

# **Effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa**

**B OKANGA \***

(Department of Business Management; University of Johannesburg)  
[Okanga@smresearch.co.za] \* corresponding author

**D GROENEWALD**

(Department of Business Management; University of Johannesburg)  
[dgroenewald@uj.ac.za]

## **Abstract**

Efficient fulfilment of e-customers' orders is a critical core business activity that influences effective performance of the modern e-retail enterprises. Unfortunately, ensuring smooth flow of goods from suppliers to e-customers' homes is a challenge that most of the South African e-retailers are still grappling with.

A conceptual analysis was used as a qualitative research technique in this study to identify inhibitors and strategies that can be adopted for improving effectiveness and efficiency of the delivery systems in the contemporary South African e-retail enterprises. Critical analysis of theories on logistical management in e-retail operations was undertaken and compared with the findings of studies conducted on e-retail operations in South Africa.

Findings indicated that efficiency and effectiveness of the delivery systems of most e-retail enterprises are predicted by the warehouse operational models and delivery methods adopted by e-retail executives.

Some of the South African e-retailers were found to have invested in the establishment of effective internal and external logistical management systems such as click-and-collect "locker model" and outsourcing to third party courier companies. However, findings revealed that the overall process of handling logistical flow from suppliers to e-customers' homes is still largely inhibited by poor activities' coordination between e-retailers, courier companies and suppliers. Other challenges were noted to be latent in late deliveries, unwillingness of e-customers to pay additional delivery costs, incompatibility of operational culture and poor after-sales service quality.

The study concludes with a strategic framework that can be adopted for improving effectiveness and efficiency of the delivery systems of the modern South African e-retail enterprises.

## **Key phrases**

*delivery systems; effectiveness; efficiency; e-retail enterprises*

## 1. INTRODUCTION

Propensity of e-retailers to deliver goods as efficiently as possible to e-customers' homes is a core e-commerce activity that predicts effective performance of e-retail outlets in the contemporary competitive virtual marketplace (Heim & Sinha 2001:264). Due to increasing customers' preferences for convenient shopping, e-retail is built on a tacit promise to have goods delivered to e-customers as efficiently as possible (Heim & Sinha 2001:264). Operational glitches limiting smooth and faster flow of deliveries from warehouses to e-customers' homes may therefore negatively affect e-customers' satisfaction and retention. All these can also affect sales and profitability as well as the overall competitiveness and growth of the e-retail enterprise (Mkansi 2013:119). Owing largely to the increasingly lucrative online market, some of the contemporary South African e-retail enterprises have adopted operational models that place delivery at the centre of critical core activities that must be accomplished effectively and efficiently (McLeod 2014:2).

Unfortunately, empirical facts imply that ensuring the smooth and efficient flow of goods from suppliers to e-customers' homes or any other specified addresses is a challenge that most modern South African e-retailers are still grappling with (Amway 2013:1; Duncan 2013:1). Prior studies have evaluated a number of critical influencers of the effectiveness of e-retail operations in South Africa (Chinyanyu, Milne & Watkins 2014:8; Dlodlo & Dhurup 2010:166; Warden & Motjoloane 2007:701). However, the essence for the establishment of effective and efficient delivery systems seems to have been ignored as one of the pivotal constructs for the establishment of effective e-retail enterprise (Chinyanyu, Milne & Watkins 2014:8; Dlodlo & Dhurup 2010:166; Warden & Motjoloane 2007:701). It is against that backdrop that this study evaluates inhibitors and influencers of effective and efficient delivery systems of the e-retail enterprises in South Africa, so as to identify appropriate strategies that can be adopted for improving effectiveness and efficiency of the delivery systems as a critical online business activity of the contemporary South African e-retail enterprises.

## 2. SHORTFALLS: PRIOR STUDIES ON E-RETAIL IN SOUTH AFRICA

Retail is a distribution channel through which enterprises sell goods in smaller quantities to consumers (Mkansi 2013:119). Following the advent and continuous innovation and improvement in the modern information technology, different forms of retailing have evolved to encompass purely physical or brick-and-mortar, virtual or pure-play, and click-and-mortar or click-and-brick retail enterprises (Turban, King, Mckay, Marshall, Lee & Vleland 2008:

29). Purely physical or brick-and-mortar retail enterprises refer to businesses that sell their products offline through investment in the establishment of physical retail outlets (Turban *et al.* 2008: 29). In virtual retail enterprises or pure-play retail businesses, all activities including advertisement, ordering of goods, payment and information on deliveries and other customer queries are handled through the medium of the internet (Turban *et al.* 2008: 29). Click-and-mortar is a retail model in which retail executives use a combination of online retail and physical brick-and-mortar retail approach (Mkansi 2013:119).

As online retails continue to replace traditional retails, e-customers' orders have also been increasing quite significantly (Smaros, Holmstrom & Kamarainen 2000:61). This is attributable to the increasing embracement of online shopping among consumers. Efficient management and delivery of such large quantities of e-customers' orders is therefore a critical factor that will delight consumers and predict the overall competitiveness of the contemporary e-retail enterprises (Smaros *et al.* 2000:61). For e-retail enterprises to perform more effectively, e-retail executives must devote their attention and resources to ensuring efficient management of logistical flow from point of production to e-retailers' warehouses and subsequently to the consumers' homes (Smaros *et al.* 2000:61).

Sadly, it is evident that despite wider adoption of e-retail technologies among South African retailers, most of the studies still continue to focus on the evaluation of the rate of the adoption of e-retail technologies among retail enterprises (Goldstuck 2012:34; Interactive Advertising Bureau of South Africa-IAB 2014; Mbatha 2014:2). IAB (2014:4) highlights customer confidence and trust in the security of the online payment methods as one of the factors still limiting the full embracement of online shopping among the modern South Africa consumers. However, it fails to identify poor deliveries that Duncan (2013:1) noted to be one of the major setbacks marring ability of most of the e-retail enterprises to thrive.

Duncan (2013:1) notes challenges marring effective performance of e-retail enterprises to be linked to lack of trust and confidence in the security of the online payment systems, poor deliveries and lack of varieties. Duncan (2013:1) also highlights that poor after-sales service quality is the other challenge latent in inability of e-retailers to effectively handle rejects and damaged goods as efficiently as possible.

However, just like in the IAB's (2014:4) findings, Duncan (2013:1) does not suggest a strategic framework that can be used to improve effectiveness and efficiency of the delivery systems of the modern South African e-retail enterprises.

Dlodlo and Dhurup (2010:166) argue that the rate of e-marketing adoption among SMEs can be strengthened through investment in e-marketing awareness and training on internet marketing programmes. Such a proposition, however ignores the essence of the existence of effective and efficient delivery system as a predictor for effective performance of the modern South African e-retail enterprises.

The approach taken in the studies of Dlodlo and Dhurup (2010:166), Goldstuck (2012:34) and Warden and Motjolo-pane (2007:701) hampers identification of inhibitors of the delivery systems of the e-retail enterprises. It also hinders the determining of the appropriate integrated remedial strategies that can be adopted to improve the overall effectiveness and efficiency of the delivery systems of the modern South African e-retail enterprises. It is such a limitation that motivates this research.

