The relationship between Media Spend and Business Cycles

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by

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Executive Summary

The business cycle, as a macro environmental force, could have a substantial impact on a firm's internal environment, and in particular on media spend levels. Business cycles are driven by a complex interplay of consumption and investment (Keynes, 1936). Thus all firms, whether they operate in a B2C or B2B context could be impacted to varying degrees by the business cycle. For example, during recessions, declining consumer and business confidence may lead to a decrease in consumption and investment activity. This in turn, could affect the share price performance and dividend yields of listed companies which in turn, could influence managerial decision-making with regard to (media) spending decisions. Hence the relationship between media spend (as a company specific activity) and the business cycle, could be of strategic importance to media managers.

There is currently limited South African published literature that provides insight into media spend movements during the expansionary (the upswing) and contractionary (the downswing) phases of the business cycle. This lack of available research has necessitated the need for this study. Consequently, this research investigates whether media spend moves in the same direction (pro-cyclical relationship) or whether it moves in the opposite direction (counter-cyclical relationship) as the business cycle. It also considers the timing of these movements in order to understand if media spend increases or decreases before or after changes in the business cycle are observed. This knowledge could potentially provide insight into whether media managers are proactive or reactive when implementing their media strategies. By understanding how these variables move together, media managers could gain competitive advantage by repositioning themselves favourably during both the upward and downward phases of the business cycle.

The study makes use of a quantitative research approach using secondary data from various databank sources. In addition, this study examines both the direct and indirect business cycle variables when investigating the relationship between media spend and the business cycle. The direct business cycle variables are consumer / business confidence and share prices /

dividend yields, while the indirect business cycle variable is media spend. It is assumed that the All Share Index (ALSI) and the All Share Dividend Yield Index (ALSI-DY) are reasonable proxies for a listed firm's overall performance. However the ALSI-DY moves in the opposite direction to the ALSI and hence the ALSI-DY is regarded as an inverse proxy for listed company performance. In addition, it is assumed that a lag or leading relationship is a realistic portrayal of a media manager's proactive or reactive strategic focus with regard to their media spend. The relationship between media spend and the business cycle, is examined by satisfying three research objectives: (1) to determine what the relationship is between media spend and consumer / business confidence (2) to determine what the relationship is between media spend and company performance (3) to determine what the relationship is between media spend and the business cycle. By exploring these three research objectives, it is possible to answer the following research statement: *Media spend has a positive (pro-cyclical) relationship with both direct and indirect business cycle variables.*

The result of the study show that as posited in the research statement, media spend is positive (pro-cyclical) in relation to both the direct and indirect business cycle variables. However, this pattern of increased media spend is only maintained during the up-phases of the business cycle, but tends to level off during the down-phases. The implications arising from this result is that proactive media managers could possibly benefit by maintaining a level media spend during the up-phases of the business cycle while shifting their focus towards media effectiveness. In this way, these managers could win market share by maximizing cost effective media efficiency. In addition, proactive media managers could also win market share during a downturn by increasing media spend and thus benefitting from greater media exposure or brand awareness. Hence in summary, South African media managers could benefit by adopting strategies that involve leaning against the wind. As a future recommendation, further insight could be gained by re-running the analysis using monthly as opposed to annual data in order to produce more statistically robust results and also to isolate any shorter duration lags or leads.

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LIST OF ABBREVIATIONS AND ACRONYMS

ALSI	: The Johannesburg Stock Exchange All-Share Index
ALSI-DY	: The Johannesburg Stock Exchange All-Share Dividend Yield Index
B2B	: Business to Business
B2C	: Business to Consumer
BER	: Bureau of Economic Research
CCI	: Consumer Confidence Index
FNB	: First National Bank
GDP	: Gross Domestic Product
HP	: Hodrick-Prescott (Filtering Technique)
JSE	: Johannesburg Stock Exchange
PIMS	: Profit Impact of Market Strategy
RMB	: Rand Merchant Bank
SA	: Republic of South Africa
SARB	: South African Reserve Bank
USA	: United States of America
UK	: United Kingdom
4 P's	: The Four P's in the Marketing Mix

Chapter 1: The Problem in Context, Problem Statement, and Research Objectives

1.1 Introduction

Business cycle fluctuations could affect the performance of individual firms, industries and entire economic sectors (Domowitz, Hubbard & Peterson, 1988; Gabisch and Lorenz, 1987; Zanowitz, 1985). Thus the relationship between a firm's media spend (as a company specific activity) and the business cycle, could be considered of strategic importance to media managers. Consequently, this study focuses on the relationship between media spend and the business cycle.

1.2 Problem in Context

There is a wealth of literature on advertising at a company specific level (Vakratsas and Ambler, 1999; Tellis, 2004). However, advertising at a macroeconomic level appears to be less extensively covered, particularly in South Africa (SA). Advertising (comprising of print, radio and television amongst others) is arguably considered to be one of the most visible mediums in a firm's marketing mix and possibly also the most affected by general economic conditions (Deleersnyder, Dekimpe, Steenkamp & Leeflang, 2007).

For example, within the context of the 2008/2009 global financial crisis (as a macro environmental impact), one of the effects experienced, has been significant changes in the advertising spending levels of companies. United States (USA) traditional advertising mediums (print and television combined), were headed to lows not seen in more than 10 years, and a drop of 5% in revenue was experienced in 2009 as media buyers favoured affordability and accountability (Mfon, 2008). A corresponding effect was experienced in online growth with online advertising dropping by 1.3% in 2009 after years of double-digit growth. Other effects experienced by the economic downturn were large-scale retrenchments in the advertising industry. For example in late March 2009, Google retrenched 200 sales and marketing employees, while the advertising giant Omnicom Group retrenched more than 3,000 employees in late 2008 (Mfon, 2008). Thus forces in the macro environment are

arguably seen to have a corresponding impact on a firm's internal environment (Altman, 1983; Platt and Platt, 1994; Gertler and Gilchrist, 1994; Gray and Stonem, 1999; Aghion, Bacchetta & Banerjee, 2004), and in particular on media spend levels, i.e. outside-in effect.

However, according to economic theorist John Maynard Keynes (1936), on a consumer level this pattern is reversed such that a collapse in public confidence will lead to dramatic declines in consumer and business spending i.e. inside-out effect. A collection of consumers forms the market context (Stapleton, 2007). Hence if consumers' economic outlook affects their spending behaviour, then their expectations could also influence the direction of economic activity in the business cycle. Rising consumer confidence could thus be considered to be an indicator of the overall economy (Kershoff, 2000; Lee, 2002). For example, if consumers are more optimistic about the economy, they tend to spend more, resulting in a higher overall demand for goods and services which could eventually lead to higher output and employment. When consumer confidence is high, consumers tend to incur debt or reduce savings to spend on luxury items (Kershoff, 2000). A low consumer confidence on the other hand, could indicate that consumers are concerned about the future and cut their spending to basic necessities. Hence, consumer's expectations about the economic performance of a country appear to correspond closely with the country's economic growth rate (Damodaran, 2002).

However, the level of consumer confidence could also affect the level of business confidence in a country (Kershoff, 2000). In SA, business confidence levels are measured via a quarterly survey conducted by the Bureau of Economic Research (BER). The survey looks at key variables such as, amongst others, the current and expected developments regarding sales and orders. Poor sales (possibly due to a low consumer confidence), could have a corresponding effect on business confidence levels. An increase in business confidence reveals that economic growth could pick up in nine or twelve months time with the reverse happening if business confidence levels decline (Kershoff, 2000). It is thus possible that the BER's business confidence index could also be a reliable leading business cycle indicator.

This means that changes in the business confidence indicator would precede changes in the business cycle. There is also growing evidence that suggest that both consumer and business confidence indicators could be linked to gross domestic product (GDP) and the business cycle, and tends to move in the same direction i.e. pro-cyclical (McNabb and Taylor, 2000).

However, advertising and business cycle dependence could also be systematically related to the cultural context in which companies operate. It has been argued that managerial decision-making (with regard to, for example media spend), could be affected by cultural context (Hofstede, 2001; Deleersnyder *et al*., 2007). Thus if culture potentially plays a role in a media managers decision-making abilities with regard to media spend, then there could also be the potential for media spend and business cycle movements to move either in the same direction (pro-cyclical) or in the opposite direction (counter-cyclical) to the business cycle, depending on the context.

This raises further questions on whether managers are proactive creators of their media strategy within their individual context, or whether they are reactive to changes in their national environment. Managers that are proactive would possibly adjust their business strategies to forecasted changes in the business cycle. Under these conditions, media spend decisions would arguably be made ahead of the business cycle and thus media spend would lead the business cycle. Reactive managers on the other hand would possibly adjust their strategies after changes in the business cycle are observed and in these instances, media spend would lag the business cycle. Consequently, cultural context as a potential indirect influencer on the media spend and business cycle relationship, suggests that national culture could potentially also influence listed companies at a share price level. The chain of events linking this relationship could start with falling consumer confidence, since declining consumer confidence could translate into less demand for goods and services from businesses. This could then result in falling sales and decreased business confidence. Hence, listed companies could possibly be impacted from two sides: declining demand for

shares from consumers (investors), and falling share prices due to declining business performance.

A listed company's share price performance could be seen as an indirect measure of that company's overall performance (Arnold and Vrugt, 2008). For example, when an organization reports a good annual profit for the year, the price of the company's shares tends to go up as there will be more demand for that company's shares. Research suggests that the expected share returns (dividend yields) are higher during recessions and lower during recoveries since companies tend to offer higher dividends to prospective shareholders to attract investment (Erb, Campbell & Viskanta, 1994). The opposite is true in expansionary (upswing) phases of the business cycle as share prices tend to increase while dividends decrease (or stays unchanged) as a result of the macroeconomic expansion. Many researchers (Keim and Stambaugh, 1986; Campbell, 1987; Fama and French, 1988) have also confirmed that expected share returns move in the same direction as the business cycle (i.e. pro-cyclical). Thus, the relationship that exists at business cycle level appears to be complex as there are many potential variables at play.

On a company-specific level, economic theorist Keynes (1936), states that business cycles are driven by a complex interplay of changes in consumption and investment. It is posited that during the expansionary (upswing) phase of the business cycle, businesses invest in new production in order to meet rising demand. The investment creates jobs which stimulates consumption. However, the consumption and investment are rarely synchronous and eventually business investment outpaces consumer demand. Businesses then reduce their investment and employment, which in turn throws the entire economy into stall (i.e. the "tipping point" from the expansionary phase into the contractionary phase of the business cycle). This tipping point or 'inflection' is due to the saturation of demand (Bruner and Carr, 2007). Thus according to Keynesian economics, a decline in GDP will imply falling investment levels which will further imply a decline in the media spend of companies. For example, when the economy enters a downturn, advertising (media) budgets appear to be

one of the first to be cut (Dobbs, Karakolev & Malige, 2002; Deleersnyder *et al.,* 2007). However, it has been argued that organizations can mitigate the effects of an economic downturn by intensifying their marketing support activities (Hillier and Baxter, 2001; Srinivasan, Rangaswamy & Lilien, 2005; Wharton, 2008; Scanlon, 2009). A global reduction in advertising activity could result in a significant drop in a country's aggregate advertising spending and thus have a corresponding effect on a country's GDP (Deleersnyder *et al.,* 2007) which in turn could influence consumer and business sentiment. Hence the relationship between a firm's media spend and the business cycle appears to be complex in nature and interacts on multiple levels. It may thus be difficult for organizations to know when to cut and when to increase their media spend activities, particularly during the upswing and downswing phases of the business cycle. Further research into this relationship is therefore required in order to gain a deeper understanding of the potential influence that media spend has on the business cycle, and vice versa.

1.2.1 Summary and key issues emerging from the problem in context

Summary

From the above discussion, it appears that the potential relationship between media spend and the business cycle is unclear. For example, it is not clear whether media spend moves in the same direction as the business cycle (pro-cyclical), or whether it moves in the opposite direction (counter-cyclical). It is also not clear whether consumer and business confidence levels have any potential influence on this relationship, and whether a company's share price performance (which is linked to the macro environment) has any influence. Finally, it is not clear whether context and perhaps national culture could exert an influence on this relationship.

Hence the following key issues can be identified:

- Forces in the *macro environment* (in particular the business cycle) are seen to have a possible corresponding impact on a firm's *internal environment* (in particular media spend levels).
- The interplay between consumer confidence and business confidence levels on the business cycle suggests that *the role of consumer activities* on the aggregate economy needs further review.
- The *share price performance* of listed companies, which is linked to the economy, appears to reflect consumer and business confidence levels.
- *Managerial decision-making* with regard to media spend in firms, could be affected by the *cultural context* within which they operate.

1.3 Problem Review

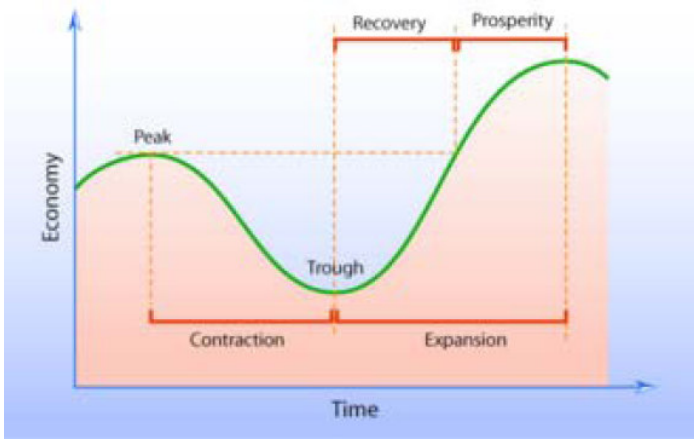
1.3.1 Introduction

The problem in context has identified various issues in the micro environment (i.e. managerial decision-making with regard to media spend; the impact of culture) and the market environment (i.e. consumer / business confidence levels) that could influence business cycle movements and vice versa. Each of these issues will be reviewed in order to gain a deeper understanding of the potential relationship that exist between media spend and the business cycle.

1.3.2 Business cycles and media spend

According to economic theory, a business cycle can be defined as the pattern of expansion (recovery) and contraction (recession) in economic activity around its long-term trend (Nelson Mandela Metropolitan University, 2009). Figure 1-3-2 below provides a graphical illustration of a business cycle.

Figure 1-3-2: The Business cycle



Nelson Mandela Metropolitan University [online] (2009)

Business cycles last for between six and thirty-two quarters (Burns and Mitchell, 1946) and could exert a substantial influence on a firm's micro or company-specific environment (Altman, 1983; Platt and Platt, 1994; Gertler and Gilchrist, 1994; Gray and Stonem, 1999; Aghion *et al.*, 2004). As previously discussed, business cycles affect firms through the channels of household consumption and corporate investment.

This would imply that on a firm specific level, the link between business cycles and a company's internal context could operate on multiple levels. For example, in SA, the impact of the 2008/2009 global economic recession resulted in 980,000 job losses. Consequently, household expenditures declined to 1993 levels while spending on semi-durable goods declined to 1998 levels and private and commercial vehicle sales reached the lowest levels on record. Coupled with this, tight lending criteria have seen banks declining 65% of all new mortgage applications and more than 30% of SA's debt holders were 3-months in arrears (Darmalingan, 2009). Hence the macro economic uncertainty that accompany job losses during a business cycle contraction (i.e. economic downturn / recession), could potentially affect companies at firm specific level through the declining demand levels for that companies goods and services.

Thus, if business cycles have a potential influence on a firm's internal context as discussed above, then on a strategic level, the negative impacts in the macro environment could force companies to adapt their internal strategies to meet declining demand levels. Firms could choose survival strategies, one of which is a possible adjustment in their marketing mix strategy which could entail a cut or increase in media spend. For example, firms could choose between adjusting their media spend in the same direction as the business cycle and cut their media spend as business cycles enter the downswing (contraction). Alternatively, they could choose to move in the opposite direction as the business cycle and increase their media spend as business cycles enter the downswing. This would imply that managers are able to recognize a change in the business cycle and then adapt immediately. However, in reality it is likely that there will be a passage of time between the change in the business cycle and a manager's realization of this change. It is thus possible that the relationship between the business cycle and media spend could demonstrate either a leading or lagging correlation. In both cases, if managers either move with the business cycle (pro-cyclical) or against the business cycle (counter-cyclical), there is the implicit assumption that managers actually look towards their external economic environment when adjusting their media strategies. This idea is supported by management literature which states that economic cycles are good examples of "shoaling" as firms look at economic trends and then increase or decrease capacity and production in response to the strong signals about the future levels of demand provided in the market (Stapleton, 2007:30).

