new-horizons-for-growth.html#1

Deloitte. (2015b). Global Powers of Retailing 2015: Embracing Innovation. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Consumer-Business/gx-cb-global-powers-of-retailing.pdf

Ernst & Young. (2015). Megatrends 2015: Making Sense of a World in Motion. http://www.ey.com/Publication/vwLUAssets/ey-megatrends-report-2015/$FILE/ey-megatrends-report-2015.pdf

E-Skills UK. (2011). *Skills Requirements for e-Commerce and Their Provision in Scotland*. The Sector Skills Council for Business and Information Technology, LMD918.

Euromonitor International. (2017). Internet Retailing in South Africa. http://www.euromonitor.com/internet-retailing-in-south-africa/report

Frost & Sullivan. (2014). World's Top Global Mega Trends To 2025: Implications to Business, Society and Cultures. Powerpoint Presentation. http://www.investinbsr.com/ipaforum/wp-content/uploads/Iain-Jawad-IPA-Forum-2014-Presentation.pdf

Greenwood, D.J., Whyte, W.F. & Harkavy, I. (1993). Participatory Action Research as a Process and as a Goal. *Human Relations*, 46, 2, 175-192.

Guest, G., Namey, E.E. & Mitchell, M.L. (2013). *Collecting Qualitative Data: A Field Manual for Applied Research*. Thousand Oaks: SAGE Publications.

Harris Poll. (2016). CIT Retail Outlook. https://www.cit.com/assets/0/74/83/350/4294967337/352/3c5bd296-8881-4483-86b4-e7f5bc7084d4.pdf

Hass Avocado Board. (2015). Retail Report: Retail Outlook and Forecast to Build Hass Avocado Retail Sales. (2014-2015 Hass Avocado Board Annual Report). https://www.hassavocadoboard.com/sites/default/files/for_client_retail_trends_report_1-23-15.pdf

Henderson, N.R. (2009). Managing Moderator Stress: Take a Deep Breath. You Can Do This! *Journal of Marketing Research*, 21, 1, 28-29.

Hevner A.R., March S.T., Park J. & Ram S. (2004). Design Science in Information Systems Research. *MIS Quarterly*, 28, 1, 75-105.

Hevner, A.R. (2007). A Three Cycle View of Design Science Research. *Scandinavian Journal of Information Systems*, 19, 2, 87-92.

Hughes, J. & Lang, K.R. (2003). Issues in Online Focus Groups: Lessons Learned from an Empirical Study of Peer-to-Peer Filesharing System Users. *Electronic Journal of Business Research Methods*, 2, 2, 121-136.

JWT Intelligence. (2014). The Future 100: Trends and Change to Watch in 2015. (2015 JWT Intelligence Trend Report). https://www.jwtintelligence.com/trend-reports/future-100-2015/

Klaiber, U. & Hermanus, T. (2014). E-Business Development and Skills Requirements in the Retail Sector. http://wrlc.org.za/wp-content/uploads/2015/08/2014-04-e-business-and-global-retail-sector-report-FINAL.pdf

Marshall, B., Cardon, P., Poddar, A. & Fontenot, R. (2013). Does Sample Size Matter in Qualitative Research?: A Review of Qualitative Interviews in IS Research. *Journal of Computer Information Systems*, 54, 1, 11-22.

Mintel. (2014). Mintel Identifies Four Key UK Consumer Trends 2015. http://www.mintel.com/press-centre/social-and-lifestyle/mintel-identifies-four-key-uk-consumer-trends-for-2015

Nastasi, B. (2008). Study Notes: Qualitative Research: Sampling & Sample Size Considerations. https://webcache.googleusercontent.com/search?q=cache:qN6-7UD2NsgJ:https://my.laureate.net/Faculty/docs/Faculty%2520Documents/qualit_res_smpl_size_consid.doc+&cd=1&hl=en&ct=clnk&client=firefox-b

Padgett, D.K. (1998). *Qualitative Methods in Social Work Research: Challenges and Rewards*. Thousand Oaks: SAGE Publications.

Peffers, K., Tuunanen, T., Rothenberger, M.A. & Chatterjee, S. (2007). A Design Science Research Methodology for Information Systems Research. *Journal of Management Information Systems*, 24, 3, 45-77.

Pillay, B. (2015). The Future of Enterprise Mobility. Enterprise Mobility Forum 2015. [PowerPoint presentation]

Rowe, G. & Wright, G. (1999). The Delphi Technique as a Forecasting Tool: Issues and Analysis. *International Journal of Forecasting*, 15, 4, 353-375.

Smith J.A., Flowers, P. & Larkin, M. (2009). *Interpretative Phenomenological Analysis: Theory, Method and Research*. London: SAGE Publications.

Smith, D. (2015). Aligning Mobile Strategies to Business Objectives. Microsoft. [Power Point presentation]

The Retail Coach. (2015). *The Future of Retail*. The 7th Annual Financial Forecast Forum. NIU Naperville Conference, January 30, Naperville, Illinois. http://cgs.niu.edu/Financial_Forecast_Forum/2015/Cofer_Retail.pdf

UK Commission for Employment and Skills. (2010). Skills for Jobs: Today and Tomorrow. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/339954/national-strategic-skills-audit-for-england-2010-volume-1-key-findings.pdf

World Wide Worx. (2016). SA Online Retail to Pass 1% of Total. http://www.worldwideworx.com/retail2016/