### **3. PROBLEM INVESTIGATED**

The use of inappropriate strategies to integrate the overall effectiveness and efficiency of the delivery system as a critical core business activity in e-retail operation undermines the extent to which the contemporary South African e-retail enterprises are able to ensure efficient and faster flow of goods from point of manufacture to e-customers' homes or any other specified addresses (Amway 2013:1; Brendanhann 2007:2; Duncan 2013:1; Holmes 2014:2; McLeod 2014:2). Except for a few e-retailers, such glitches in the delivery process seem to have affected the overall satisfaction and loyalty of e-customers to frequently use online shopping from certain e-retail enterprises (Duncan 2013:1; Holmes 2014:2).

### **4. PURPOSE OF THE RESEARCH**

The purpose of this research is to undertake a critical analysis of inhibitors and influencers of the effectiveness of e-retail operations in South Africa so as to determine the integrated strategies that can be adopted for improving effectiveness and efficiency of the delivery systems as a critical e-commerce activity of the contemporary South African e-retail enterprises.

### **5. METHODOLOGY**

While drawing from views of Boghossian (2011:488) and Cronin, Ryan and Coughlan (2008:38), this research used conceptual analysis as the main qualitative research technique. Conceptual analysis involved systematic review and meta-synthesis, which were accomplished according to three main steps that are aligned to the three main research questions that include (Cronin *et al.* 2008:38):

- What are the contemporary views on strategies that influence effectiveness and efficiency of the delivery systems of the modern e-retail enterprises?
- How effective and efficient are the delivery systems of the e-retail enterprises in South Africa?
- Which strategic framework can be suggested for improving effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa?

Assessment of the contemporary theories on the strategies that influence effectiveness and efficiency of the delivery systems of the modern e-retail enterprises was accomplished through systematic and meta-synthesis of core theories on e-retail. Analysis of trends on the effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa was undertaken through critical analysis of prior empirical and non-empirical studies which have been conducted on challenges that limit the effective operation of the modern South African e-retail enterprises.

The study examined studies conducted on e-retail operations in South Africa in the period between 2002 and 2015. Thereafter, an analysis and comparison of core theories on e-retail operations with empirical findings on the effectiveness of delivery systems of the South African e-retail enterprises were conducted to identify challenges marring effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa (Blanchette 2012:27; Boghossian 2011:488; Cronin *et al.* 2008:38). After a logical conclusion was reached on the hampering challenges, the study postulates a strategic framework that can be adopted for improving effectiveness and efficiency of the delivery systems of the modern South African e-retail enterprises. The details of the findings are presented and discussed as follows.

## 6. FINDINGS

In line with the discussions in the above indicated methodology, the findings in this section are presented and discussed according to the two main headings that include:

- Contemporary theories: integrated strategies for effective and efficient delivery systems of the modern e-retail enterprises.
- Empirical: effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa.

The details of the discussions are as follows.

## 6.1 Integrated strategies for effective and efficient delivery systems of the modern e-retail enterprises

The integrated perspective of the views of different authors on the predictors of the efficiency and effectiveness of the delivery systems of the modern e-retail enterprise is illustrated in Figure 1 (Heim & Sinha 2001:264; Mkansi 2013:119; Smaros *et al.* 2000:61). The overall effectiveness and efficiency of the delivery systems of the modern e-retail enterprises is influenced by the warehouse operational models and the delivery models adopted by the e-retail executives (Heim & Sinha 2001:264; Mkansi 2013:119; Smaros *et al.* 2000:61).

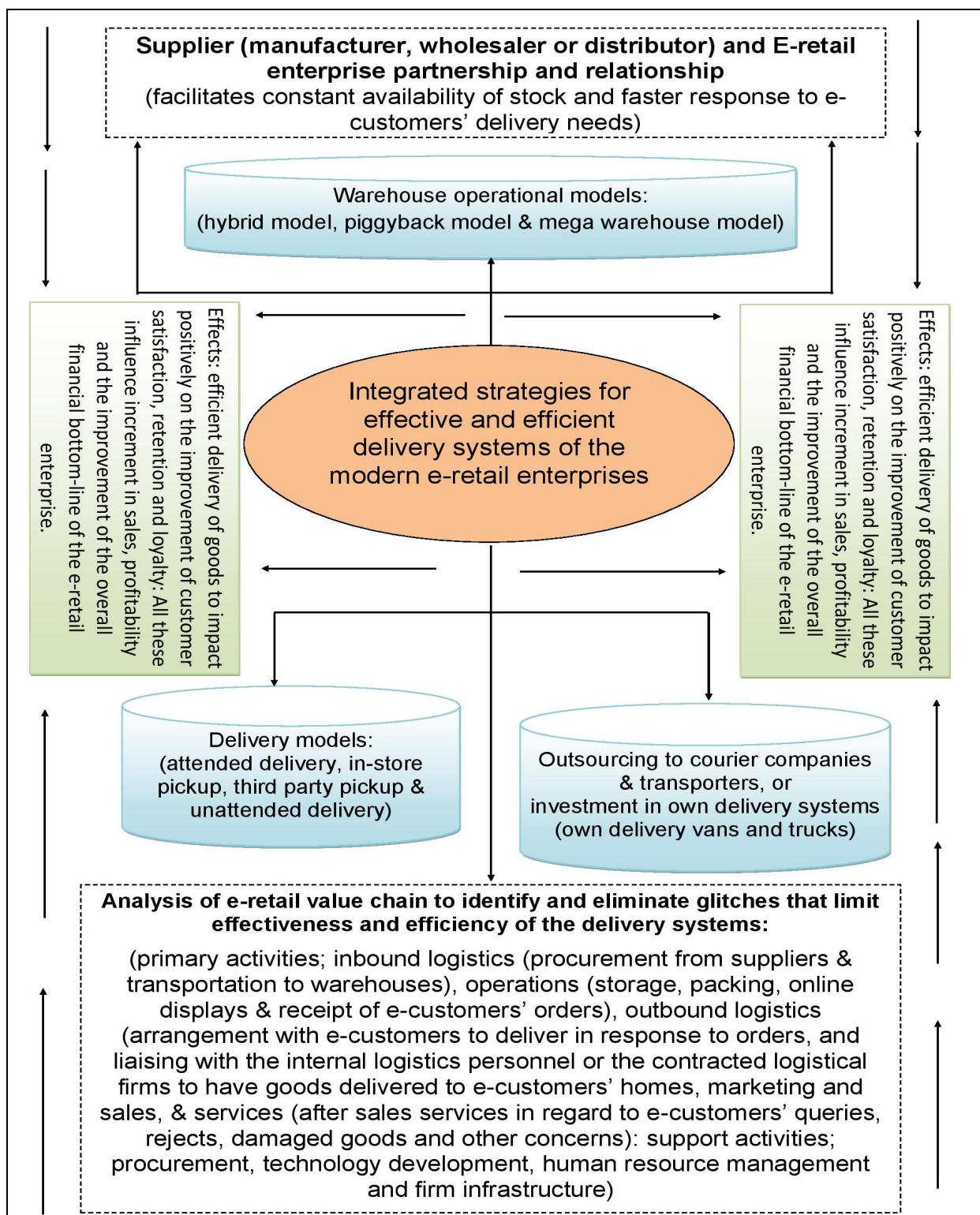
Besides the need for critical analysis of outsourcing vis-à-vis investment in own internal delivery systems, further interpretation of theories reveal that constant analysis of the e-retail delivery value chain is also paramount for identification and elimination of operational glitches. This enhances determining of measures that can be used to smooth and fasten flow of deliveries from warehouses to e-customers' homes (Heim & Sinha 2001:264; Mkansi 2013:119; Smaros *et al.* 2000:61).