However, one could also consider the reverse of this argument. If managers develop their media strategies without regarding their external macro-environment, then there would be no real trend observed between the internal media decisions of companies and the macroeconomic phases of the business cycle. In this context, there would be no significant movement observed either with or against the business cycle. This idea may be difficult to accept, especially when one considers that companies arguably function to serve customers (B2C) or other businesses (B2B) and thus need to examine their external market for signals of change. Consequently, if firms arguably adjust their media strategies according to changes in the market context where consumers operate, and these consumers potentially influence

the business cycle through their aggregate demand, then there could also be an indirect link between media spend movements and the business cycle.

Thus the possible relationship between business cycles and media spend appears to operate on multiple levels. It is however unclear as to whether consumer and business confidence levels has a direct influence on the business cycle. If such a relationship exists, then one could also argue that there is an indirect relationship present between media spend and the business cycle. This is considered further below.

1.3.3 Consumer sentiment / business confidence and the business cycle

As previously discussed, business cycles are driven by the changes in consumption and investment. Consumers play a major role in this process since consumer spending accounts for a large portion of a country's GDP (Lee, 2002). How consumers spend is arguably influenced by their economic outlook. In SA, consumers are faced with increased crime levels, political uncertainty and the after-effects of the 2008/2009 global financial crisis (Darmalingam, 2009). Consequently, such an uncertain climate could be mirrored in the business cycle. For example, if consumers have a low economic outlook, their spending (which drives the economy) could become more conservative. Thus within this context, there is a definite relationship present between public / consumer sentiment and movements in the business cycle. However, if consumers are not influenced by their macroeconomic forces, there would be no correlation observed between consumer sentiment and the business cycle and hence no relationship would be found to be present. However there is evidence from business literature that consumer confidence and economic activity generally move in the same direction (Lee, 2002). This would suggest that there is a definite direct relationship that exists between these variables.

Thus if consumer sentiment potentially influences the business cycle, there could also be a corresponding impact on business confidence levels. As previously stated, in SA, business confidence levels are measured by the business confidence index. The business confidence

index tends to rise when the increase in business activity matches or surpasses previous expectations, and the external environment remains relatively stable (Kershoff, 2000). In contrast, when business confidence levels are “low”, business people are uncertain about future prospects and/or unhappy with current company performance. Consequently, low business confidence could reflect uncertainty about the macro environment within which companies operate. This implies that business entities look towards their external environment and then react accordingly. However, companies could decide to make decisions in isolation without necessarily looking towards their external environment. In this case, there would be no significant correlation between business cycle movements and the movements in business confidence levels. However, according to economic literature, business cycles imply that the business confidence index tends to move in the same direction as the business cycle for a number of quarters (Kershoff, 2000). This suggests that there is a direct relationship between these variables which require further exploration.

Hence if consumer and business confidence levels have a possible direct influence on the business cycle, it is possible that there is also an influence on a listed company’s share price performance, since a company’s share price is arguably linked to fluctuations in the business cycle. This implies that the business cycle could also have a direct influence on a listed company’s share price performance. This dynamic is explored further below.

1.3.4 Share price performance on the business cycle

As discussed above, consumer confidence possibly reflect the present and future economic conditions of a country, and business confidence possibly provides a snapshot of the current and expected state of the economy. Thus in an efficient market, consumer and business sentiment could also reflect the share price performance of listed companies (Arnold and Vrugt, 2008). This would imply that movements in the one variable could possibly be mirrored in the other. However, investors may not be rational, and markets may be less than efficient.

According to business literature, a listed company's share prices is said to reflect investor confidence which in turn is shaped by consumer and business confidence (Arnold and Vrugt, 2008). Thus, in terms of the Efficient Markets Hypothesis (Firer, Ross, Westerfield & Jordan, 2004), a company's share price should reflect all information which includes public sentiment. However, the fact that consumer confidence levels change over different parts of the business cycle, implies that markets are possibly less than efficient and investors possibly react emotionally to news by displaying tendencies such as panic selling and "herd instinct" behaviour (Open University Business School, 2007).

A listed company's share price is the sum total of future expected earnings (dividends) discounted at a rate (the discount rate) which compensates shareholders for the risk incurred for their investment (Firer *et al*., 2004). Macroeconomic changes could thus affect stock prices in two ways: first, by impacting the expectation of future dividends, and second, by altering the discount rate. This is particularly relevant during recessions when markets will tend to be more volatile due to heightened uncertainty and shareholders tend to be more risk-averse in order to protect their investment. In these instances, stock market returns could possibly reflect business cycle fluctuations through their dividend yields.

According to business literature, a company's share price performance and their dividend yields could be considered a reasonable measure of that company's overall 'perceived' performance (Andreou, Osborn & Sensier, 2000). During boom times (the upswing of the business cycle), companies could experience heightened company performance and thus be able to pay higher dividends. Whereas in recessions, a company's cash flow may come under pressure and force them to cut dividends. The more volatile the market environment is in terms of risk and uncertainty, the more likely it is that consumer and business confidence levels will drop and negatively influence share price performance. This could then translate into falling share prices during recessions and increased share prices during boom periods. Within this context, it is possible that share prices will mirror the business cycle. This implies that there is a possible direct relationship between these two variables. However, the

complex relationship that exists between a listed company's share price performance in relation to the business cycle, does not take into account the influence of managerial culture as a potential influencer on the business cycle dynamic. This is explored further below.

1.3.5 The impact of culture on managerial decision-making

In contrast to the 'rational agents' of economic theory which states that managers objectively take all information into account when making decisions, it could also be argued that managers behave subjectively when making decisions. This is defined as 'animal spirits' according to Keynesian economics (Keynes, 1936). Hence the consideration of business cycle impacts on company performance or media spend allocations, also needs to consider how corporate culture affects a media manager's ability to adapt.

Hofstede (1994:4) defines the cultural context in which managers operate as the "…human environment in which an organization operates that affects management processes". Deleersnyder *et al*. (2007) further state that it is possible to question whether a particular cultural setting encourages companies to react strongly or weakly to changes in the economy. As stated previously, media managers possibly react to changes in the business cycle by adapting their media spend decisions in the same direction as the business cycle (i.e. pro-cyclically), or by adapting their spend decisions in the opposite direction to the business cycle (i.e. counter-cyclically). Alternatively, there could be no significant trend observed in a media manager's decision-making (i.e. acyclically). In each of these instances, it could be argued that cultural context could possibly influence a manager's strategic choice. For example, when one considers the cultural context of listed companies, managers possibly experience strong pressure to fulfil the short-term (quarterly) expectations of the stock markets. It is possible that they operate in a culture of short-sightedness (investment myopia) where they over-emphasize short-term profits because they need to deliver dividends to shareholders (Bennett, 2005). Consequently, during business cycle contractions (i.e. economic downturns / recessions), managers with a short-term outlook are more likely to favour cost cutting measures to maintain their bottom-line profits while discouraging long-

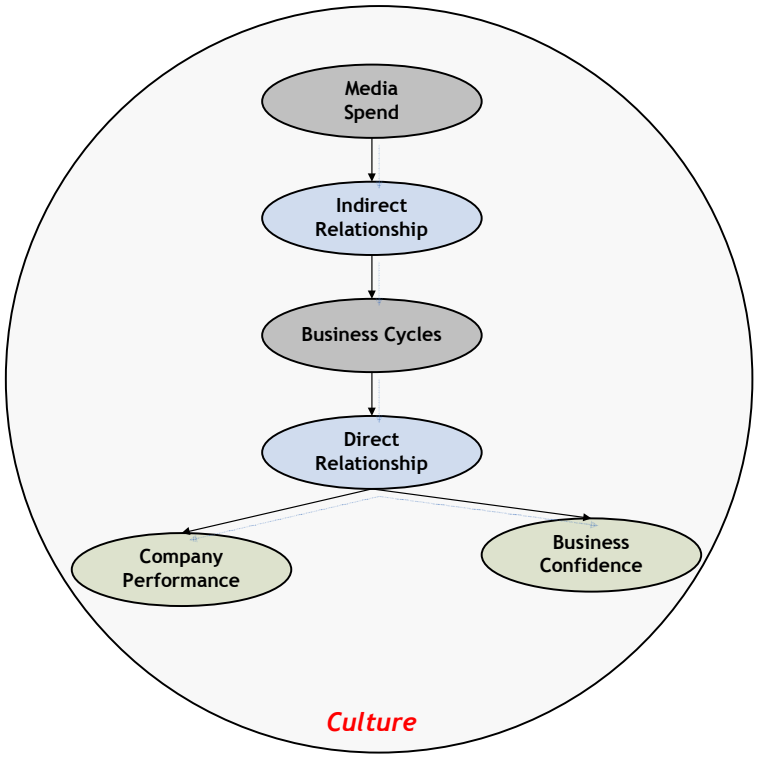
term investments like media spend initiatives aimed at long term brand building (Mizik and Jacobson, 2007). In this context, media managers would possibly adapt their media spend allocations in the same direction as the business cycle (pro-cyclical) and thus cut their media spend to match the downturn of the business cycle (contraction/recession). However, some listed companies could operate in a culture that regard recessions as opportunities to strengthen their business by investing aggressively in long term initiatives that could help to increase their competitive advantage over rival firms. These firms, and by implication the media managers within them, would possibly adapt their media spend allocations in the opposite direction as the business cycle (counter-cyclical) and increase their spend during the downturn. Thus the cultural context within which media managers operate, could potentially influence the direction in which media spend allocations are adjusted in relation to the business cycle.

Consequently, if the cultural context within which media managers operate, is able to potentially influence the direction within which decisions are taken in relation to the business cycle, then it is also possible that culture could potentially also influence the timing of these decisions. This could be manifested in two ways viz. managers could either react after changes in the macro environment (reactive), or they could pre-empt changes in the macro environment (proactive). A reactive strategy implies a greater degree of risk-aversion than a proactive strategy. This risk-aversion could be demonstrated when media managers make strategic decisions after a change in the macro environment becomes apparent. They could react to falling or rising business and consumer confidence levels and increase or decrease their media spend after this fact and thus lag the business cycle. In contrast, a company with a greater risk-appetite could adjust their media spend allocations in anticipation of the benefits derived from the changes in the business cycle. Within this context, changes in media spend would potentially lead the business cycle. Thus the cultural context within which media managers operate, could potentially influence whether media spend allocations lead or lag the business cycle.

1.3.6 Summary

The above arguments have indicated that there is a possible chain of impacts that runs from consumer confidence into business confidence which in turn could impact share prices and dividend yields. These dynamics could in turn influence and shape the business cycle which indirectly affects firms at micro level. Overriding all of these aspects is the potential influence that a firm's cultural context has on a manager's decision making abilities when faced with changes in the business cycle. Hence these arguments can be summarized in Figure 1-3-6 below.

Figure 1-3-6: The potential relationship between media spend and the business cycle



Desai-Gossel (2010)

In the preceding arguments (as graphically illustrated by Figure 1-3-6), it has been suggested that there is a possible direct relationship between company performance (as measured by a listed firm's share price performance/dividend yields) and the phases of the business cycle.

Furthermore, consumer/business confidence levels could also be linked to the phases of the business cycle. Hence a firm's performance (as measured by share prices and dividend yields) and a country's consumer/business confidence levels, could potentially also influence a media manager's strategic decisions when it comes to media spend allocations. In addition, this latter aspect may be influenced by the cultural context within which media managers operate and their associated level of risk-appetite when taking strategic media decisions.

Consequently, if company performance and consumer/business confidence levels could potentially influence business cycles, and this in turn influences media spend, then a possible indirect relationship could also be present between media spend and the business cycle. However these arguments require further theoretical and empirical analysis.

1.4 Problem Statement

Based on the preceding discussion, the following thesis statement can be derived:

Media spend has a positive (pro-cyclical) relationship with both direct and indirect business cycle variables.

1.5 Research Objectives

1: To determine what the relationship is between media spend and consumer/business confidence.

2: To determine what the relationship is between media spend and company performance.

3: To determine what the relationship is between media spend and the business cycle.

1.5.1 Discussion

The data-set of interest in all three objectives, will comprise of the annual media spend figures recorded for all listed companies in SA between the periods 1993 to 2009. For the purposes of this research, this data-set will be segmented into four categories: Print; Radio; Television and Total Media Spend.

Thus the data-sets used to address each of the research objectives will be as follows:

- The data to empirically explore research objective one, will consist of the media spend data as outlined above, as well as the consumer confidence index and the business confidence index figures recorded in SA between the periods 1993 - 2009.
- The data to empirically investigate research objective two, will consist of the media spend data as outlined above, as well as the Johannesburg Stock Exchange All-Share Index (i.e. the ALSI), and the Johannesburg Stock Exchange All-Share Dividend Yield Index (i.e. the ALSI DY) recorded in SA between the periods 1993 - 2009.
- The data to empirically investigate research objective three, will consist of the media spend data as outlined above, as well as the GDP figures recorded in SA between the periods 1993 - 2009. SA GDP has been adjusted for inflation in order to produce the real, seasonally adjusted GDP figures.

1.6 Importance of the Research

This research attempts to measure the relationship between SA media spend movements and the business cycle. In particular, this study aims to provide insights into media spend movements during expansionary (the upswing) and contractionary (the downswing) phases of the business cycle. The study further investigates whether media spend moves in the same direction (pro-cyclical) or whether it moves in the opposite direction (counter-cyclical) as the business cycle. It also considers the timing of these movements in order to understand if media spend increases or decreases before or after changes in the business cycle are observed. This knowledge could possibly provide insight into whether media managers are proactive or reactive when implementing their media strategies.

It is envisaged that this research will contribute to the field of marketing as this subject has not been extensively researched, particularly in SA. Thus, by understanding the media spend and business cycle relationship, media managers could possibly gain strategic insight into whether in general, decisions on media spend allocations are made proactively or reactively by managers in relation to the business cycle (macro environment). This knowledge could then be used by media managers to gain competitive advantage in both the upward and downward phases of the business cycle. For example, if it is shown that media managers increase their media spend during the upward phases of the business cycle, it could indicate that proactive media managers could benefit by not following the herd and instead maintain a level media spend and shift their focus towards media effectiveness. In this way, these managers could win market share by maximizing cost effective media efficiency. However in the downturn, if media managers are shown to cut marketing spend, then proactive media managers could also win market share by increasing media spend and thus benefitting from greater media exposure or brand awareness. Thus in conclusion, this research could possibly aid South African media managers to better understand the benefits to be gained from leaning against the wind.

1.6.1 Limitations (Assumptions) and Delimitations

Limitations:

- All four data-sets were produced on an annual rather than monthly basis. However, this did not have a significant impact on the statistical analysis approaches proposed and hence data validity and reliability issues were not compromised. These approaches as well as the methodology are discussed in greater detail in chapter four.
- This research assumed that a lag or leading relationship was a realistic portrayal of a media manager's proactive or reactive strategic focus with regard to their media spend. However, further qualitative analysis could possibly provide further insight but this remained outside the scope of the study due to time constraints.
- This research assumed that the All Share Index and the All Share Dividend Yield Index were reasonable measures of a listed firm's overall performance.

Delimitations

- Due to a lack of available data, the analysis has only considered listed companies in SA.
- The media spend data was delimited to companies that had recorded an advertising media component in their audited financial statements between the periods 1993 - 2003.

1.7 Overview of the Report

- *Chapter one* of this research report, provides a broad contextual outline on the broad topic of media spend and the possible direct and indirect impacts that could affect the business cycle.
- *Chapter two* uses management models and theoretical frameworks to gain a deeper understanding of the direct and indirect impacts affecting media spend and the business cycle.

- *Chapter three* uses peer-reviewed articles and other published sources in order to consider the viewpoints of various authors regarding the direct and indirect impacts affecting media spend and the business cycle.
- *Chapter four* provides details on the research design and methodology adopted in the research report in order to meet each research objective.
- *Chapter five* presents the results of the statistical data analysis and discusses the key findings in relation to each research objective.
- *Chapter six* concludes the research report by providing a definitive response to the research statement. In addition, there is a brief discussion about additional future research that could be undertaken on the topic as a recommendation.

Note: Chapter 7 was not included as this chapter is optional (Shipham, 2010).

