

Full Length Research Paper

The relative reality of accounting for web-based transactions

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This paper explores the accounting methods used for web-based sales transactions in multiple cases in South Africa. Exploratory descriptive research is warranted, as little research had been done on the accounting of sales and web-based sales transactions. Information was gathered using structured interviews, transaction trail data collected from web-based transactions and a content analysis of the websites of the cases involved in the study. The relative perceptions of the managers and the reality of the method used to account for web-based transactions was contrasted with the prescriptions of the international accounting standard on revenue. The results were described in the context of the accounting requirements of the international accounting standard on revenue and the influence of the doctrines of relativism and reality.

Key words: E-commerce, web-based transactions, sales transactions, business-to-customer transactions, and B2C.

INTRODUCTION

The introduction of technologies that enable electronic transactions, especially web-based transactions, changed the business world as well as the rules and conditions under which business transactions occur (Marcella, 1998). Sales transactions are the core revenue-generating process in a business and merging web-based technologies to enable web-based sales can lead to real business advantages. These include a fast-growing sales channel, higher growth opportunities offered in the fairly new consumer or retail e-commerce business environment, and the operational benefits of automated transaction processing. The expected faster pace of growth of the e-commerce retailing channel at 17% outpaces the traditional channel, which stands at 3.5% (Kilcourse, 2008). In South Africa the bid or buy website reported turnover of 20 million in 2005, a growth of 65% on the previous year (Anonomous, 2005). Retail e-commerce sales in the USA have grown to \$142 billion,

but at only 3.6% of total retail sales there still is a lot of growth opportunities when the nearly 40% e-commerce sales market share in the manufacturing industry in the USA is considered (US Census, 2008).

Knowledge of the actual or real methods used to identify, capture and process a web-based sales transaction is especially important, as web-based sales transactions allow the customers, untrained in the business's accounting process, to capture the details of a sales transaction, anywhere at any time. In over-the-counter retail transactions the customer can complete the transaction and leave with the product. However, there is a time lag for web-based retail transactions, as the transaction will only be complete once the product is delivered to the customer. Proper accounting of sales transactions is important, as the accounting processes deliver information to managers to enable them to manage from an informed position. The maintenance of proper accounting records is necessary not only for management decisions and the preparation of financial statements, but also for determining revenue for income tax purposes and identifying sales tax or value added tax (VAT). However, more automated web-based transactions can have advantages as they facilitate transaction processing as per the program's instructions on a 24/7 or continuous basis,

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Abbreviations: IAS, International accounting standards; SSL, secure socket layers; VAT, value added tax.

reducing the accounting staff and business's needs to record transactions. The accounting opportunities offered by new web-based technologies are described by Read et al. (2001) in the statement "Ultimately, we will be able to eliminate the need for transaction processing activity (staff that process transactions in the finance function) completely, replacing it with Web-based systems".

Managers should not blindly merge their sales business process with web-based technologies simply because they expect to increase sales and improve the performance of their business, as a merger with information technology (IT) can be expensive. It is important that managers appreciate the impact of IT on their business process and specifically on the accounting process before they implement new technologies. They must have a good business case and be sure that their expectations are matched to the reality of web-based sales. Merging sales transactions with IT will make the new process heavily reliant on IT. However, despite all the advantages offered by IT system mergers, successful IT projects are not the norm and IT projects are expensive. Many expensive unsuccessful IT projects have been reported in the literature (Levinson, 2009; McDougall, 2006).

As this study focuses on the accounting and the complexities of the supporting IT process, although worthy of research, it is outside the scope of this study.

Merging the sales process with web-based technologies will increase automated accounting of web-based sales transactions. In such situations it is important to ensure that the managers understand how the automated accounting occurs: they need to know what methods are used to capture and process the transaction, and the reality of its web-based accounting. "Reality" or "realism" is when "the object of perception has real existence and is neither reducible to universal mind or spirit nor dependent on a perceiving agent" (Oxford, 2009). Realism can be viewed in accounting terms as the ability of accounting to reflect the real existence of the underlying recorded economic event in an objective manner. Managers should not assume that the accounting of web-based sales uses the same principles and rules used for other sales transactions as it might not be appropriate or other accounting methods might be programmed into the system. They should not be satisfied with their own relative view if it is not based on factual knowledge. Relativism is the "doctrine that knowledge is only of relations" and that knowledge is "relative to situations and is not absolute" (Oxford, 2009). Relative knowledge relies on the interpretation of information or transaction data, which is influenced by subjective factors such as the personal characteristics or knowledge of the manager interpreting the data, or the values or customs applicable to the situation or society; it is influenced, in other words, by personal perceptions.