The details of all these strategies are evaluated and discussed as follows.

### *6.1.1 E-retail warehouse operational models*

As a result of the evolution of e-retail and its increasing embracement among e-customers, new models of stores and warehouses are emerging to replace or modify the traditional models of retail stores and warehouses. Such trends have also motivated the transformation of how such warehouses and stores are managed to influence the improvement in order fulfilments (Heim & Sinha 2001:264; Tesco 2010:45). Hybrid model, piggyback model and mega warehouse models are some of the warehouse models that have evolved from the pragmatic approach of retailers as the three critical warehouse models for easing the overall process of managing customer orders and deliveries (Heim & Sinha 2001:264; Mkansi 2013:119).

**Hybrid model** is a warehousing approach in which the e-retailer develops and establishes a separate warehouse or store that only deals in picking and packing products or goods for deliveries to e-customers' homes or any other specified addresses (Heim & Sinha 2001:264). The use of hybrid warehouse model renders it easier for e-retail enterprises to create more space for easy movement of personnel picking, packing and loading goods for deliveries. It also enhances implementation of efficiency improvement measures that often involve installation of machineries and automations to improve the overall responsiveness of the e-retail enterprises to e-customers' orders (Smaros *et al.* 2000:61).



**FIGURE 1: Integrated strategies for effective and efficient delivery systems of the modern e- retail enterprises**

Source: Researcher's own construct as derived from the interpretation of different theories on logistical management in the modern e-retail enterprises (Heim & Sinha 2001:264; Mkansi 2013:119; Smaros et al. 2000:61).

**Hybrid model** is a warehousing approach in which the e-retailer develops and establishes a separate warehouse or store that only deals in picking and packing products or goods for deliveries to e-customers' homes or any other specified addresses (Heim & Sinha 2001:264). The use of hybrid warehouse model renders it easier for e-retail enterprises to create more space for easy movement of personnel picking, packing and loading goods for deliveries. It also enhances implementation of efficiency improvement measures that often involve installation of machineries and automations to improve the overall responsiveness of the e-retail enterprises to e-customers' orders (Smaros et al. 2000:61).

Despite its efficiency enhancement values, other authors note that hybrid warehouses are not preferable due to hefty costs required for its establishment and operation (Hays, Keskinocak & Virginia 2004:20). Such costs are not relatively comparable to the costs of establishing a piggyback model. A piggyback model is distasted for slowing the process of picking and packing the ordered goods. However, it is still often treated as a more cost-effective approach for largely brick-and-mortar retailers that are yet seeking to establish online presence (Heim & Sinha 2001:264; Mkansi 2013:119).

In **piggyback model**, the e-retailer uses the same physical retail outlets for picking and packing online customer orders alongside offline customers (Heim & Sinha 2001:264; Mkansi 2013:119). This provides an appropriate operational model for traditional brick-and-mortar retail enterprises that aim to go online to use the same stores to serve online customer orders without necessarily having to invest in new infrastructure. Such approach optimises the existing traditional retail structures. It also reduces the amount of capital finance required for establishing online e-retail subsidiaries.

However, if the rate of online customer orders increases, its limitations may set in to deprive the overall physical attractiveness of the in-store shopping environment (Heim & Sinha 2001:264; Mkansi 2013:119). The accomplishment of picking, packing and loading of online customers' orders in the same environment in which ordinary customers are doing physical traditional shopping leads to overcrowding that slows down movement and faster undertaking of deliveries.

Even in the midst of such drawbacks, piggyback model is still often preferable. Retailers that are new entrants into e-retail, but with numerous outlets in several widely dispersed geographical locations can usually use piggyback model to improve the overall proximity to geographical locations with significant consumer concentrations (Geunes *et al.* 2004:118; Tan *et al.* 2009:445). Besides avoidance of traffic congestions and minimisation of risks of



depreciations of delivery vans and trucks, proximity to such geographical locations also means that consumers are able to have the ordered goods delivered to them as speedily as possible (Mkansi 2013:119).

In contrast, **mega warehouse models** are larger automated warehouses almost the size of a football field. Mega warehouses are often stocked with non-perishable stocks such as shoes, clothes, books, cosmetics and electronics (Mkansi 2013:119).

As compared to piggyback in which the same physical stores are used for serving online customer orders, mega warehouses ease the movement of personnel involved in picking and packing of orders. Large spaces also facilitate the creation of driveways for delivery vans to enter and facilitate picking, packing and loading at the same time (Heim & Sinha 2001:264; Mkansi 2013:119). This reduces the lead time between the time that the online customer orders and pays and the time that deliveries are accomplished. However, some authors caution that just like in hybrid warehouse models, the drawbacks of mega warehouse models are linked to higher costs of establishment that can limit their distribution and geographical coverage. Limited geographical coverage undermines proximity to customer locations and the overall efficiency and effectiveness of the e-retail delivery systems (Geunes *et al.* 2004:118). Despite the overall effectiveness of warehouse operational models that the e-retail enterprise uses, effectiveness and efficiency of the delivery operations of e-retail enterprises are also predicted by a combination of the delivery models that the e-retail executives have selected (Tan *et al.* 2009:445).

### ***6.1.2 E-retail multichannel delivery model***

Most e-retailers tend to deprive customers of alternative delivery modes by prescribing only a specific mode of delivery (Foster 2012:6; Turban *et al.* 2008: 29). Yet, studies indicate that the use of multichannel models encompassing attended delivery, in-store pickup, third party pickup locations and unattended delivery facilitates the extent to which the drawbacks of one delivery mode are able to outplay the weaknesses of the other delivery modes and vice-versa (Mkansi 2013:119). In attended delivery modes, e-customers are availed with the time that deliveries can be undertaken so that they can choose the time that goods can be delivered. Since e-customers are required to be present for deliveries to be undertaken, the advantages of attended delivery modes are reflected in minimisation of incidents of theft or loss of goods (Mkansi 2013:119; Tesco 2010:45).

Unfortunately, drawbacks of attended delivery modes are latent in the fact that uncertainties linked to fluctuations of traffic can cause courier companies or customers to be late at the

time specified for deliveries to be made. Additional costs that e-retailers charge for deliveries can also repel customers who are nonetheless busy and require goods to be delivered at the time convenient for them (Tanskanen, Yrjola & Holmstrom 2002:169). Unless the e-customer specifies work address as the point of delivery, the other challenge arises from the fact that the time of attended deliveries may conflict with the times that e-customers are at work (Tanskanen *et al.* 2002:169).

The same challenge seems also applicable to in-store delivery. In-store delivery modes provide appropriate flexibility in the time that e-customers can fetch the online purchased products. The inconveniencing aspect of it arises from the fact that e-customers still have to make trips to the stores and delay in queues before products are handed over to them (Tanskanen *et al.* 2002:169). Such a situation leaves the customer still using the often inconveniencing traditional shopping style even after going online. Such view explains why it is preferable to also use third party delivery modes that require contracting with courier companies or transporters to have goods delivered either at the customers' places of work or homes or any other location that the customer agrees with the third party (Tanskanen *et al.* 2002:169). Although this eliminates costs that customers must incur when making trips to stores, costs that customers or e-retailers must incur to have goods delivered at the location of customers' convenience may still be deterring (Yingpeng 2014:190).