1.8 Summary of Chapter One

Chapter 1 provided a contextual overview of the potential relationship between media spend and the business cycle. This potential relationship was found to operate on multiple levels. One of these levels included the impact that consumer and business confidence could have on the business cycle. A second level was the impact that a firm's share price performance and dividend yields could have on the business cycle. Finally, the impact of cultural context was considered as a potential influencer with regard to media spend decisions in relation to the business cycle. From the discussion, it was found that there appeared to be a lack of clarity on whether all the variables moved in the same direction as the business cycle (i.e. a pro-cyclical relationship), or whether they moved in the opposite direction to the business cycle (i.e. a counter-cyclical relationship). It was also not clear whether media spend decisions were made before, or after changes in the business cycle were observed. The timing of these decisions could possibly provide insight into whether media managers are proactive or reactive when making media spend decisions in reaction (or anticipation) to the business cycle. Hence these issues require further critical review.

Chapter 2: Problem Analysis / Theoretical Considerations

2.1 Introduction

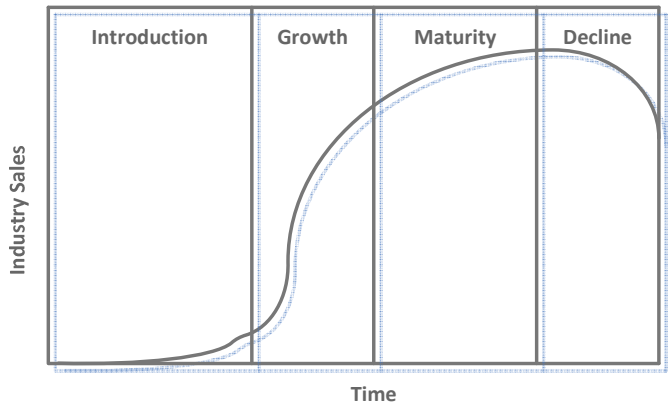
Figure 1-3-6 provides a schematic illustration of the potential relationship between business cycles and media spend. In this study, this potential relationship appears to operate on three main levels with culture possibly impacting the direction of variable movements. These variables are reviewed further in this chapter using theoretical frameworks and strategic management models.

2.2 Consumer / Business Confidence and Media Spend

The preceding discussion in chapter one eludes to the idea that consumer confidence as a variable, and business confidence as a variable, could potentially influence each other. There is also the suggestion that consumer and business confidence could influence a firm at micro level (where marketing and media budgets are set). Thus, in order to consider this dynamic, management models and theoretical frameworks will be used for two purposes: firstly, to understand whether there could be a relationship between consumer confidence and business confidence; and secondly, to understand whether there could be a relationship between consumer and business confidence, and media spend.

In order to consider the first issue, it is necessary to gain a clearer understanding of the industry dynamics regulating companies. Bakhru (2006) posits that the industry life-cycle curve as graphically depicted in Figure 2-2, provides a useful framework within which to consider the industry dynamics regulating firms. This model provides a tool which could assist in identifying the patterns of entry and exit of firms within industries.

Figure 2-2: The Industry Life-cycle Curve



Bakhru (2006)

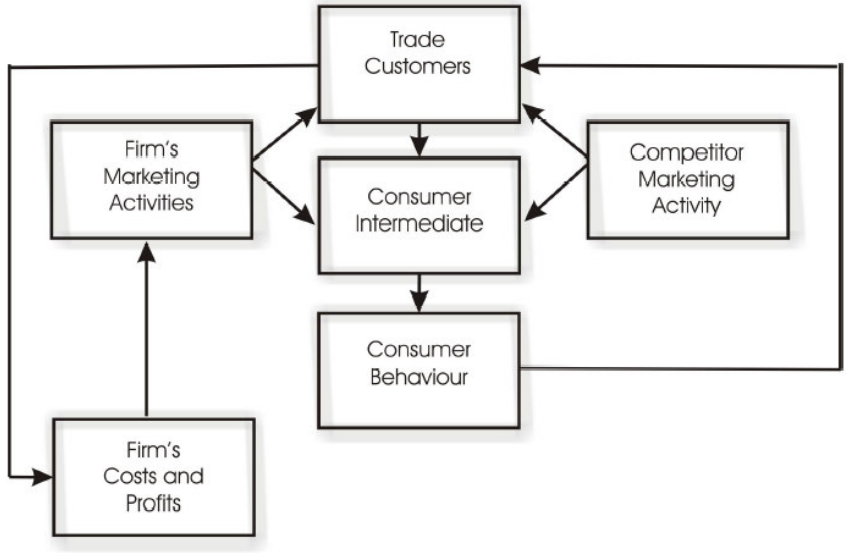
As stated by Bakhru (2006: 30) "…the dynamic process through which industries evolve is shaped to some extent by three factors viz. technology, economies of scale and demand". For the purposes of this study, the latter factor will be considered in particular, as aggregate demand levels are influenced by the consumer. Hence, according to the industry life-cycle curve, demand levels will fluctuate depending on the various phases of the life cycle.

It is possible to compare the life-cycle curve to the business cycle curve as depicted previously in Figure 1-3-2. In the life-cycle curve, the growth phase is characterized by growing demand as the number of firms entering exceeds the number of firms exiting. However, during the maturity phase, new demand gives way to replacement demand only and in the decline phase, demand levels appear to be in decline with more firms exiting than entering. These phases are similar to the phases in the business cycle. For example, during contractionary periods (downswings/recessions) of the business cycle, there is likely to be an increased number of company bankruptcies and reorganizations (Picard and Rimmer, 1999). Hence the number of firms exiting is likely to exceed the number of firms entering which bear close similarity to the decline phase of the life-cycle. This could then lead to reduced consumer confidence which conceivably leads to a more conservative spending pattern, thus

reinforcing the downswing cycle of the business cycle curve. The reduced demand levels will in turn have a corresponding impact on business confidence as firms exit possibly due to the unattractive market. Thus consumer confidence and business confidence appear to influence each other, indicating that there could be a relationship between these two variables.

In order to consider the second issue (i.e. the possible relationship between consumer and business confidence and media spend), it is necessary to apply the above framework to media spend. Consequently, a second model that could provide further insight into the media spend and consumer/business confidence dynamic, is Ambler's (2003) demand and supply cash flow model as graphically depicted in Figure 2-2-1 below.

Figure 2-2-1 Simple marketing cash flow model



Adapted from: Ambler (2003)

According to Ambler's model, sales growth, which is realized through increased demand levels, is regarded as a measure of firm performance. Thus, in an economic downturn,

reduced demand levels could lead to firms cutting back on marketing spend in order to maintain profitability. The economic downturn (which could be mirrored in the decline phase of the industry life-cycle), could lead to a negative feedback loop in Ambler's (2003) model: a reduction in advertising spend results in reduced revenues, which in turn leads to reduced profitability, thus further stimulating additional cuts in advertising spend. Within this context, media spend could conceivably be linked to consumer sentiment and business sentiment, since consumers (through their aggregate demand), and businesses (through their investment levels), serve to reinforce the economy. An economic downturn could thus potentially feed through to consumer and business sentiment levels which in turn could impact firm revenues and influence media spend. It is thus necessary to explore this link between consumer and business confidence levels and media spend further, as it could provide further insights into the media spend and business cycle dynamic.

2.3 Share Prices / Dividend Yields as Proxies for Company Performance

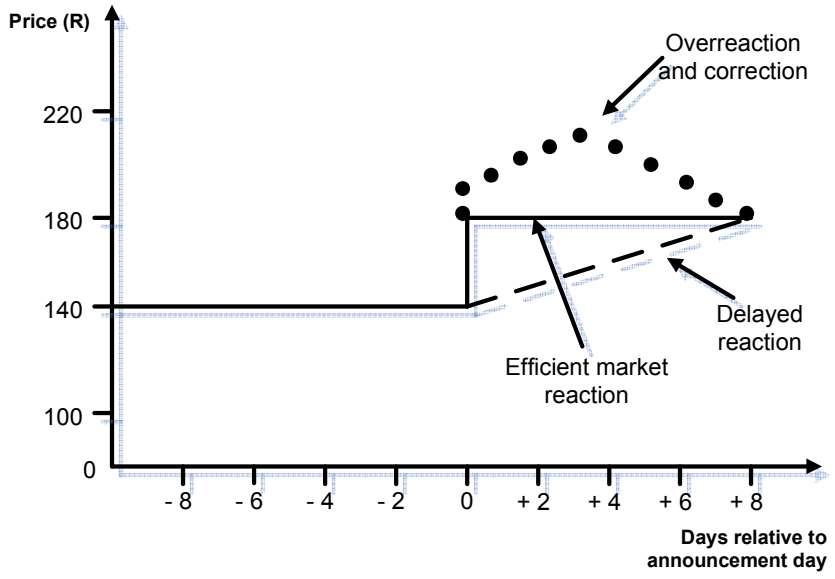
It has been suggested in the preceding chapter that a company's share price performance and dividend yields (conceivably influenced by fluctuations in the business cycle), could be considered a reasonable measure of a firm's overall performance. Consequently, if forces in the external environment are seen to have a possible corresponding effect on a firm's internal environment [and performance] (Altman, 1983; Platt and Platt, 1994; Gertler and Gilchrist, 1994; Gray and Stonem, 1999; Aghion *et al*., 2004), then, it would also be necessary to analyze the share price performance and dividend yields of firms as potential proxies for overall performance. One possible theoretical framework for investigating this issue is the Efficient Markets Hypothesis (EMH) theory.

In its strongest form, the market (where consumers and investors operate) is efficient if all information relevant to the value of a share is quickly and accurately reflected in the market price (Firer *et al.,* 2004). This information would also include market sentiment on a company's performance. Hence, according to the Efficient Markets Hypothesis (EMH), in a strong form efficient market, business and consumer confidence levels will instantly be

reflected in share price movements. Hence if business and consumer confidence possibly mirror and reflect the business cycle, and these movements are instantaneously translated into share price adjustments, then it follows that share price movements could also reflect business cycle changes.

However, the timing of these adjustments may vary due to factors such as herding (where individuals follow each other), and 'irrational exuberance' (where people are over-optimistic and buy based on sentiment rather than on value). Thus, share price adjustments could possibly demonstrate an over-reaction or under-reaction pattern depending on timing. This process may be better understood by looking at the Efficient Market Reaction model (Firer *et al.,* 2004) as illustrated in Figure 2-3.

Figure 2-3: Efficient Market Reaction Model



Adapted from: Firer et al. (2004:373)

The Efficient Market Reaction model illustrates three levels of market reaction. According to the 'efficient market reaction' (the first reaction), the price of a share instantaneously adjusts to and fully reacts to new information. However, according to the 'delayed reaction', the price partially adjusts to the new information (e.g. eight days elapses before the price completely reflect the information). Finally, in an 'overreaction' scenario, the price over-adjusts to the new information and 'overshoots' the new price before it subsequently corrects itself again. Hence, when one considers the effects of each of these share price movements against movements in the business cycle, it is possible that the share price over-reactions and over-corrections could possibly demonstrate exaggerated business cycle effects. Therefore, share price movements are likely to capture both business cycle fluctuations and, through the Efficient Markets Hypothesis (where external changes are instantaneously reflected in share prices), also company performance. Consequently, if all information about a company is included in its share price, then it is also possible that the share prices of listed companies could in fact be used as a proxy for that company's performance.

This argument could also be extended to the dividend yields of companies. The Gordon Growth Model, as depicted in Figure 2-3-1, could possibly provide further insights into the business cycle effects on share prices.

Figure 2-3-1: The Gordon Growth Model

$$Value\ per\ share = \frac{DPS_t}{k_e - g}$$

Where DPS_t is the expected dividend in period *t*

k_e is the cost of equity

g is the dividend growth rate

Damodaran (2002:323)

According to the Gordon Growth Model, new macroeconomic information (e.g. business cycles), will affect stock prices if it impacts on either expectations about future dividends, discount rates or both. Hence, during expansionary (boom / upswing) phases of the business cycle, companies will arguably have more funding to pay out dividends. In addition, the discount rate (i.e. the compensation for risk) drops because the cost of equity (i.e. the return that investors require on their investment) drops, while the growth portion of the share increases. Thus according to the Gordon Growth Model, under these conditions, share prices are likely to rise. On the other hand, during a contractionary (recession / downswing) phase of the business cycle, dividends per share could either decline or remain relatively level. The discount rate is then likely to increase, since the cost of equity will rise while the growth portion of the share declines. This will lead to the share price falling. Thus, according to the Gordon Growth Model, the relationship between share values and the business cycle tends to move in the same direction (i.e. pro-cyclical).

However, companies may be reluctant to cut their dividends because the market could consider this to be a negative signalling effect which in turn could erode share prices (Open University Business School, 2007). Companies could endeavour to keep their dividend payout ratios stable during a recessionary (contractionary / downturn) phase of the business cycle in order to placate existing shareholders. Companies could even pay out more dividends from retained earnings in order to attract future investors. Hence in reality, it is possible that dividend yields could move in the opposite direction to the business cycle (i.e. counter-cyclical relationship).

Consequently, if according to the Gordon Growth Model, share prices are affected by dividends, then it is also possible that the dividend yields of listed companies could also be used as a proxy for that company's performance. Furthermore, as discussed, dividend yields are likely to move in the opposite direction of share price movements and thus it can be considered as an inverse proxy of company performance. However, it is not clear whether the general relationship between share prices and business cycles moves in the same

direction (pro-cyclical) or whether they move in the opposite direction (counter-cyclical). Hence further empirical analysis would be required.

2.3.1. Company Performance and Media Spend

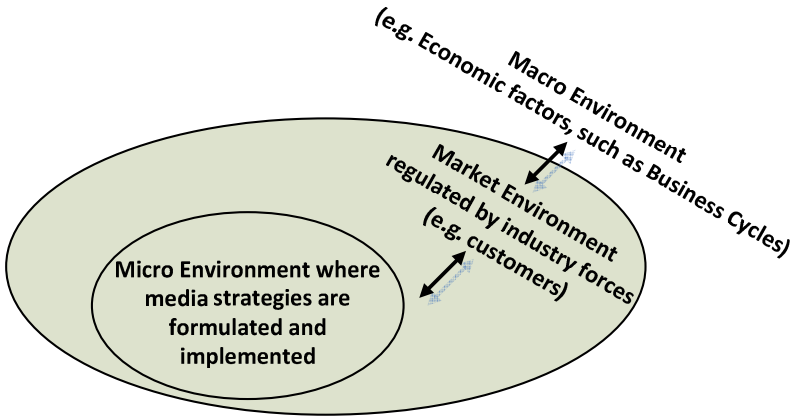
As discussed above, share prices and dividend yields could be used as proxies for company performance. Thus company performance, which is also impacted to some degree by consumer and business confidence levels through their aggregate demand and investment, could potentially also mirror and reflect the business cycle. For example, business cycle fluctuations could affect firms at micro level which in turn could result in firms reacting by adapting their financial activities to suit the changing economy.

Consequently, a detrimental change in the forces that shape business cycles which tip the phase from expansion (prosperity) to contraction (decline) (see Figure 1-3-2), could result in firms having limited capital at their disposal because of reduced earnings. These reduced earnings could be experienced due to reduced levels of aggregate demand. Firms could then respond by engaging in processes of cost rationalisation and reduce their media spend activities in line with the changes experienced in their external environment. For example, when company performance increases in times of economic prosperity, firms could have more disposable revenue to spend on media activities. However, when company performance decreases due to economic decline, firms could have less disposable revenue to spend on media activities and thus reduce media spend. Thus media spend activities could demonstrate the same relationship with company performance (as measured by their share prices and dividend yields) as they do with business cycles. It is therefore necessary to explore this relationship further, as it could provide further insight into the media spend and business cycle dynamic.

2.4 Business Cycles (macro environment) and Media Spend (micro environment)

As discussed in chapter 1, business cycles as a macro-environmental force could exert an influence on a firm's micro or company specific environment. It is therefore necessary to consider the three environments that could possibly influence a firm at micro level in order to review this issue further. Figure 2-4 below provides a model of the three environments (Stapleton, 2007).