The possible disparity between the accounting requirements of the standards and the actual accounting

delivered through the web-based system, coupled with the perception of the managers or users of the data on how the data was captured by the system, was the originating questions that led to this research. A normative application of the requirements of the revenue standard in particular was followed, as companies in South Africa are legally required to comply with the financial reporting standards (South Africa, 2006, 2008).

This paper explores the perceptions of accountants and other middle-level managers on the accounting of web-based transactions. Multiple South African cases were used, and the perceptions were compared with the actual methods used to record web-based transactions, as well as the requirements of the revenue standard. In essence, the paper identifies the perceptions of the managers on the accounting of web-based transactions, the relative view, contrasting the relative view with the reality as evidenced by the actual accounting of web-based transactions. It then assesses both against the prescriptions of the accounting requirements as described in the revenue standard, international accounting standard 18 (IAS 18).

The findings of this paper highlight disparities that should be managed to ensure a unified understanding in an entity as to the operations of its system, the information generated by the system and the level of compliance with the accounting standards. Although the study focuses on the accounting of web-based transactions, the difference between the reality and the relative perceptions of managers found in the study highlights a risk that can have broader management implications.

Objectives and limitations of this study

The objective of the research is to use multiple South African cases of web-based transactions to identify and compare perceptions (the relativity) of the accounting methods used with the actual methods used (the reality) to recognise and record these web-based transactions. The study then compares the perceived and actual accounting practices with the requirements of the revenue standard.

The study was limited to South Africa for both the transactions as well as the entities selected in the case study. This enabled the study to focus on a "normal" web-based transaction, where the initiation, delivery and payment of the transaction occurred within the boundaries of the country and used the country's currency. Compounding factors such as the influence of foreign exchange, fraudulent transactions, and time delays due to customs or overseas deliveries were thereby specifically excluded. To enable the study to achieve its objectives the following research questions were formulated:

1. How do the cases record their web-based transactions in their accounting records?

2. How do the middle-level managers in the cases perceive their accounting of their web-based transactions?

3. Do the perceptions and the accounting methods used for web-based transactions comply with the requirements of the revenue standard?

In order to answer these research questions the study used an exploratory multiple case study design. An exploratory approach was warranted, as the literature review found little evidence of research on the normal accounting of sales transactions and none on the accounting of web-based transactions. Page and Meyer (2003) describe exploratory research as "an exploration of a phenomenon". Exploratory research is thus a suitable method to discover the accounting and the perceptions of the accounting of a business event, specifically web-based transactions. It is also a limitation as the results of the study cannot be extrapolated to all South Africa entities engaging in web-based sales transactions.

The Framework for the Preparation and Presentation of Financial Statements (Framework), and the international accounting standards (IAS) form the custom or value system against which the practice of accounting should be interpreted. Thus there should be no difference between the perceptions of the accounting of web-based transactions that form the "relativist" view and the actual practice of accounting for web-based transactions that forms the "realism" view in the multiple cases evaluated by this study.

Accounting requirements

The requirements that transactions should be recorded immediately, that they should be classified according to their nature, that all transactions should be fully explained and that all similar transactions recorded in the preliminary book should be posted to the specialised book maintained for that type of transaction go back to 622 AD (Zaid, 2004). Although the basic accounting requirements for transactions have remained fairly constant over time, the computerisation of accounting information has influenced the methods used in accounting for transactions. One of the advantages of information technology improvements applicable to accounting, according to Gelinis et al. (2005), is that, "data entry devices allow business event data to be entered directly into the information system at the time and place that the business event occurs". The use of the Internet to enter the details of a web-based transaction by the customer adds to the advantage of using technology to aid in the capturing of transaction data. However, the accounting process then also becomes more reliant on IT.