Such delivery costs can also deter poor customers who cannot afford to meet double costs involved in payment of actual costs of online goods and costs associated with deliveries (Yingpeng 2014:190). All these imply that the use of unattended delivery as the accompanying delivery modes would provide alternatives of the delivery modes that online consumers can select (Yingpeng 2014:190). Unattended delivery mode refers to the process through which e-retailers deliver goods to either e-customers' lockbox at home or work or any other place that the e-customer requires and agrees (Mkansi 2013:119). Unattended delivery mode eliminates inconvenience and costs associated with deliveries. However, risks of loss or theft of the delivered goods remain quite eminent as the goods are just delivered unattended. E-retail executives may also be affected by the difficulty of making appropriate decisions on whether to outsource delivery processes or develop an internal delivery management system (Mkansi 2013:119).

### ***6.1.3 Outsourcing versus investment in internal delivery systems***

Evaluation of efficacy of outsourcing vis-à-vis investment in the internal delivery systems is another critical factor that influences effectiveness of the delivery system of the modern e-

retail enterprises (Hays *et al.* 2004:13). Outsourcing refers to the process through which the delivery services of the e-retail enterprise are provided by a contracted third-party. For less financially resourced e-retail enterprises, outsourcing of delivery services is an appropriate strategic decision because of the less amount of the required capital finance (Hays *et al.* 2004:13). Hefty costs associated with investment in an efficient and effective internal delivery system are often not relatively comparable to the costs of having the delivery system outsourced. This signifies that outsourcing of the internal delivery system is a strategy that can only be used until the e-retail enterprise has gained the desired financial strength to be able to invest in the equipment and tracks for its own delivery systems.

However, some authors argue that outsourcing can also be costly and reduce profitability margins due to fees payable to contractors (Ganesn *et al.* 2009:23). This renders it difficult for e-retailers to pass advantages that are often linked to lower operational costs to e-customers in terms of lower prices ((Peter & Walters 2007:59). Outsourcing of deliveries must therefore be undertaken by e-retailers only in exceptional circumstances that e-retail executives feel that effective accomplishment of deliveries as one of the core activities will not be undermined (Ganesn *et al.* 2009:23). As such decisions are being undertaken, critical factors that must be considered include the associated cost implications. Other critical predictors involve evaluation of the overall networks of the third party logistic providers with other firms and compatibility of their operational cultures with the cultures in the e-retail enterprise (Samar & Trudie 2009:13).

In the traditional brick-and-mortar retail enterprises, deliveries to customers are often considered as peripheral and outsourced to improve the overall management's concentration on core activities. That is not the case in the contemporary e-retail enterprises in which the extent to which e-retailers are able to deliver the ordered online goods as speedily as possible to consumers is a factor that can make or break the e-retail enterprise (Ganesn *et al.* 2009:23). Such a view implies that well-resourced e-retail enterprises must avoid outsourcing of delivery activities because they are core and critical to effective e-retail operation as compared to the operations in the traditional brick-and-mortar e-retail enterprises (Samar & Trudie 2009:13).

Risks of incompatibility of operational culture reflecting different levels of operational efficiency can affect the overall quality of the delivery services. Negatively, this can affect the satisfaction of e-customers and subsequently the competitiveness of the e-retail enterprise. Investment in the internal delivery systems must be a priority if e-retailers are to operate

more efficiently and in a manner that delights their customers (Samar & Trudie 2009:13). While using own vans and trucks, e-retail enterprises can be able to undertake necessary modifications in the delivery processes and methods that can render it possible to optimise delivery routes and attain the desired level of operational efficiency (Samar & Trudie 2009:13). Irrespective of how effective and efficient the delivery system of the e-retail enterprise may be, most authors argue that constant analysis of the e-retail delivery value chain is critical for identification of critical inhibitors and determining remedial and improvement strategies that can be put in place (Peter & Walters 2007:59).

#### ***6.1.4 E-retail value chain***

Analysis of e-retail value chain influences identification and elimination of operational glitches that can undermine effectiveness and efficiency of the delivery systems of e-retail enterprises (Peter & Walters 2007:59). Critical activities in the analysis of e-retail value chain include primary activities and support activities. Primary activities encompass evaluation of the effectiveness of the process and style for management of inbound logistics, operations, outbound logistics, marketing, and sales and services (Peter & Walters 2007:59: Porter 1985:1). Inbound logistics involve analysis of the process of procuring, storage and packaging of products for deliveries. This leads to assessment of outbound logistics that deals with evaluation of efficiency of how online customers' orders are received, processed and despatched using either own delivery systems or delivery systems outsourced to third party courier companies (Peter & Walters 2007:59: Porter 1985:1).

It is also important that significant focus is directed towards identification of glitches that limit efficient logistical management and smooth flow of goods from point of manufacture via stores of e-retail enterprises to point of consumption (Peter & Walters 2007:59: Porter 1985:1). All these influence improvement of inventory management, partnership and linkage with manufacturers, wholesalers or distributors. Other business values of such approach are reflected in the improvement of the process of storage and packaging to ensure that goods are delivered more efficiently to e-customers (Peter & Walters 2007:59: Porter 1985:1).

However, the effects of such analysis can be limited unless accompanied by evaluation of the overall effectiveness of support activities encompassing procurement, technology development, human resource management and firm infrastructure. In certain cases, challenges that limit the smooth flow of goods are related to either to the methods used in the procurement processes, human resources' skills and competencies, or lack of supportive technology and firm infrastructure (Feindt, Jeffcoate & Chappell 2000:51). Analysis of such

support activities is therefore critical for identification and elimination of such inherent weaknesses.

For deliveries to be accomplished efficiently and effectively, it is also critical that in the first place, there must be sufficient stocks to enhance the faster response to e-customers' orders by making deliveries as soon as possible (Feindt *et al.* 2000:51). In certain cases, deliveries have often not been effected more easily because of poor inventory management to balance the predicted demands with supplies. Other sources of poor deliveries are linked to failure to link up with suppliers, manufacturers, wholesalers and distributors to ensure that goods are made easily available (Feindt *et al.* 2000:51; Foster 2012:19; Huang 2013:9; Yingpeng 2014:190).