Figure 2-4: A model of the three environments



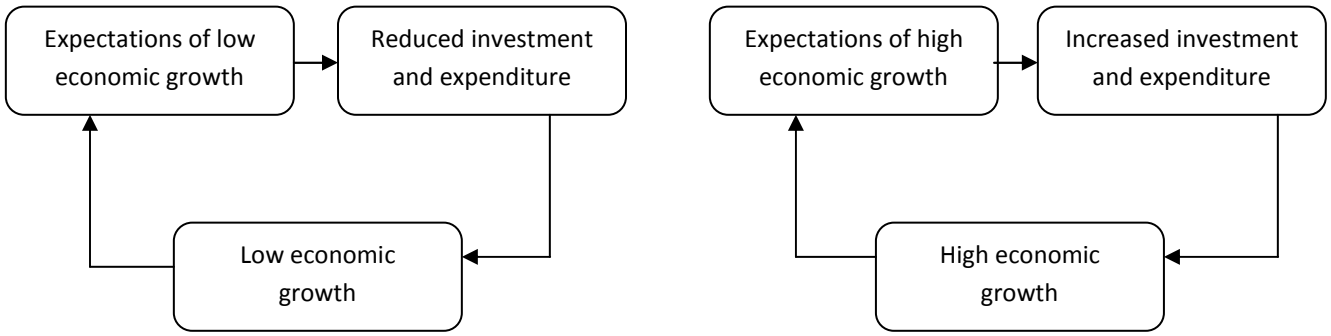
Adapted from: Stapleton (2007)

The three environments model illustrates the interconnected relationship that exists between environments and provides an analytical framework that could help to link the factors in a firm's macro environment, to the effects on a firm's internal (micro) environment. As illustrated, the micro environment is linked to the macro environment through the market environment. In the context of this study, this would suggest that business confidence (which resides at micro / market environmental level), could be influenced by consumer confidence (which resides at market environmental level). Business confidence could reside at micro level if the firm looks inward. However, business confidence could also reside at market level if a firm does business with other firms in a B2B context. Consequently, if business confidence levels are conceivably influenced by market and consumer sentiment, then this

could also have a corresponding impact on the business cycle (which resides at macro environmental level) since consumer demand and industry investment drives the economy (Keynes, 1936). Hence declining consumer confidence levels due to macro environmental factors such as a global economic recession, could have a corresponding effect on the aggregate demand levels of consumers. This in turn, could affect the performance of firms at micro level and indirectly affect their (media) spend.

However, the relationships between the micro, market and macro environments are not linear, since each environment can affect and is affected by the other (Bakhru, 2006). This issue is explored further by Stapleton (2007). Stapleton (2007) supports the view of Keynes (1936) that business cycles are driven by the interplay of consumption and investment dynamics. This interplay is graphically illustrated in Figure 2-4-1 below.

Figure 2-4-1: Firm expectations and economic cycles



Stapleton (2007)

According to Stapleton (2007), the economy tends to move in cycles (i.e. the swings from boom to bust) as a result of market inefficiencies, whereby production (which resides in a firm's micro environment) cannot increase sufficiently to meet increased demand (which resides at market environment level). This could then lead to increased costs and labour inflation, which further depresses demand. As a result, the rate of economic growth slows

and goods, services, and labour move into surplus, inflation falls and a new cycle begins. The same happens in reverse. If the economy is expected to go into decline, organisations invest less and individuals spend less which means that the expectation is fulfilled once again (Stapleton, 2007). This cycle thus reinforces the interconnected relationship between the micro, market and macro environments. Ambler (2003) takes this interconnected relationship one step further in his demand and supply cash flow model as previously discussed and graphically illustrated in Figure 2-2-1.

According to Ambler (2003), advertising (which resides at micro environmental level), stimulates demand (which resides at market environmental level) via the following cyclical process: a firm spends money on advertising, which in turn stimulates demand. This brings cash to the firm, with which it pays for operating expenses, and distributes profits. Thus if advertising alters consumer consumption, it has a double multiplier effect. First, advertising, like any business spending, creates employment, which in turn produces more spending. Second, by increasing the propensity to consume, it raises the whole multiplier effect (Ambler, 2003).

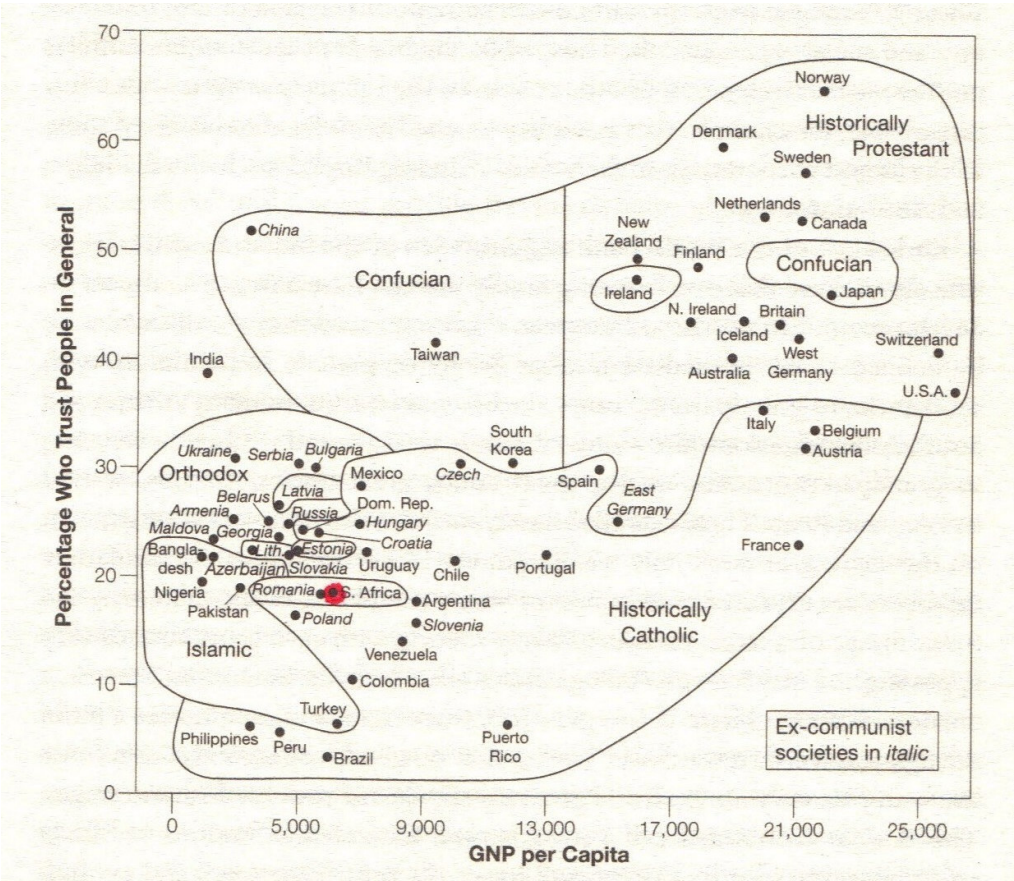
Thus in all three arguments (Ambler, 2003; Stapleton, 2007; Keynes, 1936) the interconnected relationship between the three environments are highlighted. The consumer is also identified as a potential powerful force driving aggregate demand levels, which in turn could channel the inter-environmental dynamics. Consequently, if macro environmental forces such as business cycle fluctuations could affect consumer and public sentiment in the market, then firms at micro level (where media spend is adjusted), could also be affected by the business cycle dynamic through the market impact. However, these arguments assume that firms are reactive to the changes in their market and macro contexts, without considering the influence of culture as a potential influencer on how and when firms react to changes in their external environment.

According to Stapleton (2007) organizations are different and therefore the best solution (in terms of their media spend) is likely to be contingent on their specific circumstances. This is known as *contingency theory,* where individual contexts influence the direction of decision-making activity. Furthermore, Hofstede (2001) looks at national culture as a potential influencer on decision-making activity. Hofstede (2001) developed a framework that allows one to assess the influence of national culture based on factors such as *long-term orientation*, *power distance*, *uncertainty avoidance*, *individualism* (as opposed to *collectivism*) and *masculinity*. However, for the purposes of this study, only *long and short-term orientations* and *uncertainty avoidance* will be considered in a SA context, since these two factors are possibly more applicable to proactive versus reactive media management decision-making.

According to Hofstede (2001), managers in cultures high on *long-term orientations* are more likely to consider building strong positions in their markets than to focus on short-term profitability. In cultures like these, media spend would conceivably be seen to be a strategic asset that requires ongoing investment. Media managers would possibly continue to invest in media activities despite an economic downturn and be seen to move in the opposite direction to the business cycle and invest more (i.e. counter-cyclical). However, according to Beinhocker (2007: 431) "…two factors in African culture that have negative economic impacts are excessive concentrations of authority in individual 'Big Men' and a view of time that focuses on the past and the present but not the future." This would suggest that in SA, there is a possible backward-looking focus and, as defined by Hofstede (2001), a *short-term orientated* culture is present. In such a culture, Deleersnyder *et al.* (2007: 8) posits that advertising outlays are more likely to be seen as an expense that "…should be modified as dictated by short-run considerations". It is thus possible that in SA, media spend movements could be seen to move in the same direction as the business cycle (i.e. pro-cyclical) with media spend possibly being cut during an economic downturn.

Furthermore, according to Hofstede (2001), *uncertainty avoidance* refers to the degree to which societies feel threatened by 'uncertain, risky, ambiguous or undefined situations' like an economic recession (Deleersnyder *et al*., 2007: 9). As argued by Deleersnyder (2007), managers in high *uncertainty avoidance* cultures would possibly be more focused on risk avoidance and risk reduction initiatives. They would also conceivably be more prone to follow the herd than to go against the mass. Under these conditions, there is likely to be low levels of trust among the population as trust would take time to build and would arguably require a culture with a long-term orientation. Beinhocker (2007: 433) developed a model that could assist to measure the relationship between low or high trust values and economic success. This relationship is graphically illustrated in Figure 2-4-2 below.

Figure 2-4-2: The relationship between trust and economic success



Beinhocker (2007)

Beinhocker (2007: 433) argues that "…trust leads to economic co-operation which leads to prosperity which further enhances trust in a virtuous cycle…but the circle can be vicious as well with low trust leading to low co-operation leading to poverty and further eroding trust." Thus in cultures that are backward-looking (i.e. with a *short-term orientated* culture according to Hofstede, 2001) and where there (according to Beinhocker, 2007) is a low trust value, there will be a tendency for managers to be more reactive than proactive. In cases like these, decision-making with regard to media spend is more likely to move with the business cycle (i.e. pro-cyclical).

As indicated in Figure 2-4-2, South Africa (represented by the red dot) falls within the area of low trust and low economic performance. There is thus empirical evidence that culture (where low trust levels are evident) and economic performance is strongly correlated. However, although culture could potentially influence the direction of media spend movements; it will be difficult to determine whether media managers in SA are reactive or proactive. Media managers could be reactive if they cut their media spend after changes in the business cycle are observed. In this case, their media spend would lag the business cycle. However, they could appear to be proactive if they cut their media spend ahead of the business cycle changes. In this case, their media spend movements would lead the business cycle. Thus with the use of Hofstede's (2001) theoretical framework and Beinhocker's (2007) trust model, it is possible that SA would arguably operate in a culture that tends to move in the same direction as the external change in a reactive fashion (i.e. media spend would arguably lag the business cycle).

Media spend decisions may also be made organically according to individual context and hence a second dynamic to consider, is *how* media managers react to changes in the macro environment. The marketing mix model as illustrated in Figure 2-4-3 below could possibly provide further insight into this issue. For the purposes of this study however, only the fourth *P (Promotion)* will be considered, as this 'mix' includes decisions on media spend.

Figure 2-4-3: The Marketing Mix (4 Ps) Model

The Marketing Mix
Product
Price
Place
Promotion

Adapted from: Doyle (2004)

The Marketing Mix Model (also known as the 4 Ps) provides a theoretical framework that could be used by marketers to assist with the implementation of a marketing strategy (Doyle, 2004). One of the arguments by Doyle (2004) is that media managers react to changes in their market and macro environments by reconfiguring variables in their marketing mix. The marketing mix can thus be adjusted on a frequent basis to meet the changing needs of the target market and the dynamics of the marketing environment. For example, when faced with changes in a firms market and macro environments, firms could use the 4 Ps as a part of the organizations strategic planning process. Media managers could then decide whether or not to increase or decrease their media spend initiatives (i.e. the *P* in *Promotion*) in relation to changes in their external environment, and in particular, business cycles. Doyle (2004) further argues that the use of the 4 Ps could assist firms to maximize their performance by developing the right package that will satisfy the needs of the consumer.

Consequently, if media managers use the marketing mix model as a tool, it implies that managers possibly react organically to changes in their external environment, and then reconfigure their “mix” to suit their consumer audience in line with the movements in their external and company specific environments. Thus, based on the arguments from Hofstede

(2001) and Beinhocker (2007), in SA, during an economic downturn, media managers would possibly adapt their marketing mix by cutting their media spend (i.e. the *P* in *Promotion*) after changes in the business cycle are observed because there would arguably be less consumers with spending power to target. However, further empirical analysis is required in order to determine whether media spend movements lag or lead the business cycle. This could possibly provide further insight into whether media managers are reactive or proactive to changes in their external environment (and in particular, the business cycle).

2.5 Summary

Chapter two provided further insights into the direct and indirect business cycle variables. From the discussion, it appears that consumer and business confidence mirror the business cycle and has a corresponding impact on firms at micro level (where media spend occurs). It was also found that share prices and dividend yields (which also mirror the business cycle), could be used as proxies for overall firm performance. Hence company performance could be correlated to media spend movements and the business cycle. Finally, the impact of culture and context on a media manager's proactive or reactive media spend decision-making in relation to the business cycle was considered. It was found that context could potentially influence whether media spend lead or lag the business cycle. However, the theoretical arguments presented, could not provide a definitive view on whether the relationship between media spend and the business cycle was negative (counter-cyclical) or positive (pro-cyclical). It will thus be necessary to also consider peer reviewed research on this topic.

Chapter 3: Literature Review

3.1 Introduction

Although the preceding theoretical arguments provide a deeper level of understanding on the research problem, a more detailed and critical review of published peer reviewed academic articles are required in order to unravel the complexity of the problem further (Shipham, 2007). In this chapter, peer reviewed articles sourced from various databases receive critical review.

3.2 Consumer / Business Confidence and the Business Cycle

The preceding discussion has identified the consumer as an important entity since aggregate demand could significantly contribute to the economic activity process. Consumer sentiment, which also leads to business sentiment, is considered to be an important variable both as a contributor to general economic activity and as a contributor to a firm's bottom line profits. Thus, for the purposes of this study, both consumer and business confidence levels (which are found to reflect the business cycle), will be regarded as direct business cycle variables. However, the exact influence of consumer and business confidence on the business cycle is unclear and hence peer reviewed journals will be evaluated on this subject.

Numerous studies have been conducted on the effect that confidence levels have on economic activity. Yew-Kuang (1992) for example, postulates that a collapse in consumer confidence could trigger a recession (i.e. a downturn or contraction in the business cycle). Yew-Kuang uses the example of a stock market crash (such as the dot.com bubble) to illustrate the effect. A stock market crash could induce a depression which could also reduce business confidence and thus affect aggregate demand which in turn affects the business cycle. This notion supports the former study by Keynes (1936) that business cycles are driven by a complex interplay of changes in consumption and investment. Thus, according to this theory, consumer sentiment would have an influence on the business cycle. Further studies on this subject can be found in the works of Matsusaka and Sbordone (1995) who

found that consumer confidence in the UK caused the business cycle. In addition, various other studies have shown that there is a causal link between consumer confidence and business cycles (Carrol, Fuhrer & Wilcox, 1994; Batchelor and Dua, 1998). For example, when UK consumer and business confidence indicators dropped during the 1990/91 recession, Abel, Bernanke & McNabb (1998) found that consumer confidence indicators were sensitive to the output trends. In addition, Rigby (2001) found that when an industry faces a recession in a country, some firms perform poorly, raising concern among their customers about the ability of those firms to service their needs. According to Rigby (2001), under these conditions, customers become more conservative in their spending and take fewer risks. Gijsenberg, van Heerde, Dekimpe & Steenkamp (2009) also found that consumers easily lose trust during economic downturns (business cycle contractions / recessions). These authors therefore prove that economic conditions (business cycle fluctuations) could affect consumer confidence which in turn affects aggregate demand levels which then reinforces the cycle.

However, the above studies appear to be country specific and hence the study by McNabb and Taylor (2002) which provides a cross correlation analysis across four countries (UK, France, Italy and the Netherlands) could provide further insight. McNabb and Taylor (2002) found that in the UK, consumer confidence caused the business cycle but this also worked in reverse as the business cycle was found to cause business confidence. However, in France and Italy, business confidence caused the business cycle but the reverse did not apply, and in the Netherlands, no causal relationship was found to be present. McNabb and Taylor (2002), did however find that in general, consumer and business confidence indicators were found to be leading indicators and generally moved in the same direction as the business cycle (i.e. pro-cyclical). Hence it was found that confidence indicators could in fact be used to predict business cycle activity across the four European economies.