Web-based sales transactions must deliver the required accounting information through a system that was

essentially developed by people versed in information technology in consultation with other managers, including accountants. It is however, a systems development risk that "important accounting practice requirements are not incorporated into the system or are incorrectly understood by the business analyst/programmer" (Jackson and Stent, 2008). As it cannot be assumed that the merging of technology and accounting will lead to appropriate accounting practices, researching whether the system will lead to appropriate accounting practices can be a useful contribution. The influence on the accounting process of international harmonisation, in the form of moving to a single set of IAS (standards), which started in 1993, and the requirements of the accounting standards should also be taken into consideration (SAICA, 2007).

Lemke and Page (1992) found that economic determinants do influence accounting policy choices even to the extent that companies might refuse to comply or abandon compliance with an accounting standard and breach their listing requirements, as happened when the tax advantages of current cost accounting were lost and compliance to the standard was abandoned, leading to the withdrawal of the standard in June 1985. Smith et al. (2001) found that economic recession could influence accounting policy choices on the recognition of expenses, especially depreciation and impairment. It is therefore possible for the practice of accounting to either apply the accounting choices contained in the accounting standards or to move away from the requirements of the standards to better account for the economic reality. It is important, however, for the actual accounting methods used to render a "true and fair" or "faithful" view of the economic reality of the transaction. Anything to the contrary can be viewed as creative accounting (Pietersz, 2009).

An example of the expected reality that accounting should comply with is contained in paragraph 15 of International Accounting Standard (IAS) 1, and states that "[f]air presentation requires the faithful representation of the effects of transactions" (IASCF, 2008). To achieve faithful representation, perceptions should not influence the accounting of the economic event or transaction. Therefore the doctrine of "realism" applies to accounting.

The accounting requirements applicable to web-based sales transactions are contained in the standard on revenue, ISA 18: "Revenue is recognised when it is probable that future economic benefits will flow to the entity and these benefits can be measured reliably", and do apply to the accounting of revenue arising from sales transactions (IASCF, 2008). The two elements that are important in order to recognise the inflow caused by revenue in a sales transaction are probability of occurrence, and reliable measurement. To generate an inflow, income or a revenue transaction must lead to an increase in economic benefits. Income is defined as "increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases in liabilities that result in increases in equity" (IASCF,

2008). In essence, a sales transaction generally leads to an inflow, as it increases an asset account by either increasing the bank account, in the case of cash sales, or the accounts receivable (debtors) account, in the case of credit sales.

Lubbe and Milligan (2006) state that the “main issues relating to the recognition of revenue are WHEN and AT WHAT VALUE”. This links back to the requirement of occurrence and measurement of the framework and the revenue standard. In addition to the debiting either sales or accounts receivable and crediting sales it is also necessary to date the transaction’s occurrence (show the date) and to measure it reliably (show the amount). Normally, reliable valuation of a transaction is determined by considering the agreed upon value, which is usually the face value of a transaction, as the fair value of the transaction. Although identifying the fair value of a transaction can at times be complex, with web-based transactions there is specific agreement as to the value of the transaction. This is similar to over-the-counter sales, where the value of the items is known. The determination of the fair value of a transaction using the agreement between two willing knowledgeable parties in an arm’s length transaction of the transaction’s value or price is acknowledged in the revenue standard (IASCF, 2008). This agreement enables the monetary value, amount or price of the transaction to be determined, and therefore allows for reliable measurement. In satisfying the recognition criteria, to determine “when” is more complex, as the revenue standard has the following additional requirements on how sales transactions should be recognised:

“Revenue from the sale of goods shall be recognised when all the following conditions have been satisfied:

- a) The entity has transferred to the buyer the significant risks and rewards of ownership of the goods;
- b) The entity retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- c) The amount of revenue can be measured reliably;
- d) It is probable that the economic benefits associated with the transaction will flow to the entity; and
- e) The cost incurred or to be incurred in respect of the transaction can be measured reliably” (IASCF, 2008).

In addition to identifying the value of a web-based transaction, the information collected must address all the above requirements in order to satisfy the recognition criteria. The following research design and data collection methods were used to explore the accounting of web-based sales transactions as well as the perceptions of managers regarding the accounting processed followed.