## **6.2 Delivery systems of the e-retail enterprises in South Africa**

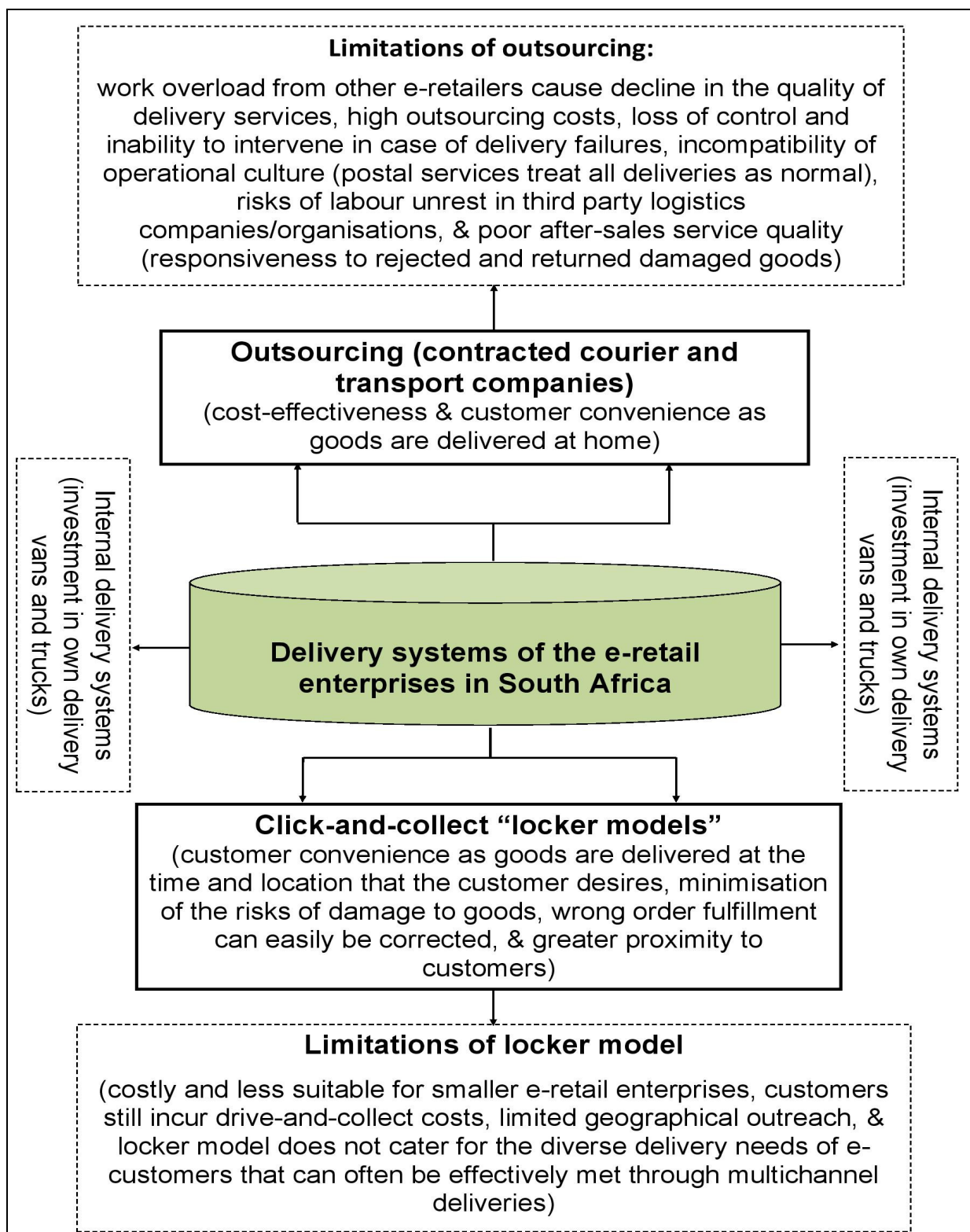
Empirical facts indicate that some of the e-retailers have either invested in the establishment of the internal delivery systems or have adopted click-and-collect "locker models" (Amway 2013:1; Brendanhann 2007:2; Duncan 2013:1; Holmes 2014:2; McLeod 2014:2). Figure 2 also highlights that it was noted that there is a stronger preponderance among most of the modern South African e-retailers to outsource their delivery systems to third party courier and transport companies (Amway 2013:1; Brendanhann 2007:2; Duncan 2013:1; Holmes 2014:2; McLeod 2014:2).

The details of these delivery methods and the associated limitations are evaluated and discussed as follows.

### ***6.2.1 Contracted courier and transport companies***

It is evident from empirical findings that most of the e-retailers in South Africa tend to rely on contracted third party logistic handlers (Amway 2013:1; Joncker 2013:2). This implies that most activities related to deliveries of goods to e-customers' homes are outsourced to different logistical companies. High rate of outsourcing of delivery services of the modern e-retailers in South Africa is attributable to hefty costs required for purchase of own delivery vans and trucks and employment of enormous number of delivery staffs (Amway 2013:1).

By outsourcing, most e-retailers are able to not only reduce operational costs and improve the overall profitability of the online operations, but also operate more efficiently. Investment in own internal delivery systems is an appropriate strategy.



**FIGURE 2: Delivery systems of the e-retail enterprises in South Africa**

Source: Researcher's own construct as derived from the interpretation of the findings of different empirical studies in the modern e-retail enterprises in South Africa (Amway 2013:1; Brendanhann 2007:2; Duncan 2013:1; Holmes 2014:2; McLeod 2014:2)

Unfortunately, most of the e-retail executives are unwilling to undertake necessary investments due to uncertainties in the South African e-retail market and the fact that some of the firms do not have sufficient funds to do so (Amway 2013:1; Duncan 2013:1).

In effect, the developments of simple online e-retail systems with modest delivery systems that are largely outsourced to third parties have usually been the appropriate approach for new entrants in the e-retail industry (Duncan 2013:1).

A delivery system is often designed to allow it be self-sustaining through additional R50 that e-customers are required to pay for delivery of the ordered goods to their homes (Duncan 2013:1). However, trends indicate that it is increasingly turning out that payment of additional R50 is considered by a majority of consumers as too high. This makes online shopping not a preferable mode of purchase by a majority of lower income consumers. The effects are often manifested in the fact that most of the ordinary consumers have often opted to avoid online purchase under the wrong impression that it is for the middle class and the affluent (Holmes 2014:2).

This results in reduction of the competitiveness of e-retail enterprises by driving e-customers away to traditional modes of retail shopping or to e-retail enterprises that do not require such payments or use alternative delivery modes (Holmes 2014:2). In other words, the use of third party contractors to accomplish logistics' delivery to e-customers' homes is still yet being undermined by a number of factors (Holmes 2014:2).

### ***6.2.2 Limitations: contracted courier and transport companies***

As most of the customers join online shopping and more retailers continue to enter the South African e-retail market, most of the courier and logistics handling companies tend to get over bogged down with enormous volume of work. This undermines the overall efficiency and effectiveness of the delivery systems of the modern e-retail enterprises. It also induces unreliability latent in late deliveries or poor time keeping (Galatis 2013:3). Since most courier companies tend to handle deliveries of several rival e-retailers using only a few staff as a measure to reduce costs, there have also been higher incidents of goods arriving when either damaged or having wrong goods delivered to the right address (Brendanhann 2007:2).

In effect, while making online purchases, e-customers are often concerned whether they would receive the right goods or wrong ones. This also involves assessment of what would be the cost implications of having to send the wrong goods back and whether or not the e-

retail enterprise would respond as fast as possible to deliver the right replacements (Galatis 2013:3).

Most of the e-retail enterprises place on their websites words of guarantee of full refund or undertaking of immediate corrective actions in case of wrong goods being delivered or if goods are delivered when damaged (Galatis 2013:3). However, there seems to be challenges of fulfilling promises for the reason that some of the customers who have experienced such incidents have not often undergone impressive experience associated with receiving wrong or damaged goods.

Besides fluctuations of the delivery charges, the fact that some of the e-retail enterprises do not carry physical stock also implies that they have a challenge of having to effectively respond to e-customers' orders by making immediate deliveries. Most of the e-customers tend to rely on postal services (Joncker, 2013:6). However, recent trends indicate that postal services owned by governmental parastatals are susceptible to disruptions linked to labour unrest. In the recent strikes of the workers of postal services, Joncker (2013:6) argue that although only a few e-customers complained of having lost goods, the incident caused delays in deliveries of goods to most e-customers.