In SA, Lee (2002) found that although various research articles show a close correlation between the ups and downs of household sentiment and the ups and downs of economic

activity, this does not necessarily imply that consumer confidence drives the economy. The author postulates that household sentiment could however be used as an important measure when gaining insight into the present and future economic conditions of a country. This view is in line with the findings of McNabb and Taylor (2002). However, with regard to business confidence in SA, the Bureau of Economic Research does not include the whole of the economy and only includes the manufacturing, construction and trade sectors which make up 40% of total GDP. Despite this, Kershoff (2000) posits that the BER index is still regarded as a reliable indicator of the current and expected state of the economy in SA.

The above arguments thus present a strong case that there is a correlation between consumer and business sentiment and the business cycle. In addition, the most recent cross correlation study in four European countries conducted by McNabb and Taylor (2002) suggests that in general, consumer and business confidence indicators can be linked to GDP and the business cycle as leading indicators, and tends to move in the same direction (i.e. pro-cyclical). These arguments therefore confirm that consumer and business confidence indicators could be used as a reasonable measure when evaluating business cycles (and by implication, the business cycle variables in this research).

3.3 Company Performance and the Business Cycle

In this study, share prices and dividend yields (which also reflect the business cycle), are regarded as direct business cycle variables and is also found to be a reasonable proxy for a listed company's overall performance. Hence it will be necessary to review published literature on share prices and dividend yields as possible leading indicators of the business cycle. It will also be necessary to consider published articles on whether share prices and dividend yields move in the same direction (pro-cyclical) as the business cycle, or whether it moves in the opposite direction (counter-cyclical) as the business cycle.

According to Roosma (1995) the stock market is generally considered to be a leading indicator of the economy because stock market dynamics are based on expectations about the future. The author empirically explores the relationship between stock price movements and dividend yields. The results indicate that dividend yields generally move in the opposite direction (counter-cyclical) to share prices because they are leading indicators and move (turn) before stock price movements. Thus in Roosma's (1995) study, market advances are preceded by high dividend yield ratios, and market declines are preceded by falling dividend yield ratios.

Fama (1990) explains this counter-cyclical relationship in terms of risk and return. The author posits that investors require larger expected returns from a security that is riskier. Hence shareholders will want higher dividends in periods of volatility (such as during periods of economic downturns). In addition, Kim and Lee (2007) found that investors have a higher risk appetite during expansionary periods of the business cycle than in recessionary periods. Furthermore, Gordon and St-Amour (2004) found that investors are more risk-averse during recessions than during expansions. According to Roosma (1995), the reasons postulated for this counter-cyclical reaction is that although the two variables (share prices and dividend yields) move together, dividend yields lead share prices by about 21 months. This effect leads to a counter-cyclical pattern whereby initially dividends increases faster than stock prices, then, as stock prices catch up, the dividend yield ratio starts to fall. Finally, when the share prices rise, the dividend yield ratio drops. Thus according to Roosma's (1995) findings, when the dividend yield ratio was found to be very high, the stock market reached its peak, on average about 21 months later. Similarly, when the dividend yield ratio was very low, a market correction followed. Thus according to Roosma (1995), dividend yields appear to react in the opposite direction to share price movements. However, Roosma's (1995) study does not consider how each variable reacts in relation to the business cycle.

Consequently, the studies by Fama (1990), Perez-Quiros and Timmermann (1996), and Schwert (1989), could possibly provide further insight into this dynamic. In the study by Fama

(1990), share prices were found to be highly correlated with business cycles in the USA. It was also found that this correlation was positive and hence moved in the same direction (pro-cyclical) as the business cycle. A second study by Perez-Quiros and Timmermann (1996) found that dividend yields decreased during economic expansions, reaching their lowest around the peak of the business cycle, while they increased during recessionary periods. Thus the study by Perez-Quiros and Timmermann (1996) found that dividend yields moved in the opposite direction as the business cycle (counter-cyclical). However, in a study by Schwert (1989), the opposite was found to be true. In addition, Deleersnyder *et al*. (2007) found that in countries where the stock market plays a larger role in economic life, advertising reacts more strongly to business-cycle fluctuations than in countries where the role of the stock market is less prominent. These studies thus show that there is some kind of relationship between stock market performance and business cycles. However, the direction of this relationship (i.e. pro-cyclical or counter-cyclical) appears to vary between studies.

Hence the study by Andreou *et al.* (2000) will be considered. Andreou *et al.* (2000) empirically investigates whether stock market price indices and dividend yields, could predict the business cycle. The study found that share prices and dividend yields lead the business cycle in the USA and in Germany. However, in Britain, only the dividend yield was found to lead the business cycle and not share prices. Furthermore, in the USA and the UK, the relationship between share price variables and the business cycle were found to move in the same direction (pro-cyclical). However, this was not the case for Germany as dividend yields did not show a significant negative or positive correlation. Therefore, there is evidence that suggests that stock market indices and dividend yields are predictors of business cycle movements. However, it is still unclear whether this relationship is pro-cyclical or counter-cyclical. This may possibly vary between different countries.

3.4 Business Cycles (macro environment) and Media Spend (micro environment)

As previously stated, business cycles as a macro environmental force, could exert an influence on a firm's micro context (Altman, 1983; Platt and Platt, 1994; Gertler and Gilchrist,

1994; Gray and Stonem, 1999; Aghion *et al.,* 2004). Thus, if business cycles could affect firms at company specific level, then a firm's media spend (which is regulated at company level) could also be affected by business cycles. This possible relationship will be explored by examining various peer reviewed articles on the subject.

Research into whether there is a correlation between business cycle effects and media spend, appears to be extensively covered by different authors. For example, Hillier (1999) analyzed 1000 companies in the "PIMS" database and found that those businesses that increased marketing spending were not significantly less profitable during recessions. However, their profits increased faster once recovery started than firms that cut their marketing budget, whose profitability actually fell during recovery. Furthermore, in a study by Bellizzi, Thompson & Loudenback (1983), the years of increasing corporate profits were compared to the years of declining corporate profits in order to determine if advertising increased following some declining periods and decreased in others. The study found that during years of increasing corporate profits, advertising expenditures increased more frequently than they did during periods of declining corporate profits. However in the declining periods where low profits were observed, advertising was found to both increase and decrease. This finding suggests that business firms may prefer to increase their spending during the boom (upswing) periods of the business cycle but become more conservative depending on their individual context during declining (downswing) periods. Furthermore, Yang (1964) found that there is a positive correlation between firm revenue and media spend. According to Yang (1964), advertising appears to lag behind general business activity in its cyclical movements. Thus a media manager's spending is found to lag behind general economic activity, proving that decisions on media spend are only made after movements in the business cycle are observed. This finding suggests that media managers in the US are possibly reactive when taking media spend decisions.

In addition, Bennett (2005) found that the profit and sales of companies appear to fall during business cycle downturns and rise during business cycle upturns. This in turn has a

corresponding effect on the amount spent on marketing which varies during the business cycle. The research proves empirically that a long-term approach to marketing management across the business cycle, leads to superior performance. Thus (as proven by Bennett, 2005), a firm will need to move in the same direction as the business cycle and increase their media spend during prosperous periods, but move in the opposite direction as the business cycle during declines and refrain from cutting their media spend (counter-cyclical) in order to attain superior performance. Other studies in support of Bennett's (2005) finding that counter-cyclical advertising during economic downturns actually create value for companies, include research by Frankenberger and Graham (2003), Srinivasan *et al.* (2005), and Srinivasan and Lilian (2009).

However, Deleersnyder *et al*. (2007) proves empirically that although there is value in counter-cyclical advertising during recessions, in reality, firms adopt a different approach. The author found that there are strong increases in media spend during business cycle expansions and strong decreases in media spend during business cycle contractions. Thus in reality, firms appear to move in the same direction (pro-cyclical) as the business cycle in both the upturns and the downturns with their media spend. The author also found that variations in the cyclical fluctuations of media spend differ across media. For example, magazine and newspaper spending are found to be more affected by economic contractions and expansions than television spending. Radio spending in contrast, is found to be less cyclically sensitive than television. Thus according to Deleersnyder *et al*. (2007), the relationship between media spend and the business cycle is found to differ across advertising mediums but generally still moves in the same direction as the business cycle (i.e. pro-cyclical). However, Dean (1951) found that there is at least some possibility that counter-cyclical advertising can help to reduce fluctuations in business cycle activity. Thus, despite the fact that Deleersnyder *et al.* (2007) found companies to move in the same direction as the business cycle with their media spend (positive / pro-cyclical), Dean's (1951) research highlights the stabilizing possibilities of advertising on the business cycle if it moves in the opposite direction (negative / counter-cyclical).

Hence the above authors appear to have a mixed view on the relationship between media spend and the business cycle. Although the benefits of a counter-cyclical approach have been proven (Hillier, 1999; Bellizzi *et al.,* 1983; Frankenberger and Graham, 2003; Bennett, 2005; Srinivasan *et al*., 2005; Srinivasan and Lilian, 2009), there is evidence that suggests that companies actually adopt a pro-cyclical approach when it comes to their media spend (Deleersnyder *et al.,* 2007). There is also evidence to suggest that US media managers are possibly reactive when taking media decisions as displayed by the lag in media spend behind the general economic activity (Yang, 1964). However it is still unclear whether this is also true for SA and hence further empirical analysis is required.

3.5 Summary

The above discussion explored the relationship between a company's media spend and the business cycle by reviewing different peer reviewed articles on the subject. In order to investigate this relationship, consumer / business confidence and share prices / dividend yields were reviewed in relation to the business cycle. Various authors found consumer / business confidence indicators to be a reasonable measure of the business cycle. There was also evidence to suggest that stock market indices / dividend yields were good predictors of business cycle movements.

The relationship between SA GDP (a measure of the business cycle) and media spend, was also explored in order to consider if the relationship was positive (i.e. moved in the same direction / pro-cyclical) or negative (i.e. moved in the opposite direction / counter-cyclical). According to various authors, this relationship was generally found to be positive (i.e. pro-cyclical) and media managers were found to be reactive (as evidenced by a lagging correlation) when taking media decisions. However, further empirical analysis will need to be undertaken in order to provide a definitive view within a SA context.

Chapter 4: Research Design and Methodology

4.1 Introduction

As discussed in chapters one and two, the relationship between media spend and the business cycle appear to operate on multiple levels. Thus in chapter three, various peer reviewed articles were assessed on the subject. It was found that the variables that have a direct relationship with the business cycle included consumer and business confidence, as well as share price performance and dividend yields. In addition, SA GDP was regarded as a direct measure of the business cycle. Furthermore, for the purposes of this study, media spend was regarded as an indirect business cycle variable (see figure 1-3-6).

Hence this quantitative study looks at both direct and indirect business cycle variables when investigating the relationship between media spend and the business cycle. This necessitates the inclusion of three different data-sets, one to meet each of the research objectives. Thus in this chapter, it will be necessary to consider the research design and methodology. According to Coldwell and Herbst (2004: 35), the research design provides "…the glue that holds the research project together". It is also the strategy for the study and specifies the methods for the collection, measurement and analysis of the data.

4.2 Data Types Used

According to Lewis (2001), the type of data that a researcher needs to generate in order to provide evidence for the research objectives, determines the type of *data collection methods used*. Furthermore, the way that the data is collected ultimately shapes the evidence. (Coldwell and Herbst, 2004). This research adopted a correlation-based research approach because two or more variables were compared to each other in order to establish if there was a relationship between them (Hofstee, 2006). Hence this necessitated the use of a quantitative research approach utilizing data from various databank sources (AC Nielsen, First National Bank, Rand Merchant Bank, Bureau of Economic Research, the Johannesburg Stock Exchange, I-Net Bridge and the South African Reserve Bank). The extensive scope of

the data required for this research study, rendered the use of primary data collection methods impossible due to time constraints, and hence secondary data was obtained from reputable databank sources. According to Coldwell and Herbst (2004), a quantitative research approach tends to be more 'reliable' and 'generalisable' because it is based on the science of statistics and uses a scientific method to draw conclusions.

4.3 Population and Sample / Sampling Method

The population is defined in this research as all listed companies in SA that have recorded media spend figures between the periods 1993 to 2009. Furthermore, this research made use of the entire data-set (i.e. census sample segmented into four categories: print; radio; television and total media spend) as variables in each of the three research objectives.

In research objective 1, additional variables included the SA Consumer Confidence Index (CCI) figures (population) and the SA Business Confidence Index (BCI) figures (population). However, the samples for both the CCI and BCI variables were only extracted from the population data between the periods 1993 to 2009 in order to match the media spend data. Furthermore, the variables used in research objective 2, comprised of the Johannesburg Stock Exchange All-Share Index figures (i.e. the ALSI) (population), and the Johannesburg Stock Exchange All-Share Dividend Yield Index figures (i.e. the ALSI DY) (population) in SA. Once again, the sample extracted included only data between the periods 1993 to 2009 in order to match the media spend data. Finally, the variable used in research objective 3, comprised of the real SA GDP figures (population). The sample extracted from this population also included only the data from 1993 to 2009 to match the media spend data.

Thus for the purposes of this research, the census sample from 1993 to 2009 (which included two business cycles), relates reliably enough back to its finite population. This will reduce the amount of standard errors (sampling errors) and allow for meaningful conclusions

to be derived. In addition, the sizes of the samples allow appropriate inferences to be made towards a population finding.

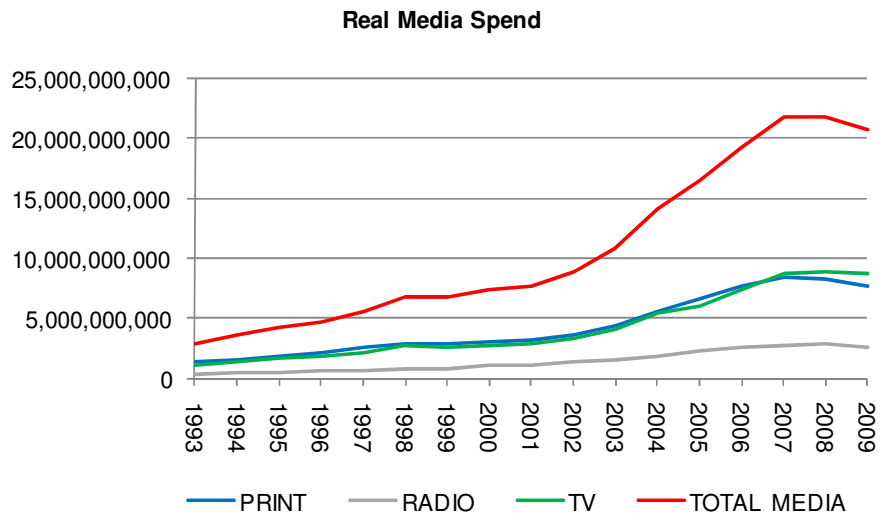
4.4 Data Description

The secondary data included in this quantitative research was provided on an annual basis and covered the periods: 1993 – 2009. The reason for this relatively short data-span was due to the fact that the media spend data of all listed companies in SA (which was compiled on an annual basis by AC Nielsen), only dates back as far as 1993.

4.4.1 Media Spend Data

The domestic media spend data obtained from AC Nielsen consisted of all four media categories measured in millions of Rands: print, radio, TV, and total media spend. In addition, the media spend series were inflation-adjusted by means of the consumer price inflation as obtained from Statistics South Africa (*Publication P0141*).