RESEARCH DESIGN AND DATA COLLECTION

A multiple case study design with four cases was used. The study

focused on four purposefully selected cases to determine if the size and type of entity played a role in the accounting of web-based transactions, as smaller and non-listed entities might not follow the guidance of the standards as narrowly as listed or multinational companies. The cases involved a well-known international company, a company listed in South Africa, an entity that specialises in web-based transactions and a small-to-medium-size entity unknown to the author. The entities were purposefully selected using websites on Ananzi. Four cases were used because the size and type of entity can influence the accounting methods used, and a multiple case study design was specifically used to gain better insight into the phenomenon (the accounting of web-based transactions). This method should not be confused with the sampling normally used in quantitative research studies. The cases are referred to as cases A to D to ensure anonymity. The use of a case study design is appropriate as it enables the author to obtain a holistic view of the event in order to answer the research questions. Yin (2003) states that “case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political and related phenomena”. The ability of case study research to contribute to knowledge thus makes it ideal for the exploratory research used by this study. Case study research is considered a suitable research method for both exploratory research and research where the research question asks “how” and focuses on contemporary events, as in this study (Yin, 2003).

The data collection process and methods used to collect the data are largely determined by the research questions. To identify how the cases account for their web-based transactions, goods were purchased by the author through web-pages on the Internet from the cases and the documents that showed the different points on the transaction trail were noted. The transaction trail for the specific transactions was accessible to the customer to address any problems or queries. Additional information on the operation of the web-based process was obtained through a website review. Structured interviews were used to identify the views or perceptions of middle level managers of the accounting methods used for web-based transactions. To answer the last research question the transaction trail and the results of the structured interviews were compared with each other and with the requirements of the revenue standard. In summary, the information needed to answer the research questions was collected using the following methods:

- a) Critically analyse the web pages of the cases for information relating to web-based transactions
- b) Purchase goods from the cases and note the transaction trail as evidenced by the supporting documents and electronic transaction trail data
- c) Deploy a specialist market interviewer to facilitate the structured interviews to obtain the views of managers on how the cases account for their web-based transactions
- d) Critically analyse the requirements of the revenue standard applicable to web-based transactions and compare the results to the transaction trail information gathered and the results of the structured interview.

Using these methods together allows the results to be analysed together to get a total picture of the actual and perceived accounting process used. The results of case study research cannot be statistically analysed and projected onto the broader population involved in web-based transactions in South Africa as the study is exploratory and qualitative and not representative of any specific population group. Yin (2003) states that “case study research is among the hardest types of research to do because of the absence of routine formulas” such as often used in quantitative research.

However, the results can enhance the understanding of the phenomenon under investigation, namely the accounting of web-based transactions. The use of multiple methods to collect data enhances the reliability of the results. The data collected and

results are discussed below in the context of the cases involved in the study and the research questions.

RESULTS AND DISCUSSION

The information gathered using the various data collection methods is described below under headings that best indicate the source of the data collected.

Website information

A review of the cases' websites provided the opportunity to gather information on the commercial issues around web-based transactions such as security measures and the transaction terms and conditions. In situations where accounting information is exposed to the risks of the Internet, there must be security measures to maintain the integrity and confidentiality of the information and facilitate customer trust.

All the websites disclosed details on how the web-based transactions were secured. The security methods most frequently used were encrypted secure socket layers (SSL) with Thawte used to authenticate the commercial website used for the transaction. In all instances the websites required details of the customer's name, delivery address and ID number to be provided on a secure webpage after there was agreement on the terms of the transaction when payment arrangements were made. In cash web-based transactions the identity or the authentication of the customer is not necessary for the accounting of the transaction, as payment is received leading to a debit to the cash or bank account, and not the customer's account, as is the case for credit transactions. The security arrangements communicated on the websites were in line with the requirements of section 43(5) of the ECT Act, which requires the supplier to use a "payment system that is sufficiently secure with reference to accepted technological standards at the time of the transaction and the type of transaction concerned" (South Africa, 2002). Information of the amount of the payment is useful in the study, as prompt payment helped to confirm the fair value of the transaction. The secure environment in which the transaction data was gathered during the final phases of the transaction helps to ensure the transaction data collected is accurate for accounting purposes.