All these affect the overall level of satisfaction and retention of e-customers who are using such delivery services. Besides the use of third party courier companies, McLeod's (2014:2) findings indicate that click-and-collect "locker model" is another strategy which is being increasingly embraced by the modern South African e-retailers.

### ***6.2.3 Click-and-collect "locker model"***

The decision of Makro's executives to invest enormously in the use of click-and-collect as a competitive strategy echoes the argument in this research that the delivery systems of most of the modern e-retail enterprises are still not operating more efficiently and effectively (McLeod 2014:2). It is such weaknesses that make Makro differentiate itself from rivals by treating delivery as a core activity in e-retail as compared to most of the modern e-retailers that outsource delivery as a peripheral activity.

Although derived from Tesco and Asda's models in the United Kingdom, Makro aims to adopt click-and-collect locker model as a distinguishing feature of its e-retail operation in South Africa. It intends to accomplish this by partnering with the Sasol to build e-commerce lockers on the fuel retailers' forecourts (McLeod 2014:2).



The rationale behind click-and-collect locker model is to create convenience for e-customers on the basis that after confirmation of online orders and payments, goods are delivered to locations most proximate to e-customers. In this process, e-commerce customers can collect products either at their own convenience or when commuting back home from work. Besides installing e-commerce lockers at the forecourts of the retail fuel stations, other strategies will also involve installing lockers at major restaurants, office parks and in all major stores of Makro across the country (McLeod 2014:2).

To facilitate access to goods delivered in lockers, confirmation of payment and deliveries will be followed with instant messaging providing codes and informing e-commerce clients about availability of goods in lockers. These lockers will be in specified locations that can be accessed by e-customers using the allocated codes (McLeod 2014:2). This will eliminate inconvenience that e-customers have to undergo by waiting for deliveries to be delivered at their homes or offices. It will also be more cost effective for Makro for the reason that the costs of delivery from one home to another are eliminated as instead goods are delivered in different sets of locations for e-customers in different areas (McLeod 2014:2). Although this strategy may drive away customers from physical traditional brick-and-mortar retails, there are also limitations.

#### ***6.2.4 Limitations: click-and-collect “locker model”***

The deterring enormous costs of establishing click-and-collect “locker model” throughout the country are linked to costs of investments in necessary equipment and in the need for establishment of relevant information system to facilitate coordination and liaison with e-customers and logistics departments (Holmes 2014:2). Undertaking such arrangements implies that some form of rental fees for usage of fuel retail forecourts will also be required. Positive effects of such a strategy are reflected in the elimination of costs of having to outsource deliveries to third party courier companies and transporters. However, such rental fees will certainly affect cost savings associated with elimination of costs linked to outsourcing to third party logistics companies (Holmes 2014:2).

The overall approach involved in the use of click-and-collect locker model also means that it entails using unattended delivery which is often constrained by risks of theft and loss of the delivered products. Reduction in risks of theft or loss of products signifies that additional costs must be incurred in putting in place necessary measures to ensure that the system is not compromised by fraudsters (McLeod 2014:2).

Even if Makro intends to install lockers in most of the retail fuel forecourts, it is unlikely that it will do so in all fuel retail stations because not all fuel retail stations are located in safe places. This signifies that some e-customers will still have to drive to distant locations to collect their products (McLeod 2014:2). The same limitation is also applicable to e-customers in rural areas that are not proximate to Makro stores or fuel stations (Galatis 2013:3).

Such a view suggests that although the purpose of the implementation of click-and-collect locker model is to minimize customer inconvenience, it will prove less effective for certain customers (Joncker 2013:2). The fact that Makro will be emphasising a single delivery approach is further linked to the interpretation that it will not adequately respond to the needs of e-customers who are determined to have goods delivered at their homes at all costs in order to minimize inconvenience associated with having to balance work, family responsibilities, leisure and work (Joncker 2013:2). This suggests that the use of a multichannel delivery system is to some extent a better approach.

## 7. DISCUSSION

It is apparent from the findings that the management of the flow of logistics from the point of manufacturer to point of consumption is a critical factor that determines the effectiveness of the modern e-retail enterprises (Feindt *et al.* 2000:51; Peter & Walters 2007:59). Unlike in traditional brick-and-mortar retail enterprises, in e-retail, it is customers' concerns of having the ordered goods delivered as soon as possible that lures e-consumers into online purchase (Mkansi 2013:119).

By operating e-retail enterprises, the executives of the e-retail enterprises make implicit reciprocal promises to deliver as soon as possible. Although the management of the delivery systems is often considered as peripheral just like the activities in the traditional brick-and-mortar, it is in other words, not peripheral at all (Samar & Trudie 2009:13). This implies that in case of outsourcing of the delivery services, careful analysis and decisions must be undertaken only in exceptional circumstances (Samar & Trudie 2009:13).

Such exceptional circumstances may include instances where the e-retail enterprise does not have adequate financial resources to invest in their own delivery vans and trucks. It also applies where most of the delivery services are accomplished internally and contractors are only required to support the existing limited internal delivery capacity (Feindt *et al.* 2000:51; Peter & Walters 2007:59). In contrast to such arguments, it is evident from the findings that there is a greater preponderance of the modern South Africa e-retail enterprises to treat

delivery as peripheral and non-core activities that can easily be outsourced (Duncan 2013:1).

Greater preponderance of e-retail executives in South Africa to outsource e-retail's delivery services is noted to be linked to inadequate financial resources and the fact that most of the e-retail executives are still often sceptical about the lucrativity of the South African e-retail market (Amway 2013:1). In effect, they tend to invest more reservedly by among other things preferring to outsource delivery systems to third party logistics companies instead of spending adequate amount of capital finance on the purchase of delivery vans and trucks (Amway 2013:1).

Outsourcing to third party courier companies seem suitable for e-retail enterprises that do not have sufficient capital finance. Empirical facts, however indicate that it is still quite challenging to get e-customers to accept payment of R50 delivery fees (Duncan 2013:1). Combined with the fact that most of the third party logistics companies often maintain only a few staffs as a measure for reducing costs, complaints have often been received from e-customers about late deliveries and poor responses in instances where damaged or wrong goods are delivered (Duncan 2013:1).

In effect, some of the e-retail firms are now adopting click-and-collect model in conjunction to the establishment of effective internal delivery system. The risks of such approach are, however latent in the fact that click-and-collect is still prone to limitations linked to poor proximity in certain geographical areas. Other risks include theft and loss of goods, and inconvenience associated with the fact that customers will still have to drive to some locations in the midst of traffic to collect the delivered items (Brendanhann 2007:2; Holmes 2014:2; McLeod 2014:2). The use of an integrated multichannel delivery approach would provide necessary flexibility to meet diverse delivery needs of e-customers, but findings signify that due to the challenge of inadequate finance, most of the modern e-retail enterprises in South Africa are using only a single delivery method (McLeod 2014:2). In other words, findings indicate that it is having goods delivered more efficiently to the consumers' homes or offices that seem to be causing significant challenges that threaten to mar effective operation of the modern e-retail enterprises (Brendanhann 2007:2; Holmes 2014:2; McLeod 2014:2).