Figure 4-4-1: Media Spend Data

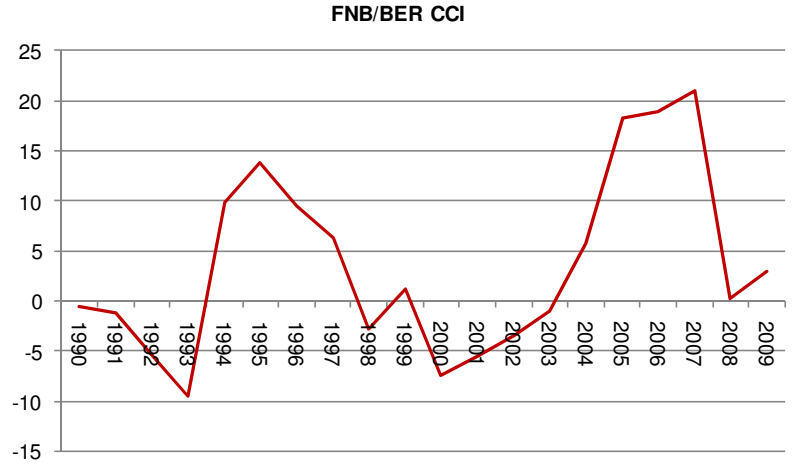


Data Source: AC Nielsen Media (2010)

4.4.2 Research Objective 1 Data

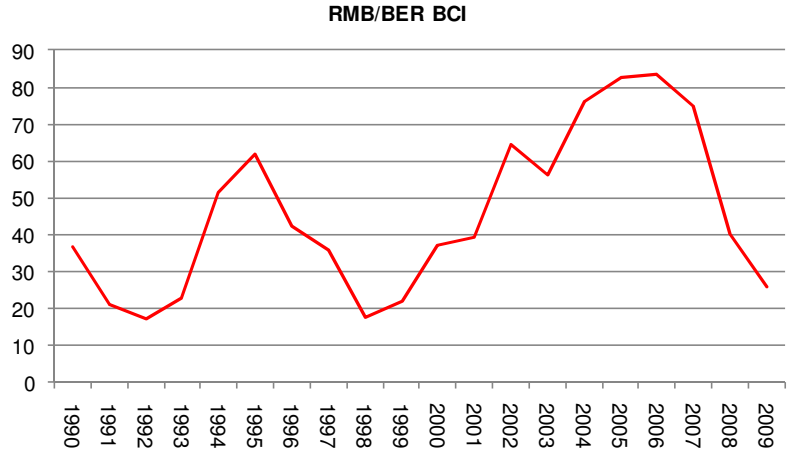
The data used to empirically explore research objective 1, consisted of the media spend data as identified above, as well as the Consumer Confidence Index as compiled by First National Bank (FNB CCI), and the Business Confidence Index as compiled by Rand Merchant Bank and the Bureau of Economic Research (RMB/BER BCI). Both FNB CCI and RMB/BER BCI series were obtained on a quarterly basis and thus they had to be averaged to annual data, so that this could be compared to annual media spend data.

Figure 4-4-2(a): Consumer Confidence Index



Data source: First National Bank / Bureau of Economic Research RSA (2010)

Figure 4-4-2(b): Business Confidence Index

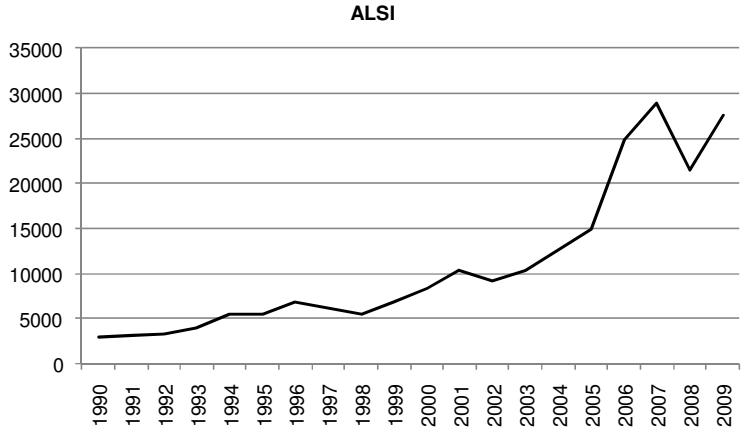


Data source: Rand Merchant Bank / Bureau of Economic Research RSA (2010)

4.4.3 Research Objective 2 Data

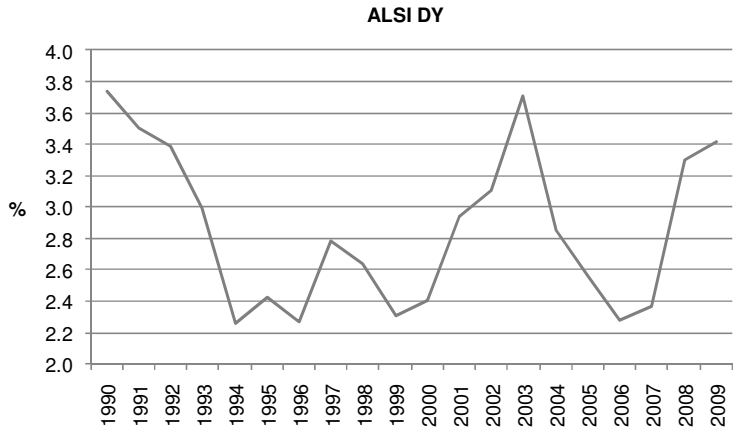
The data used to empirically investigate research objective 2 consisted of the annual media spend data, the Johannesburg Stock Exchange All-Share Index (JSE ALSI), and the Johannesburg Stock Exchange All-Share Dividend Yield Index (JSE ALSI DY). Both the ALSI (J203) and ALSI DY (J203 DY) data series obtained from I-Net Bridge were received on a monthly basis and were thus averaged to annual data before it could be compared to annual media spend data.

Figure 4-4-3(a): The All Share Index



Data Source: Johannesburg Stock Exchange / I-Net Bridge (2010)

Figure 4-4-3(b): The All Share Index Dividend Yield

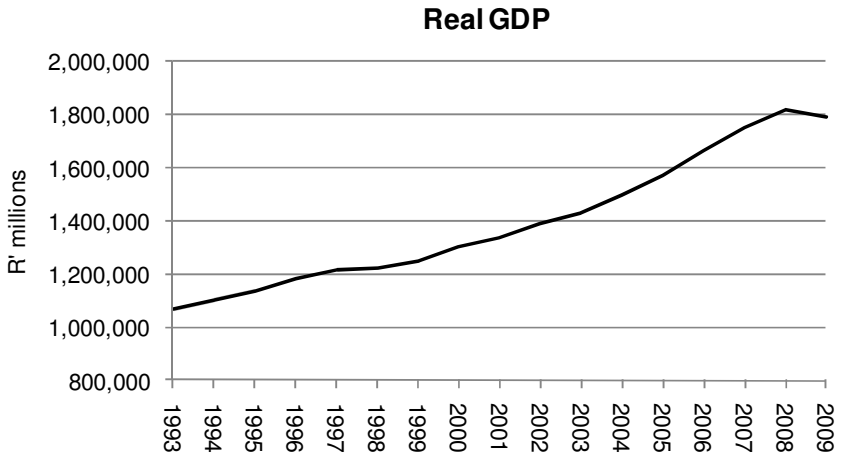


Data Source: Johannesburg Stock Exchange / I-Net Bridge (2010)

4.4.4 Research Objective 3 Data

The data used to empirically investigate research objective 3 consisted of the annual media spend data and the real seasonally adjusted gross domestic product (GDP) measured in millions of Rands, as compiled by the South African Reserve Bank (*SARB code KBP6006D*). This variable is also commonly considered to be a measure of the SA business cycle (Du Plessis, 2004).

Figure 4-4-4: Real Gross Domestic Product in South Africa



Data Source: South African Reserve Bank (2010)

4.5 Methodology: Data Analysis Techniques

A quantitative analysis was undertaken using the econometric software programme 'EViews 6', a widely used professional econometric programme produced by Quantitative Micro Software LLC (USA). In addition, this research applied inferential statistics in order to determine if there was a relationship between variables i.e. between media spend and the business cycle. The purpose of applying inferential statistics was to allow inferences to be made on the population from which the sample was drawn.

Inferential statistics was applied using a three-stage process. Firstly, the cyclical component of each series was extracted using a filtering technique. Secondly, full sample and cross correlation analysis (i.e. correlations run at plus or minus four years) were undertaken in order to establish if media spend and the business cycle were pro-cyclically (positively) or counter-cyclically (negatively) correlated. In addition, the cross-correlations were undertaken in order to determine if media spend lagged or led the business cycle. Thirdly, the phased correlations (i.e. correlations run on the up-phases and down-phases of the business cycle) were run in order to determine if the cyclical associations between media spend and the business cycle differed depending on whether the economy was in an upward (expansionary) or downward (contractionary) phase.

To ensure that a sufficiently statistically significant relationship existed, the correlations were based on a 95% significance level determined on the basis of the following equation: $1.96 \times 1/\sqrt{T}$ (where T represents the sample size [17 in this study]). Hence the correlations were deemed insignificant if they fell below 47.5%. This was particularly relevant to cross correlations (discussed in section 4.4.2) as t-statistics were not available. However, for the full sample correlations and phase correlations, t-statistics were used to determine significance to 1% (99% confidence), 5% (95% confidence) and 10% (90% confidence) levels.

Historically two approaches were used to empirically investigate the relationship between media spend and macro-economic variables: first-differencing and cointegration analysis. The first-differencing approach commonly explored the relationship between the growth rates of the media spend against the growth rates of the macro-economic variables (Ashley, Granger & Schmalensee, 1980; Jacobson and Nicosia, 1981; Didow and Franke, 1984). However, it soon became apparent that first-differencing techniques tended to emphasise short-term fluctuations in the macroeconomic series at the expense of the cyclical relationships (Baxter, 1994). Hence studies then focused their attention on the long-term association using cointegration techniques instead (Chowdhury, 1994; Jung and Seldon,

1995). Although these studies provided insight into the sensitivity of media spend to macroeconomic change, they also suffered from the severe limitation of being ill-suited to measuring the varying cyclical durations associated with business cycles. Hence first-differencing tends to over-emphasise the short-term business cycle fluctuations and cointegration tends to over-emphasis the long-term fluctuations (Deleersnyder *et al*., 2007).

Consequently more recent empirical studies of business cycle fluctuations have increasingly made use of filtering techniques which considered both short-term and long-term fluctuations. The three most commonly used filtering techniques include the Hodrick and Prescott (HP) (1997) filter, the Baxter and King (1999) filter, and the Christiano and Fitzgerald (2003) filter (Guay and St.-Amant, 2005). Econometric studies have shown that the Hodrick-Prescott (1997) filter is most suited to isolating long-term cycles from annual data while the Baxter-King (1999) and Christiano-Fitzgerald (2003) filters are most suited to extracting shorter-duration cycles from quarterly or monthly data (Christiano and Fitzgerald, 2003). Previous studies that have explored the cyclical relationship between media spend and the business cycle using filtering techniques have either made use of the Hodrick-Prescott (1997) filtering technique (Lamey, Deleersnyder, Dekimpe & Steenkamp, 2007; Deleersnyder *et al*., 2007) or the Baxter-King filtering technique (Deleersnyder *et al*., 2007; Gijsenberg *et al*., 2009) depending on the availability of suitable data. In this research, the Hodrick and Prescott (1997) filtering approach was adopted in order to extract the cyclical components of all the annual data in the data-set. Thereafter, full sample, cross correlation (i.e. correlations run at plus or minus four years) and phase correlation analysis were undertaken in order to establish if media spend and the business cycle were pro-cyclically (positively) or counter-cyclically (negatively) correlated. This is discussed below.

4.5.1 Full Sample Correlation Analysis

Correlation analysis measures the relationship between two variables but does not imply a causal inference (Coldwell and Herbst, 2004). Hence, for the purposes of this research, once the cyclical components of the annual data were extracted using the Hodrick-Prescott filtering

technique, full sample correlation analyses were undertaken in *'EViews'* in order to determine whether the relationship between media spend and the business cycle was pro-cyclical (i.e. positively correlated), counter-cyclical (i.e. negatively correlated), or acyclical (i.e. no significant correlation).

4.5.2 Cross Correlation Analysis

Full sample correlation analysis determined whether the cyclical relationships between variables were positively or negatively correlated. However, full sample correlation analysis did not indicate whether one variable was found to lag or lead another variable. This finding would potentially provide insight into a media manager's proactive or reactive position with regard to their media spend allocations in relation to movements in the business cycle. Hence in order to determine whether media spend lagged or led the business cycle, cross correlation analysis (which determines where the highest correlation occurs within the time-frame) was adopted. The four-year leads and lags used in the research were selected on the basis of half of a typical eight-year business cycle.

The approach used to isolate the significant leading or lagging coefficients was made on the basis of Alper (2002) which consists of the following three steps: First, the four-year leading and lagging correlation analysis between media spend and each direct and indirect business cycle variable was undertaken. Second, the largest correlation coefficient was located and checked for significance. As previously stated, if the correlation coefficient was found to be below 47.5%, the relationship was deemed acyclical. However, if the correlation coefficient was found to be above 47.5%, the relationship was deemed to be significant and hence could be pro-cyclical or counter-cyclical (depending on the positive or negative sign). Third, the results were checked to see if there was another significant correlation coefficient with the opposite sign. If such a correlation coefficient was found to be present, then the relationship was deemed to be acyclical once again as the positive and negative coefficients would cancel out the cyclical relationship. However, if no such correlation coefficient was

found to be present, then the media spend variable would be found to be either leading or lagging the business cycle depending on the location of the significant correlation coefficient.

Thus for example, if the highest correlation coefficient between media-spend and real GDP was found to be at a lead-lag greater than 0, then media spend was deemed to be leading real GDP. However, if the highest correlation coefficient between media-spend and real GDP was found to be at a lead-lag below 0, then media spend was found to be lagging real GDP. In both cases this lag or lead would only apply if there was no significant correlation coefficient with the opposite sign (in which case the relationship would be deemed acyclical because the cyclical relationship would then be cancelled out).

4.5.3 Phase Correlations

As discussed, full sample correlation analysis determines the cyclical relationship between variables while cross correlation analysis determines whether variables lag or lead the business cycle. However, these approaches do not indicate whether the cyclical relationships between variables differ during the up-phases and down-phases of the business cycle. Thus phase correlations were undertaken as it allowed the full sample correlations to be run separately on the up-phases and down-phases. In order to perform this part of the analysis, the business cycle upward and downward phases (in years) were isolated based on the official turning points for the SA business cycle as listed in Table 4-5-3 below (SA Reserve Bank's Quarterly Bulletin: *Table S-153:*)

Table 4-5-3: Official Turning Points of the South African Economy

Upward phase	Downward phase
1993 - 1996	1996 - 1999
1999 - 2007	2007 - 2009

Data Source: South African Reserve Bank (2009)

As can be seen from Table 4-5-3 the data that comprised of the up-phase correlations consisted of the years 1993 to 1996 and 1999 to 2007 while the data that comprised of the down-phase correlations consisted of the years 1996 to 1999 and 2007 to 2009. These separate data-sets allowed the researcher to determine whether media managers changed their media spend responses during the up-phases and down-phases of the business cycle in a consistent manner.

4.6 Delimitations and Limitations

The most significant delimitations and limitations in this research were found to be associated with a lack of available data, particularly with regard to the annual media spend data. In the case of the annual media spend data, AC Nielsen did not compile media spend data on durations shorter than on an annual basis and in addition, have only been compiling the data since 1993. This meant that all of the data series included in this research had to be converted from shorter frequencies to annual data, which implied a natural smoothing effect as a result. Furthermore, it was not possible to obtain total firm revenue data in Rands of SA companies and thus the JSE ALSI and JSE ALSI DY figures were used as proxies for company performance. However, this naturally excluded unlisted and Alt-X listed companies. Thus the study was delimited to the following areas: only listed company data from 1993 – 2009 were considered and only companies that had recorded a media spend component in their audited financial statements from 1993 – 2009 as recorded by AC Nielsen, were considered.

In addition, the following four limitations were noted in the research (in no particular order of importance). First, it was assumed that a lag or leading relationship of up to 4 years was sufficient to capture a media manager's proactive or reactive strategic stance. Second, this study did not adopt a causal test such as the Granger causality method due to a lack of sufficient data. Instead the associated relationships between media spend and the business cycle was assessed using correlation analysis. Thus no causality could be inferred. Third, it was assumed that the use of the share index and the dividend yield index was a reasonable

measure of a listed firm's overall performance. Finally, this study made use of SA data exclusively and thus it was not clear whether the results could be generalized to other countries.

4.7 Ethical issues / Confidentiality / Bias

This quantitative research made use of secondary data that was freely available from various reputable data sources and thus there were no notable ethical issues or confidentiality issues associated. Furthermore, the use of secondary data from reliable data sources eliminated the risk of respondent bias, interviewer bias and interview setting bias. The use of more than one data-bank source further eliminated any potential data source bias.

4.8 Measuring Instruments and their Validity, Reliability, Generalisability

4.8.1 Measuring Instrument

According to Hofstee (2006: 115), a research instrument is "anything that you use to get the data that you're going to analyze". In this study, the research practitioner was the measuring instrument, since the researcher sourced the secondary data from various databank warehouses and then analysed this data using *EViews 6* econometric software. *EViews 6* provides sophisticated data analysis, regression, and forecasting tools on Windows based computers and is widely used to carry out statistical analysis on the relationship among variables.