The other transaction information communicated on the websites was the general terms and conditions of the web-based transaction, including how transactions can be cancelled or goods returned. Specific information regarding the return of goods was disclosed on the website by all the cases. All these complied with the requirements of section 44 of the ECT Act and in most instances the conditions for cancellations and returns were similar to the conditions applicable to normal over-the-counter transactions for the case (South Africa,

2002). The cancellation and return policies all allowed for cancellations and returns, although the terms differed between the cases from the minimum legally required seven days to a month. Information on cancelled or returned transactions is useful in this study as a returned or cancelled transaction can neutralise the underlying original web-based transaction, and should be taken into consideration when the overall fairness of recorded revenue is evaluated.

Purchase of goods and transaction trail data of web-based transactions

To determine how the system accounted for web-based transactions and how the accounting is supported by documents as evidenced by the transaction trail, goods were purchased from the cases and the supporting influence of the source documents and transaction trail was documented. Initial purchases were made and the purchases were later replicated to enhance the validity and reliability of the collected information. All replicated purchases confirmed the transaction trail as identified by the initial purchase. The transaction trail left by the transaction, as seen from the author's, or a customer's perspective, was tracked, and the data gathered through these actual transactions is summarised below: the document made available on the website after the transaction was initiated and the items to be purchased selected was called an online invoice, a pro-forma invoice or an order. Despite the different names the documents of all the cases did show detailed information on the description, unit price, quantity, and delivery charges of the items identified. Thus clear evidence on the measurement of the value of the transaction was available. In all cases specific agreement as to the details of the transaction was requested by the website. This specific agreement helped to gather evidence on the agreement between two willing parties that established the fair value of the transaction. This enabled the reliable measurement of the value or the amount of the transaction. In all cases, payment details had to be completed and processed before the final processing of the transaction. The successful processing of the transaction was dependent on the successful processing of the payment information. The processing of the payment in all the cases occurred in a secure environment, as promised on the websites.

In all cases invoices accompanied the goods subsequently delivered, and the date of the invoice was the same as the dispatch date. With the invoice as the source document the accounting of the transaction occurred on the date the goods were dispatched, the invoice date, and not on the delivery date. This could be an indication that the need for control or the loss of control at dispatch triggered the accounting of the web-based transaction and not the need to comply with the requirements of the revenue standard. There thus seems to be a direct link between the timing of the initiation of

the accounting and the timing of the physical loss of control over the goods. Interestingly, the entering of the transaction details on the website was not the event that triggered the accounting of the transaction. The reason could be that the cases do not view the transaction process as sufficiently advanced to be entered into the accounting records directly via the web-commerce servers. The practice of separating the accounting from the web-commerce servers might be an indication that the cases use the prudence principle. "[P]rudence is the degree of caution in the exercise of the judgements needed in making the estimates required under conditions of uncertainty" (IASCF, 2006). Dempsey and Pieters (2008) add to this description of prudence by stating that when cautious decisions are made and judgements exercised "income must not be overstated". Recognising income at the time the order is placed but before there is certainty about the delivery of the goods could be seen as a breach of the prudence principle. It seems reasonable that the cases wait until there is more certainty that the income will in fact be earned by using the date of delivery to the customer before the transaction is recognised. The current practice, however, is a breach of the requirement of IAS 18, which requires "Revenue from the sale of goods shall be recognised when all the following conditions have been satisfied:

The entity has transferred to the buyer the significant risks and rewards of ownership of the goods" (IASCF 2008).

The cases treated the payment differently: one deducted the payment before the goods were dispatched on the receipt of the order, one deducted the payment on the same day as the dispatch of the goods and the other two deducted the payment after the goods were dispatched. Despite the different treatments of the payment all the cases used the principles of accrual accounting, and not the principles of cash accounting, as they all used the invoice as the source document to account for the web-based transaction. The reality or actual accounting practices used by the cases all followed the same accounting practice of recording the web-based transaction when the invoice was generated and the goods dispatched. This practice does not comply strictly with the specific requirements of the revenue standard, but being consistently early, by a day or two, over a period of a year would not have an unduly negative influence on the reasonableness of the total revenue for the year. The results of the structured interviews below show the relative view of the accounting of web-based transactions.