## **8. MANAGERIAL IMPLICATIONS**

In response to the findings of this study, it is argued that the use of integrated strategies in Figure 3 is a prerequisite for the modern South African e-retail enterprises to ensure that

their delivery systems are able to operate more efficiently and effectively. This can also amplify the ability of e-retailers to influence improvement in satisfaction and retention of e-customers. It is indicated in Figure 3 that the three critical warehousing models that the modern e-retail enterprises can use to ensure effectiveness of their delivery systems include hybrid warehouse model, piggyback warehouse model and mega warehouse model.

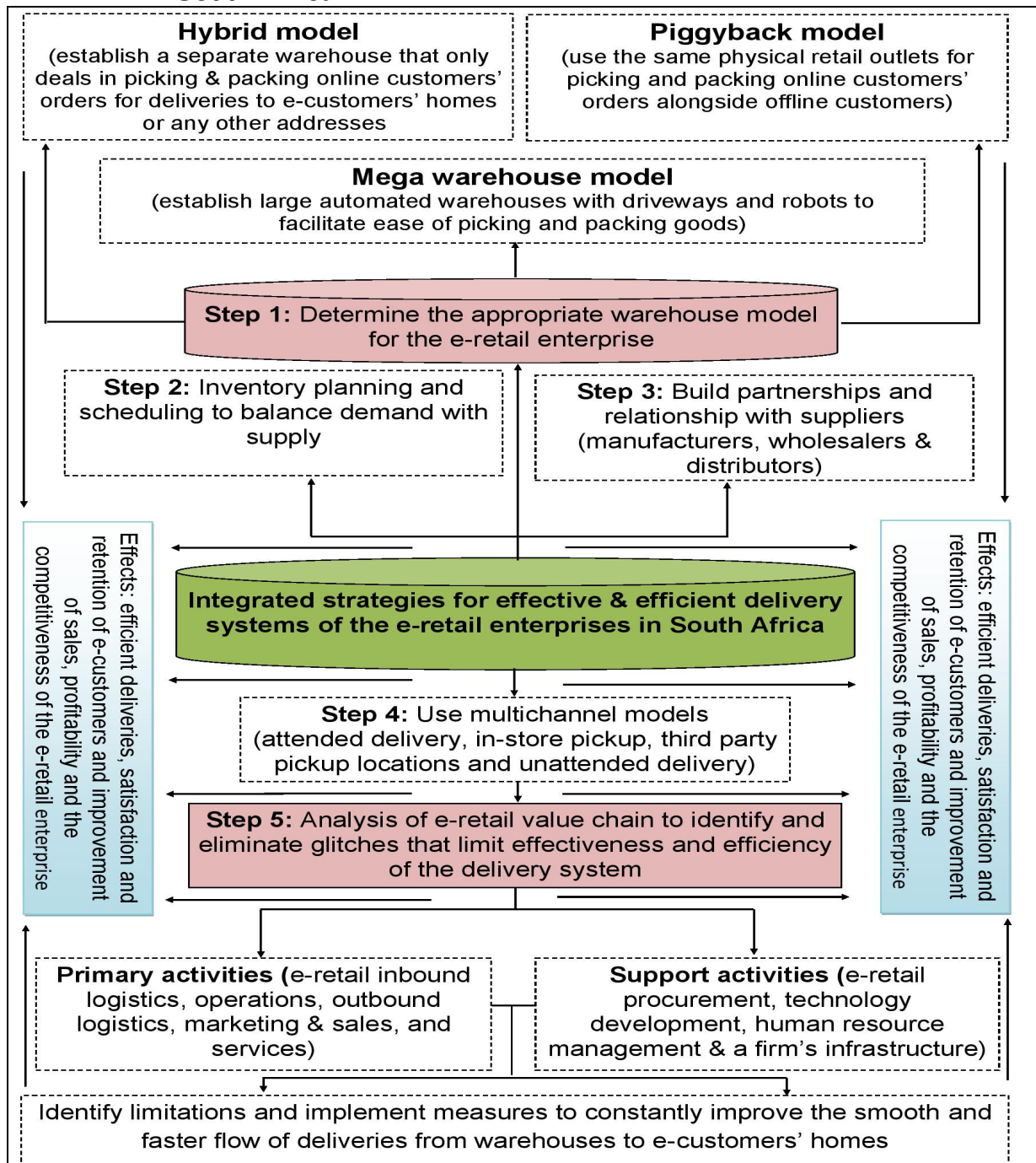
Effective use of hybrid model implies that e-retail executives must be prepared to commit enormous amount of financial resources towards the establishment of new and separate warehouses to ease the process of picking and packing orders. This must be accompanied by recruitment of adequate number of personnel who are in charge of picking, packing and dispatching e-customers' goods. Risks of hybrid model are linked to the fact that in case of significant increase in online customer orders, the use of hybrid warehouse models may limit efficient picking, packing and dispatching goods. It is also often expensive to establish in all geographical locations.

Instead, the South African e-retailers that are not well financially resourced, the use of piggyback warehouses would be appropriate for the reason that they do not need to invest in the establishment of new warehouses. However, piggyback's limitations are linked to the fact that when the number of e-customers increase more significantly, it may turn difficult for staffs to pick and pack products in the same retail stores together with the customers of the physical traditional retail outlets.

Just like in hybrid warehouses which are usually difficult to establish, mega warehouses are also not easy to establish by the e-retail enterprises that are not financially well resourced. This signifies that for e-retailers who are beginners, the use of piggy warehouse models would be an appropriate strategy that can be followed with upgrade to either hybrid or mega warehouses depending on the increment in the quantities of online customers' orders.

Such a decision must be accompanied by effective inventory planning and scheduling to ensure availability of stock and smooth flow of goods from the point of manufacture to the point of consumption. Such a view is attributable to the fact that deliveries of most of the modern South African e-retail enterprises have been quite poor due to poor inventory management. This leads to shortage of stock required to meet the available or future demand. However, inventory planning and management will not precipitate the desired positive effects, unless accompanied by initiation and building effective partnership and relationships with suppliers.

**FIGURE 3: Integrated strategies for improving the effectiveness and efficiency of the delivery systems of the e-retail enterprises in South Africa**



Source: Researcher's own construct as derived from the interpretation and comparison of the theoretical findings (Heim & Sinha 2001:264; Mkansi 2013:119; Smaros *et al.* 2000:61) with the findings of different empirical studies (Amway 2013:1; Brendanhann 2007:2; Duncan 2013:1; Holmes 2014:2; McLeod 2014:2) on the effectiveness and efficiency of the delivery systems of the modern e-retail enterprises in South Africa.

Building effective partnerships and relationships with suppliers would influence improvement of the extent to which e-retailers are able to deliver customers' orders more efficiently. This is attributable to the fact that due to arrangement between certain e-retailers and suppliers, some of the e-retailers operate without holding actual physical stock. Yet when orders and payments are confirmed and received respectively, poor inventory management in supplier organisations has often affected availability of stock to ensure faster response to e-customers' orders.

By building effective partnership and relationships with suppliers, e-retailers can be able to craft and implement strategies that facilitate smooth flow of goods to e-customers. Such a measure must be accompanied by analysis of e-retail value chain to identify and eliminate glitches that limit effectiveness and efficiency of the delivery system.