The data series used in this study were obtained from the databank warehouses responsible for the collection, validation and publication of this data in SA. These databank sources included AC Nielsen (for the SA media spend data), First National Bank and the Bureau of Economic Research (for the Consumer Confidence Index data), Rand Merchant Bank and the Bureau of Economic Research (for the Business Confidence index data), the Johannesburg Stock Exchange / I-Net Bridge (for the All Share index and All Share Dividend

Yield index data) and the South African Reserve Bank (for the Real Gross Domestic Product data in SA and the Official Turning Points of the South African Economy data).

4.8.2 Validity

As discussed, the secondary data used to undertake the empirical analysis was sourced from reputable data-sources (AC Nielsen, First National Bank, Rand Merchant Bank, Bureau of Economic Research, the Johannesburg Stock Exchange, I-Net Bridge and the South African Reserve Bank). In addition, the data analysis was undertaken using 'EViews 6' econometric software in order to ensure data reliability. However, according to Charlesworth, Lewis, Martin & Taylor (2003), data reliability is nothing without data validity as data validity conveys the extent to which the research findings accurately represent what is really happening in the situation.

Although all four data-sets in the research were only available on an annual rather than on a monthly basis, this did not have a significant impact on the econometric approaches proposed because the research addressed the issue of validity through the process of triangulation. Easterby-Smith, Thorpe & Lowe (1991) identified two forms of triangulation adopted in this research. The first was data triangulation which was achieved by incorporating data from different data sources and then including variables that were both direct and indirect measures of the business cycle. In addition, methodological triangulation was achieved using three variants of correlation analysis. These included full sample correlations (i.e. correlations at the same time), cross correlations (i.e. correlations run at plus or minus four years), and phase correlations (i.e. correlations run on the up-phases and down-phases of the business cycle).

In addition, when considering internal and external validity, external validity was found to be more relevant to the study than internal validity. The reason for this was that the study made use of secondary data which required the application of the proximal similarity model as an

outcome of the empirical investigation. This model allowed the results of a media manager's behaviour in relation to the business cycle to be generalized to other periods. Furthermore, in this research, the secondary data appeared to measure what it purported to measure with no omissions. Hence the data was found to conform to both *face* and *content* validity (Charlesworth *et al*., 2001). In addition, the study made use of standard econometric techniques for the measurement of correlating relationships and thus the research satisfied the requirements of *construct* validity. Furthermore, the type of *criterion-related* validity that this research supported was *convergent* validity (i.e. where one instrument measuring a particular construct was found to be highly correlated with another instrument known to measure the same construct). The *convergent* validity was achieved by measuring the correlations between direct and indirect measures of the business cycle and media spend (Charlesworth *et al*., 2001).

4.8.3 Reliability

Lewis (2001) defines 'reliability' as the accurate measurement and recording of the secondary data so that if another person repeated the same exercise they would obtain the same results. In this research, the 'test-retest' reliability technique (Coldwell and Herbst, 2004) was used to ensure data reliability. This was done by re-running the econometric analysis more than once in order to ensure that the output was consistent.

4.8.4 Generalisability

This research could only be generalised within a SA context as all the secondary data was provided on a macro scale. In addition, the research findings were found to hold external validity (i.e. the capacity to generalise findings to other similar situations and contexts) through the application of the proximal similarity model (see section 4.7.1). This has therefore increased the scope of the study to generalise to all listed companies in SA.

4.9 Summary

In chapter four, the research variables and methodology was discussed. The variables included secondary data such as annual media spend, CCI figures, BCI figures, ALSI figures, ALSI-DY figures and the SA-GDP. Once the variables for this quantitative correlation-based research were identified, the methodology was detailed: first, the HP filtering technique was used to extract the cyclical components of all the variables. Next, full sample correlation analysis was undertaken in order to determine if the relationship was positive (pro-cyclical) or negative (counter-cyclical). This was followed by cross correlation analysis in order to determine if one variable led or lagged the other and finally, phase-correlations were undertaken in order to determine if the cyclical relationship between the variables differed during the up-phases and down-phases of the business cycle. The chapter concluded with a discussion on data integrity issues such as the limitations, delimitations, ethical issues, confidentiality, validity, reliability, bias and generalisability of the study. It was found that the data was sufficiently robust in order to draw meaningful results. These findings are discussed in chapter five.

Chapter 5: Results and Discussion

5.1 Introduction

This study explored empirically the relationship between media spend and the business cycle on three levels. First, the relationship between media spend and CCI and BCI was assessed. As previously discussed both CCI and BCI has a direct relationship with the business cycle and are therefore regarded as direct business cycle variables. Second, the relationship between media spend and the ALSI and ALSI-DY was assessed. As previously discussed, the ALSI and ALSI-DY also has a direct relationship with the business cycle and are therefore regarded as direct business cycle variables. Lastly, the relationship between media spend and the business cycle (as measured by SA's real GDP), was assessed. As previously discussed, media spend has an indirect relationship with the business cycle and is therefore regarded as an indirect business cycle variable. Thus the research objectives for this study was firstly, to determine the relationship between media spend and consumer/business confidence; secondly, to determine the relationship between media spend and company performance; and lastly, to determine the relationship between media spend and the business cycle. Three different correlations were then run for each of the research objectives. These included: full sample correlations, cross correlations and phase correlations. The findings of this study are presented and discussed below.

5.2 The relationship between Media Spend and Consumer / Business Confidence

The relationship between SA Media Spend and SA Consumer (CCI) / Business Confidence (BCI) was analyzed by assessing whether SA media spend moved in the same direction as the CCI and BCI (i.e. pro-cyclical relationship), whether it moved in the opposite direction as the CCI and BCI (i.e. counter-cyclical relationship) or whether there was no significant movement (i.e. acyclical relationship). This was done by applying a full sample correlation analysis, presented in Table 5-2-1 below.

Table 5-2-1: Full Sample Correlation Analysis

	Print	Radio	TV	Total_Media
CCI	0.646	0.496	0.518	0.614
	(3.282) ***	(2.215) **	(2.346) **	(3.014) ***
BCI	0.456	0.560	0.212	0.411
	(1.984) *	(2.621) ***	(0.839)	(1.748)

t-statistics are in parentheses.
***, ** and * represents significance at the 1%, 5% and 10% levels respectively.

From the analysis it appears that media spend generally moves in the same direction as the CCI (i.e. positive / pro-cyclical relationship). This implies that a decline in consumer confidence will result in a decline in media spend and an increase in consumer confidence will result in an increase in media spend. However, the relationship between media spend and business confidence (BCI) produced a mixed response. As indicated in Table 5-2, there is no relationship between business confidence and TV-spend as well as business confidence and Total Media spend (i.e. acyclical). However, a weak pro-cyclical relationship is observed between business confidence and Print-spend and a strong pro-cyclical relationship observed between business confidence and Radio-spend. This suggests that media managers are more strongly focused on consumer sentiment levels (displayed by a strong pro-cyclical correlation) than business sentiment (displayed by a mixed correlation), when making their media spend decisions.

In order to consider whether media spend decisions lag or lead consumer and business confidence levels, cross correlation analysis was undertaken. The results of this analysis are presented in Table 5-2-2 below.

Table 5-2-2: Cross Correlation Analysis for Objective 1

Lag/Lead	-4	-3	-2	-1	0	1	2	3	4
HP Correlation with CCI:									
Print	-0.394	-0.304	-0.111	0.270	0.647	**0.716**	0.247	-0.072	-0.387
Radio	-0.234	-0.101	0.154	0.336	0.496	**0.621**	0.007	-0.185	-0.444
TV	-0.201	0.169	0.445	**0.674**	0.518	0.174	-0.148	-0.283	-0.450
Total Media	-0.344	-0.012	0.284	**0.699**	0.614	0.280	-0.071	-0.289	-0.411
HP Correlation with BCI:									
Print	0.118	0.345	0.484	0.607	0.456	-0.115	-0.459	-0.549	-0.440
Radio	-0.035	0.186	0.336	**0.627**	0.560	0.042	-0.133	-0.427	-0.444
TV	0.306	0.525	0.577	0.476	0.212	-0.281	-0.522	-0.518	-0.456
Total Media	0.170	0.402	0.506	0.584	0.411	-0.126	-0.438	-0.553	-0.486

The highest degree of co-movement of each variable with CCI and BCI is printed in bold if the correlation coefficient is significant at the 5% level.

As can be seen from Table 5-2-1, Print and Radio-spend movements occur before changes in the consumer confidence levels (i.e. lead correlation). However, TV and Total Media spend movements occur after changes in the consumer confidence index (i.e. lag correlation). These results suggest that Print and Radio-spend decisions are made proactively while TV-spend are made reactively. However, even though there is a mixed response, Total Media spend is still found to be reactive (i.e. lag correlation). This suggests that the bulk of media spend decisions that take consumer confidence into account are allocated to TV.

With regard to business confidence levels, media spend movements appear to have a different relationship. The analysis reveals that no lag or lead correlations are evident for Print, TV and Total Media spend. However, Radio-spend appear to lag business confidence. Thus the finding that Radio-spend leads consumer confidence but lags business confidence, suggests that radio spend decisions consider consumer sentiment more than business sentiment.

In order to consider whether media spend relationships with the CCI and BCI are consistent over the up and down phases of the business cycle, phase correlations were undertaken. The results of this analysis are presented in Table 5-2-3 below.

Table 5-2-3: Phase-Correlation Analysis for Objective 1

Business Cycle Phase	Correlation with CCI			
	Print	Radio	TV	Total_Media
Up phase	0.677 (2.762) **	0.603 (2.268) **	0.589 (2.187) *	0.658 (2.624) **
Down phase	0.638 (1.657)	0.380 (0.821)	0.503 (1.164)	0.577 (1.414)

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5%, and 10% levels respectively.

Business Cycle Phase	Correlation with BCI			
	Print	Radio	TV	Total_Media
Up phase	0.506 (1.758)	0.595 (2.219) *	0.372 (1.201)	0.483 (1.656)
Down phase	0.774 (2.444) *	0.653 (1.724)	0.653 (1.724)	0.743 (2.219) *

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5%, and 10% levels respectively.

As can be seen from Table 5-2-3, the phase correlations between media spend and the CCI show that the variables generally move together during the up-phases (i.e. positive / pro-cyclical relationship). However no significant correlations are observed during the down-phases of the business cycle (i.e. acyclical relationship). This suggests that media manager's increase their media spend in relation to consumer confidence during the up-phases but keep media spend level during the down-phases of the business cycle. Hence as consumer confidence increases, media spend increases accordingly but as consumer confidence declines, media spend is kept level.

The phase correlations between media spend and the BCI show that TV-spend has no relationship (acyclical) to business confidence during the up and down-phases of the BCI. In addition, Radio-spend is kept level in the down-phase while Print-spend declines during the down-phase of the BCI. Furthermore, Total Media spend remains level during the up-phase of the BCI. However, even though there is a mixed response, Total Media spend declines during the down-phase of the BCI (weakly pro-cyclical). This suggests that the decline in Total Media spend in relation to BCI arises from the decline in Print spend.

5.3 The relationship between Media Spend and Company Performance

The results for the full sample correlation analysis between media spend and company performance is displayed in Table 5-3-1 below. The All Share Index (ALSI) was used as a proxy for company performance. In addition, the All Share Dividend Yield Index (ALSI-DY) which as proven by published literature displays an opposite relationship to the ALSI, was used as an inverse proxy for company performance (i.e. both variables ALSI and ALSI-DY will move in the opposite direction to each other) [refer to Addendum B, Figure B-1].

Table 5-3-1: Full Sample Correlation Analysis for Objective 2

	Print	Radio	TV	Total_Media
ALSI	0.558	0.301	0.579	0.550
	(2.603) **	(1.222)	(2.747) **	(2.552) **
ALSI DY	-0.619	-0.433	-0.520	-0.590
	(3.052) ***	(1.859) *	(2.358) **	(2.833) **

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5% and 10% levels respectively.

From the analysis, it appears that Print and TV spend tend to move in the same direction as the ALSI (i.e. pro-cyclical) while Radio spend has no relationship (i.e. acyclical). In addition, Total Media spend has a positive (pro-cyclical) relationship with the ALSI. This suggests that

as company performance increases (resulting in greater profits), media spend allocations will tend to increase. In addition, the ALSI-DY was found to move in the opposite direction to the ALSI (see Appendix B, Figure B-1) and thus as anticipated, the relationship between the media-spend variables and the ALSI-DY was found to be significantly counter-cyclical for Print, TV and Total Media spend. Hence the previous finding that radio and the ALSI have no relationship is supported by the correlations between Radio and the ALSI-DY which found only a weak counter-cyclical relationship to be present.

Cross correlation analysis was undertaken next in order to determine whether media spend decisions lagged or led the ALSI and the ALSI-DY. The results of this analysis are presented in table 5-3-2 below.

Table 5-3-2: Cross Correlation Analysis for Objective 2

Lag/Lead	-4	-3	-2	-1	0	1	2	3	4
HP Correlation with ALSI:									
Print	-0.107	-0.408	-0.387	0.400	**0.558**	0.437	0.327	0.106	-0.194
Radio	-0.128	-0.536	-0.380	0.454	0.301	0.484	0.350	0.127	0.004
TV	-0.146	-0.208	-0.074	0.519	**0.579**	0.306	0.328	0.173	-0.308
Total Media	-0.125	-0.372	-0.298	0.445	**0.550**	0.442	0.374	0.122	-0.226
HP Correlation with ALSI DY:									
Print	0.507	0.498	0.176	-0.369	-0.619	-0.391	-0.103	0.144	0.301
Radio	0.389	**0.488**	0.261	-0.348	-0.433	-0.251	-0.169	0.097	0.106
TV	0.411	0.266	-0.029	-0.324	**-0.520**	-0.344	-0.100	0.119	0.353
Total Media	0.478	0.443	0.145	-0.358	-0.590	-0.393	-0.119	0.148	0.316

The highest degree of co-movement of each variable is printed in bold if the correlation coefficient is significant at the 5% level.

As seen in Table 5-3-2, media spend does not demonstrate any lead or lag relationship with the ALSI or the ALSI-DY (with the exception of Radio spend which is found to lag the ALSI-DY). However, the full sample correlation has shown that the relationship between the ALSI and the ALSI-DY are only weakly significant and thus the cross correlation result is not sufficiently robust enough to draw a final conclusion.

In the next part of the analysis, phase correlations were undertaken in order to consider whether media spend relationships were consistent over the up and down phases of the business cycle. The results of this analysis are presented in Table 5-3-3 below.

Table 5-3-3: Phase-Correlation Analysis for Objective 2

Business Cycle Phase	Correlation with ALSI			
	Print	Radio	TV	Total_Media
Up phase	0.594	0.441	0.605	0.582
	(2.216) *	(1.474)	(2.282) **	(2.148) *
Down phase	0.638	0.380	0.503	0.577
	(1.657)	(0.821)	(1.164)	(1.414)

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5%, and 10% levels respectively.

Business Cycle Phase	Correlation with ALSI DY			
	Print	Radio	TV	Total_Media
Up phase	-0.593	-0.411	-0.544	-0.572
	2.207 *	1.354	1.946 *	2.090 *
Down phase	-0.756	-0.510	-0.684	-0.720
	2.308 *	1.187	1.877	2.077

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5%, and 10% levels respectively.

The phase correlation analysis show that Print, TV and Total spend appears to move in the same (ALSI) or opposite (ALSI-DY) direction during the up-phase of the ALSI and ALSI-DY cycle (i.e. pro-cyclical for ALSI and counter-cyclical for ALSI-DY). However, in the down-phase of the ALSI and ALSI-DY cycle, there is no relationship between the variables (acyclical), with the exception of Print spend which moves in the opposite direction to the ALSI-DY (counter-cyclical). In addition, Radio spend is found to have no relationship with the ALSI or the ALSI-DY (acyclical). Furthermore, the results of the relationship between the media components (excluding radio) and the ALSI imply that rising share prices (improved

performance) leads to increased media expenditure during the up-phase, and a level expenditure during the down-phase of the ALSI cycle.

5.4 The Relationship between Media Spend and the Business Cycle

The results for the full sample correlation analysis between media spend and the business cycle is displayed in Table 5-4-1 below. The Business Cycle is measured by the SA real GDP.

Table 5-4-1: Full Sample Correlation Analysis for Objective 3

	Print	Radio	TV	Total_Media
Real GDP	0.775	0.782	0.803	0.808
	(4.750) ***	(4.854) ***	(5.226) ***	(5.319) ***

t-statistics are in parentheses.
*** represents significance at the 1% level.