Structured interviews

Structured interviews were used to determine the perceptions of managers on how the cases accounted for their web-based transactions, the relative view. cAssurances

were given during the interview that the identities of both the entities and the respondents would be kept confidential. The interviews were facilitated by a specialist market research interviewer in order to enhance the independence of the study and to ensure that the author did not unduly influence their answers.

The interviews showed that all the cases were companies. The fact that all the cases were companies meant that section 286 of the Companies Act, which required at the time that, the financial statements of a company had to comply with the requirements of generally accepted accounting practice, applied to all cases (South Africa, 1973). Although valuable information was obtained from the initial respondents, follow-up interviews were performed by the author in situations where the information provided did not adequately answer the research questions. The results of the initial and follow-up interview were combined and described below.

The following questions were asked, the answers described and the results compared with the results from the web analysis and transaction trail.

Is the customer required to specifically accept the details in terms of description, quantity and price of the goods selected?

All the respondents answered this question in the affirmative. This specific acceptance of the information reflected the value of the transaction the customer agreed to, and ensured that the case had enough details captured in its system to measure the value of the transaction. This agrees with the information gathered from the actual transactions.

Which document is presented to the customer as evidence of the transaction immediately after the customer enters the transaction on the Internet?

This question enabled the comparison of the information obtained by the structured interview with the transaction trail documentation gathered through actual purchases of goods.

The answers differed between the cases as well as with the documents actually viewed during the collection of the transaction trail data. Case C's respondents indicated an order form and a pro-forma invoice. Case B indicated that an invoice was printed by the customer. Case A stated that they use e-mail, and Case D used an order form.

Thus the relative view of some managers did not match their reality.

Identify the date on which the transaction should be recorded. The respondents were asked to select from the following dates the date on which the transaction should be recorded in the accounting records:

i. On the date of the agreement of the details of the sales

transaction

- ii. On the date the sales transaction is paid for by the customer
 - iii. On the date the goods are shipped to the customer
 - iv. On the date the goods are delivered to the customer
- Another date, specify

The respondents chose the date of agreement of the details, the shipment date and the date of delivery to the customer. None indicated another date. One respondent selected two options, namely the day the goods are shipped and the day the goods are delivered to the customer. It is possible that the customer could receive the goods on the day they were shipped. It is however, more likely that the goods would be received by the customer within a few days, as courier firms generally guarantee delivery periods of between 24 and 48 h. The different perceptions of the respondents regarding the transaction date did not correlate with the data collected in the transaction trail. This is again an indication that the perceptions of the accounting of web-based transactions or the relative view of the managers on the accounting are not necessarily influenced by the actual accounting practice used by the cases or by the requirements of the revenue standard.

Identify the document presented to the customer as evidence of the transaction upon delivery of the goods.

The respondents were given the option to choose between a till slip and an invoice or to indicate another document. Case A's representative stated that the till slip and invoice are the same document. The actual documentation received when purchasing goods through the Internet from Case A did confirm the respondent's statement. All the other respondents stated that their companies send the customer an invoice together with the goods as evidence of the transaction. The actual transactions supported their views.

How are web-based transactions disclosed in the financial statements?

The respondents were given the following options to choose from:

- i. Incorporated as part of revenue
- ii. Disclosed separately
- iii. Do not know
- iv. Other, specify

There was a correlation between the expertise of the respondents and their responses to this question. None of the managers whose expertise was more dominant in IT know how web-based transactions were reflected in the financial statements. The other respondents indicated that web-based transactions were incorporated as part of

revenue for accounting purposes.

Do you think the method used by the company to account for its web-based transactions agree with Accounting Standards?

For all the cases the financial and sales managers interviewed perceived the accounting of web-based transactions to comply with the requirements of GAAP. The assurance with which this question was positively answered seen in the light of the different answers on when the transaction should be recorded is an indication that the managers' perceptions on the correct accounting is influenced by their own view or the relative view and not by the requirements of the standards which describe the GAAP requirements.

How do you know that the goods sold during Internet-based sales transactions were sold at a profit?

The respondents all indicated that they used gross profit to determine profitability. Case C also used the price list from its suppliers to determine profitability.

Is it possible to determine the cost price of an individual transaction?

All the respondents answered in the affirmative.

Is it possible to determine the cost of sales for the whole financial period?