While using value chain analysis, critical primary activities that the management of the e-retail enterprise must examine include inbound logistics, operations, outbound logistics, marketing and sales, and service. Evaluation of operations will involve analysis of the process of storage, packing, online displays and receipt of e-customer orders and despatching. Assessment of outbound logistics will involve evaluation of the process of arranging with e-customers to deliver in response to orders, and liaising with internal logistics personnel or contracted logistical companies to have goods delivered to e-customers' homes.

In the value chain analysis, the accompanying support activities that must also be assessed by e-retailers include procurement, technology development, human resource management and a firm's infrastructure. In the context of the illustration in Figure 3, all these will influence effective identification of all limitations and implementation of measures to constantly improve the smooth and faster flow of deliveries from warehouses to e-customers. All these will subsequently lead to the improvement of the satisfaction and retention of e-customers as well as sales, profitability and the competitiveness of the e-retail enterprises.

## **9. CONCLUSION**

Adoption of the strategic framework in Figure 3 would certainly solve challenges that the modern South African e-retail enterprises face in striving to ensure efficient flow of logistics from suppliers to e-customers. However, its overall effectiveness will depend on the commitment of e-retail executives to allocate sufficient resources for its operationalisation. Further studies can therefore examine the perception of e-retail executives on the

establishment of an effective delivery system as an investment rather than expenditure in e-retail operations.

## REFERENCES

- AMWAY M.** 2013. Deliveries: your guide to doing business with Amway. [Internet: [www.amway.co.za](http://www.amway.co.za); downloaded on 2015-04-10.]
- BREDENHANN A.** 2007. The challenges facing online shopping in South Africa. Issue No. 23/September 8, 2007. Johannesburg: Mail & Guardian.
- BLANCHETTE P.** 2012. Frege's concept of logic. New York, NY: Oxford University Press.
- BOGHOSSIAN P.** 2011. Williamson and the a priori and the analytic. *Philosophy & Phenomenological Research* 82(1):488-497.
- CRONIN P, RYAN F & COUGHLAN M.** 2008. Undertaking a literature review: a step by step approach. *British Journal of Nursing* 17(1):38-43.
- CHINYANYU M, MILNE D & WATKINS ML.** 2014. ICT adoption and development of e-business among SMEs in South Africa. Buckinghamshire, UK: New Buckinghamshire University.
- DLODLO N & DHURUP M.** 2010. Barriers to e-marketing adoption among small and medium enterprises (SMEs) in the Vaal Triangle. *Acta Commercii* 1(12):164-180.
- DUNCAN F.** 2013. Four things South African retailers need to do better online: steps SA retailers can take to give online shopping a boost. Johannesburg: Moneyweb. [Internet: [www.moneyweb.co.za](http://www.moneyweb.co.za); downloaded on 2015-04-10.]
- FEINDT S, JEFFCOATE J & CHAPPELL C.** 2002. Identifying success factors for rapid growth in SME e-commerce. *Small Business Economics Review* 19(3):51-62.
- FOSTER A.** 2012. Packaging and the internet a guide to packaging goods for multi-channel delivery systems. London, UK: Incpen.
- GALATIS P.** 2013. Why the majority of South Africans aren't yet shopping online. Johannesburg: [Internet: [www.yepiechef.com](http://www.yepiechef.com); downloaded on 2015-04-10.]
- GANESN S, GEORGE M, JAP S, PALMATIER RW & WEITZ B.** 2009. Supply chain management and retailer performance: emerging trends, issues and implications for research and practice. *Journal of Retailing* 1(1):84-94.
- GEUNES J, PARDALOS EPM, ROMEIJN HE & SHEN ZJ.** 2004. Applications of supply chain management and e-commerce research in industry. Dordrecht, NL: Kluwer.
- GOLDSTUCK A.** 2012. Internet matters: the quiet engine of the South African economy. Johannesburg: World Wide Worx Research Organisation.
- HAYS T, KESKINOCAK P & VIRGINIA ML.** 2004. Strategies and challenges of internet grocery retailing logistics. Dordrecht, NL: Kluwer.
- HEIM GR & SINHA KK.** 2001. Operational drivers of customer loyalty in electronic retailing: an empirical analysis of electronic food retailers. *Manufacturing and Service Operations Management* 3(3): 264-271.
- HUANG Y.** 2013. China's online shopping market transactions over 1.3 trillion. Hongkong: Eric Consulting.
- HOLMES T.** 2014. Chasing the e-tail a costly investment. Johannesburg: Mail & Guardian [Internet:<http://mg.co.za/article/2014-06-26-chasing-the-e-tail-a-costly-investment>; downloaded on 2015-04-10.]

- IAB-INTERACTIVE ADVERTISING BUREAU OF SOUTH AFRICA.** 2014. South African e-commerce report: effective measures IAB South Africa Report 2014 [Internet: <http://iabsa.net>; downloaded on 2015-04-10.]
- JONCKER J.** 2013. Online sellers and shipping challenges. Johannesburg: Bidorbuy [Internet: <http://pressoffice.mg.co.za/bidorbuy>; downloaded on 2015-04-10.]
- MBATHA B.** 2014. South Africa goes digital: possible obstacles to the adoption of digital television. *Mediterranean Journal of Social Sciences* 5(1):89-95.
- MCLEOD D.** 2014. Makro goes online locker, stock and barrel: Makro drawing on lessons from Walmart, looks set to be a formidable competitor in e-commerce in South Africa. [Internet: <http://www.techcentral.co.za/makro-goes-online-locker-stock-and-barrel/>; downloaded on 2015-04-10.]
- MKANSI M.** 2013. Management of the e-retail supply and distribution network Bolton, UK: University of Bolton. (D Phil thesis.)
- PETER GP & WALTERS T.** 2007. Adding value in global B2B supply chains: strategic directions and the role of the internet as a driver of competitive advantage. *Industrial Marketing Management* 37(2):59-68.
- PORTER ME.** 1985. Competitive advantage: creating and sustaining superior performance. New York, NY: Free Press.
- SAMAR IS & TRUDIE KR.** 2009. Measuring the quality of e-service: scale development and initial validation. *Journal of Electronic Commerce Research* 10(1):13-28.
- SMAROS J, HOLMSTROM J & KAMARAINEN V.** 2000. New service opportunities in the e-grocery business. *International Journal of Logistics Management* 11(1):61-74.
- TANSKANEN K, YRJOLA, H & HOLMSTROM J.** 2002. The way to profitable internet grocery retailing – six lesson learned. *International Journal of Retail and Distribution Management* 30(4):169-178.
- TAN PJS, RAVI SS & THENG YY.** 2009. Effective e-commerce strategies for small online retailers. *International Journal of Electronic Business* 7(5):445-472.
- TESCO.** 2010. A business for a new decade. Tesco PLC annual report and financial statements, 2010. London, UK: Tesco.
- TURBAN E, KING D, MCKAY J, MARSHALL P, LEE J & VIEHLAND D.** 2008. Electronic commerce: a managerial perspective. Upper Saddle River, NJ: Pearson.
- WARDEN C & MOTJLOPANE IM.** 2007. E-commerce adoption factors for SMMEs: Supporting cases from South Africa. *Managing Worldwide Operations & Communications with Information Technology* 1(1):701-708.
- YINGPENG LRY.** 2014. New business model for companies to win competition. *American Journal of Industrial and Business Management* 4(1):190-198.