All the respondents indicated that they could identify the cost of sales for the whole financial period. This is not really surprising, as the respondents stated in reply to the previous question that they used gross profit to determine the profitability of sales transactions. The fact that in all instances web-based transactions are profitable enables all the cases to comply with the requirements of the definition of "revenue" as described in IAS 18, being an inflow of economic benefits (IASCF, 2008).

How do you know that your web-based security measures were effective?

This question produced various answers, including the use of high-level security and the following of best practices and internet protocols. But the most pervasive statement was that they were not experiencing any problems or having any trouble.

How would a returned sale be reversed?

Case D reversed it by means of a manual journal. All the other respondents indicated that they replace to goods credit or reimburse the customer, as appropriate.

Comparison with the revenue standard

Given all the information gathered through the structured interviews and follow-up interviews, the transaction trail data collected and the review of information disclosed on the websites into account, this study gathered enough data to describe the methods used by the companies to account for their web-based transactions. The tracking of the transaction follows the following process: the customer selects goods on the website, processes an order or goes to the checkout to communicate the desire to purchase. Details of the product description, quantity, unit price and delivery charge are shown as well as the value of the transaction being initiated. In two cases, payment details are processed before the transaction details are agreed upon. Details of the proposed transaction are specifically agreed upon. The remaining cases process payment details after the agreement. Payment information is entered in a secure environment. A reference number is issued to the customer. The documents received by the customer after the transaction has been initiated include online invoices, orders, pro-forma invoices or confirmation of payment with a reference number. The document that accompanied the goods on delivery is either a till slip/invoice or an invoice.

The above description of the transactions from an operational perspective, which incorporates customer information, serves to enhance clarity and ensure that there is no confusion between some of the operational information that supports a web-based transaction and the accounting thereof. The accounting process can be described as follow: the value and details of the transaction are known and agreed to by the customer on the website before the transaction is processed. The documents received by the customer after the transaction has been initiated include online invoices, orders, pro-forma invoices or confirmation of payment with a reference number. Information to initiate the payment of the transaction was either submitted just before the agreement to the transaction details or just thereafter and formed an integral part of the processing of the transaction. Payment details were processed via secure web pages.

Invoices were used to initiate the accounting of the transaction. The document that accompanied the goods on delivery is either a till slip/invoice or an invoice. The cases use gross profit to ensure the transactions are profitable and could determine the cost price of the products. Delivery was after the generation of the invoice. A payment clearing account was debited and sales were credited.

It appears that there is a definite correlation between the methods used to account for web-based transactions and cash sales transactions.

As the information relating to the payment of the web-based transaction is captured at the same time as the initiation of the transaction by the customer, it seems that the companies account for their web-based transactions

in much the same way as they would do cash sales. Another factor to consider is that the goods have to be delivered. Although there is specific agreement on the fair value of a transaction, the transaction is recognised on dispatch and not on delivery, when the risks and rewards of the ownership of the goods transfer to the customer, as required by the revenue standard. However, if the recognition of web-based sales transactions is consistently after between 24 and 48 h, the average time for delivery, the total revenue recorded for the year will still be a fair reflection of the revenue received over the accounting period. Alternatively the transaction can be recognised at dispatch but entered into a sales clearing account and only transferred to revenue or sales once delivered, leading to compliance with the requirements of the revenue standard while maintaining control over the transaction process until completion.

A possible concern is that the relative view and assumption of compliance with the accounting requirement of managers might have a more pervasive impact. Accounting should as far as is practical always reflect the reality of the economic event that caused the transaction. The relative view differed from reality and both differed from the prescription of the accounting standard, leading to the surprising discovery that the accounting of web-based transactions was not always triggered by the requirements of the standards but by the loss of control and thus the need of managers, including accountants, to control the business event through the use of accounting. Managers should be careful not to assume that they know how transactions are recorded for financial accounting purposes, or assume that the accounting methods used comply with the requirements of the accounting standards, but should ensure that there is a correlation between their relative views or perceptions, the reality recorded by the accounting records and the prescriptions of the accounting standards. This would prevent them from unknowingly following accounting practices that do not fully comply with the requirements of the standards in an environment where compliance is required by the Companies Act (South Africa, 2006, 2008).

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