The results of the full sample correlation analysis reveal that the relationship between media-spend and the real SA GDP, appear to move in the same direction (i.e. pro-cyclical). This implies that media managers spend more during the up-phases of the business cycle but possibly cut their media spend during the down-phase of the business cycle. This will be examined further in the phase correlations below. Furthermore, the correlations are all highly significant (i.e. at a 1% significance / 99% confidence level). This suggests that the relationship between the media components and the real SA GDP is the most robust of any of the relationships measured.

In the next part of the analysis, cross correlation analysis was undertaken in order to consider whether media spend decisions lagged or led real GDP. The results of this analysis are presented in Table 5-4-1 below.

Table 5-4-2: Cross Correlation Analysis for Objective 3

Lag/Lead	-4	-3	-2	-1	0	1	2	3	4
HP Correlation with GDP:									
Print	-0.274	-0.250	-0.128	0.156	**0.775**	0.732	0.401	0.099	-0.182
Radio	-0.344	-0.326	-0.276	0.032	**0.782**	0.573	0.509	0.283	-0.021
TV	-0.225	-0.076	0.173	0.453	**0.803**	0.670	0.288	0.055	-0.199
Total Media	-0.277	-0.213	-0.056	0.243	**0.808**	0.733	0.420	0.137	-0.185

The highest degree of co-movement of each variable with real GDP is printed in bold if the correlation coefficient is significant at the 5% level.

The cross correlation analysis show that there is no lag or lead relationship between media spend and real GDP. This suggests two possible implications: first, if there is a lag or lead relationship between the media components and real GDP, then it occurs at time-spans shorter than a year and thus it is not captured by the annual data. Second, there is no lead or lag because the media components change at the same time as the business cycle changes. In this case it would be expected that there would be no significant relationship between the media spend variables and the business cycle (acyclical) as there would be no consistent behaviour. However, since the full sample correlations were found to be highly pro-cyclical for all the media components, this suggests that media managers do adapt their media spend allocations according to the changes in the business cycle. Hence, there is likely to be a passage of time before the turn of the business cycle becomes apparent to media managers and thus the second implication is unlikely. In order to explore this further, phase correlations were undertaken as depicted in table 5-4-3 below.

Table 5-4-3: Phase-Correlation Analysis for Objective 3

Business Cycle Phase	Correlation with Real_GDP			
	Print	Radio	TV	Total_Media
Up phase	0.805 (4.068) ***	0.798 (3.972) ***	0.817 (4.251) ***	0.832 (4.495) ***
Down phase	0.773 (2.436) *	0.966 (7.456) ***	0.733 (2.152) *	0.813 (2.795) **

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5% and 10% levels respectively.

The phase correlations confirm the results of the full sample correlations that all media spend components move in the same direction as the business cycle during the up-phases (i.e. highly significantly pro-cyclical), which accords with Bellizzi *et al.* (1983) and Deleersnyder's *et al.* (2007) international studies. However the results as set out in Table 5-4-3 show that this pattern is not maintained during the down-phases of the business cycle with the exception of Radio spend, which is strongly pro-cyclical during both the up and down-phases. For Print and TV spend, both components appear to move in the same direction as the business cycle in the down-phase (i.e. pro-cyclical) but are only weakly significant at the 10% significance level. This finding is in contrast to Deleersnyder *et al.* (2007) who report that print media was more significantly cyclical than TV, while radio was less significantly cyclical. This suggests that SA's media spend is driven more by Radio than by Print or TV, however internationally, this dynamic is reversed.

Thus the phase correlations in this study suggest a possible levelling off of media spend rather than significant cuts during the down-phase. Consequently, total media spend moves with the business cycle during the down-phase (i.e. significantly pro-cyclical at a 5% significance level), but is not as significant as during the up-phase (1% significance level). Hence during the boom (expansionary) phase of the business cycle, media spend is increased, however during the recessionary (contractionary) phase of the business cycle,

Radio spend is cut more aggressively than Print or TV spend. Consequently, Total Media spend during the down-phase is less significant than during the up-phase.

Thus contrary to the empirical evidence of Deleersnyder *et al.* (2007) and the theoretical arguments of Hofstede (2001) and Beinhocker (2007) (that national cultures like SA with a short-term orientation and low trust values will result in decisions being made in the same direction as the business cycle in both the up and down-phases in a reactive fashion), SA media managers appear to react as expected during the up-phase by increasing their media spend, but maintains a level spend during the down-phase.

5.5 Summary

Full correlation analysis was undertaken in order to determine whether each of the variables in the objectives moved in the same direction (i.e. positive / pro-cyclical relationship), the opposite direction (i.e. negative / counter-cyclical relationship) or was found to be insignificant (i.e. neutral / acyclical relationship). In addition, cross correlation analysis was undertaken in order to determine whether one variable was found to lag or lead another. This finding could possibly provide insight into whether a media manager is proactive or reactive with regard to their media spend allocations. Finally, phase correlations were undertaken in order to determine whether media spend was consistent over both the up and down phases when compared to each business cycle variable (i.e. CCI, BCI, ALSI, ALSI-DY, real GDP). The conclusions for each result will be discussed in chapter six.

Chapter 6: Conclusion and Recommendations

6.1 Introduction

In chapter five, it was found that the full correlation, cross correlation and phase correlation analysis for all the variables produced mixed results. However, in general, it appeared that SA media managers made their decisions shorter than a year and thus it was difficult to determine whether these decisions lag or lead the business cycle. Furthermore, although the media spend relationships have been shown to be generally positive (i.e. pro-cyclical) during the up-phases of the business cycle, it was found to be less significantly positive / pro-cyclical during the down-phases. Thus in general, SA media managers appear to increase their media spend during up-phases but maintain a level media spend during the down-phase. The concluding remarks for this research follow below.

6.2 Conclusion

This research attempted to answer the following problem statement:

> *Media spend has a positive (pro-cyclical) relationship with both direct and indirect business cycle variables.*

The following concluding remarks for the full correlation, cross correlation and phase correlation analysis, as tabulated in Tables 6-2-1, 6-2-2 and 6-2-3 can be derived:

Table 6-2-1: Conclusion - Full Correlation Analysis

Media Spend	Objective I		Objective II		Objective III
Variable	CCI	BCI	ALSI	ALSI-DY	Real GDP
Print	P ***	P *	P **	C ***	P ***
Radio	P **	P ***	A	C *	P ***
TV	P **	A	P **	C **	P ***
Total Media	P ***	A	P **	C **	P ***

***, **, and * represent significance at the 1%, 5%, and 10% levels respectively.

The empirical analysis undertaken in this study has found that media spend (as an indirect business cycle variable) has a consistently positive relationship with Consumer Confidence (as a direct business cycle variable) and SA Real GDP / the business cycle. However, media spend has a mixed relationship with Business Confidence and the All-Share Index (direct business cycle variables).

In the case of the relationship between media spend and Business Confidence, Print and Radio both have a positive relationship (pro-cyclical), while TV and Total Media do not have a significant relationship (acyclical). In addition, with regard to the All-Share Index (direct business cycle variable), Radio spend is not significant (acyclical). It thus appears that media spend has a positive relationship with Consumer Confidence and SA Real GDP / the business cycle, but an inconsistent relationship (acyclical) with Business Confidence and the All Share Index.

Table 6-2-2: Conclusion - Cross Correlation Analysis

Media Spend	Objective I		Objective II		Objective III
Variable	CCI	BCI	ALSI	ALSI-DY	Real GDP
Print	Lead	None	None	None	None
Radio	Lead	Lag	None	Lag	None
TV	Lag	None	None	None	None
Total Media	Lag	None	None	None	None

Although most of the lead and lag relationships were found to be insignificant, Print and Radio spend were found to lead Consumer Confidence while TV and Total Media spend were found to lag Consumer Confidence. Hence when it comes to consumers, media managers appear to be more reactive.

Table 6-2-3: Conclusion - Phase Correlation Analysis

Media Spend Variable	Objective I				Objective II				Objective III	
	CCI		BCI		ALSI		ALSI-DY		Real GDP	
	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down
Print	P **	A	A	P *	P *	A	C *	C *	P ***	P *
Radio	P **	A	P *	A	A	A	A	A	P ***	P***
TV	P *	A	A	A	P **	A	C *	A	P ***	P *
Total Media	P **	A	A	P *	P *	A	C *	A	P ***	P **

***, **, and * represent significance at the 1%, 5%, and 10% levels respectively.

The results of the phase-correlations show that in general, the media spend variables move in the same direction as the business cycle variables during up-phases. However, during down-phases, the media spend variables are not significant in relation to Consumer Confidence and the All-Share Index. In addition, the finding that the relationship between Radio, TV spend and Business Confidence is insignificant during down-phases (acyclical) supports the finding that media managers keep Print and TV spend level during the down-phases.

As anticipated, (refer Addendum B Figure B-1), the All-Share Index Dividend Yield moves in the opposite direction to the All-Share Index (direct business cycle variable) and hence there is a negative (counter-cyclical) relationship between Print, TV and Total media spend and the All-Share Index Dividend Yield. Radio spend is found to have no relationship with the All-Share Index and the All-Share Index Dividend Yield, which suggests that Radio spend decisions are not based on company performance. Furthermore, in the down-phase of the All-Share Index and All-Share Index Dividend Yield cycle, there is no relationship between

the variables with the exception of Print spend, which moves in the opposite direction to the All-Share Index Dividend Yield (counter-cyclical). These results imply that as a company's financial performance improves, media expenditure increases but when financial performance declines media expenditure is kept level.

The relationship between the media-spend variables (indirect business cycle variable) and SA Real GDP / the business cycle, are all highly significant and move in the same direction (positive / pro-cyclical) during the up-phase of the business cycle. However during the down-phase, the relationships show a weakening of significance. This implies that as the business cycle moves into the up-phase, media spend is increased but as the business cycle moves into the down-phase, media spend is kept level.

Thus during the up-phases of the business cycle, media spend (indirect business cycle variable) has a positive relationship (pro-cyclical) with Consumer Confidence, Business Confidence, the All-Share Index, and SA Real GDP / the business cycle (direct business cycle variables). However in general, media spend tends to level off in relation to the direct and indirect business cycle variables during the down-phase.

Hence in the final conclusion, this study has found that as posited in the research statement, *'media spend has a positive (pro-cyclical) relationship with both direct and indirect business cycle variables'.* However this is only true during the up-phases. These results therefore suggest that the relationship between the media spend and business cycle variables demonstrate a more complex interaction than originally posited in the problem statement. The suggestions for future research are discussed below.

6.3 Recommendations

As previously discussed, the lead / lag correlations as measured by the cross correlation analysis was found to be insignificant in some instances. This was possibly due to a lack of monthly or quarterly data. Thus the following recommendations can be derived:

- Further research could be conducted if data can be obtained on a monthly as opposed to a quarterly basis. This will allow more detailed inferences to be made on the lead / lag correlations.
- In addition, the research assumed that a lag or leading relationship was a realistic portrayal of a manager's proactive or reactive strategic focus with regard to their media-spend. However, further qualitative analysis could possibly provide further insight into a media manager's proactive or reactive media spend behaviour.

6.4 Summary

This study has found that as posited in the research statement, media spend is positive (pro-cyclical) in relation to both the direct and indirect business cycle variables. However, this pattern where media spend is increased, is only maintained during the up-phases of the business cycle but tends to level off during the down-phases. The implications arising from this result is that proactive media managers could possibly benefit by maintaining a level media spend during the up-phases of the business cycle, while shifting their focus towards media effectiveness. In this way, these managers could win market share by maximizing cost effective media efficiency. In addition, proactive media managers could also win market share during a downturn by increasing media spend and thus benefitting from greater media exposure or brand awareness. Hence in summary, South African media managers could benefit by adopting strategies that involve leaning against the wind.

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Appendix A: Hodrick-Prescott Filter - Graphical Results

Figure A-1: Media Spend Cycles

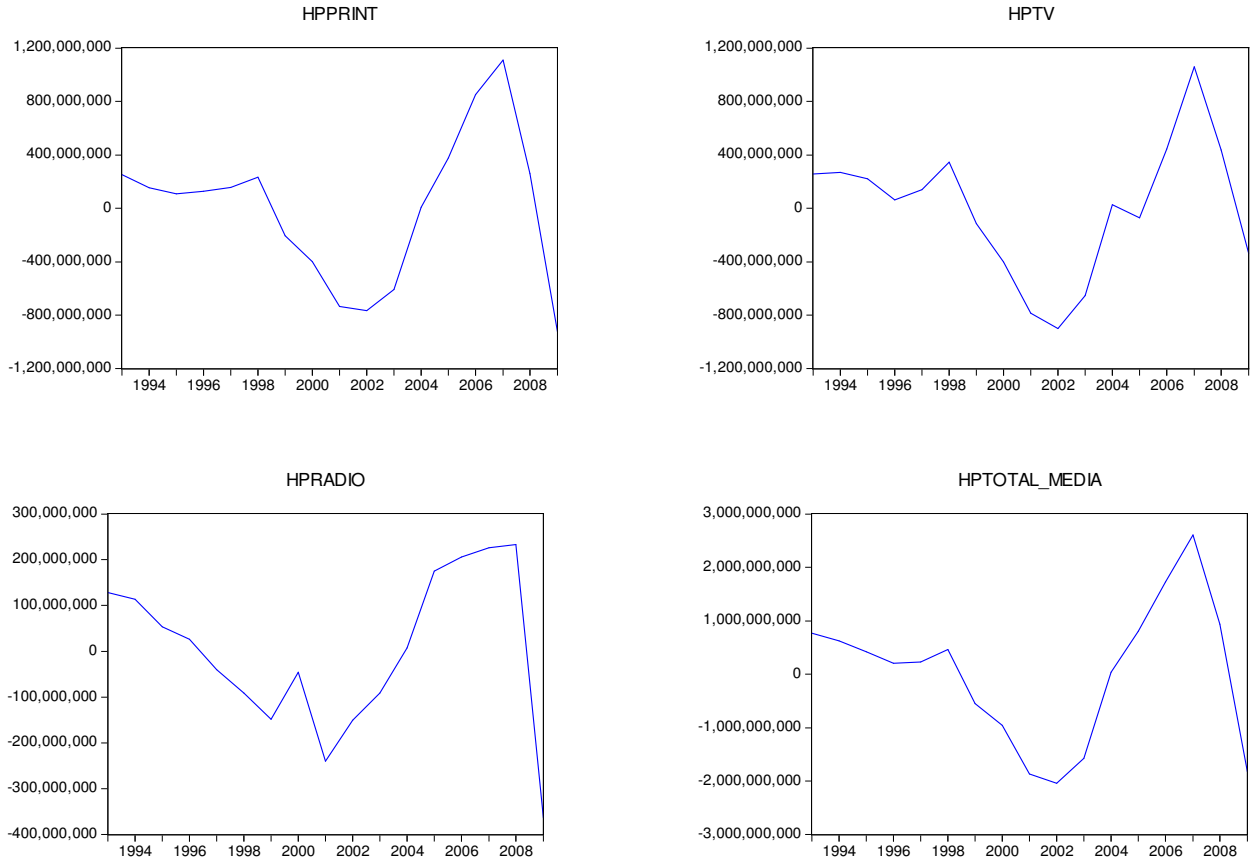
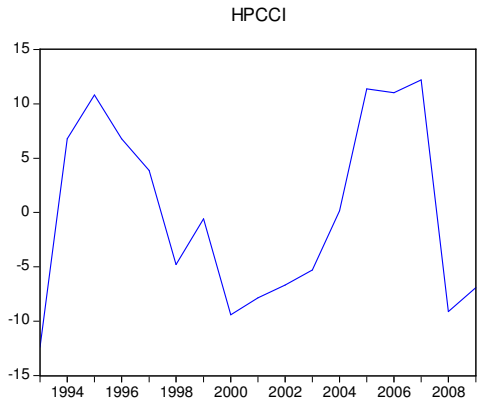


Figure A-2: Consumer and Business Confidence Cycles:



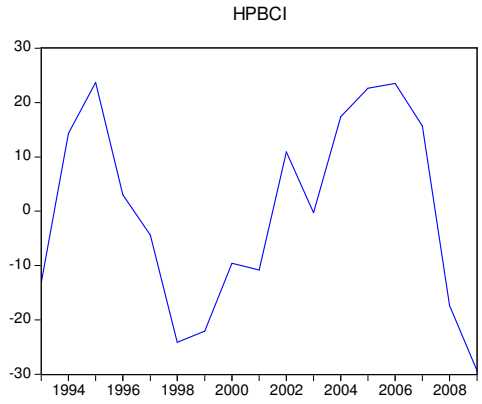
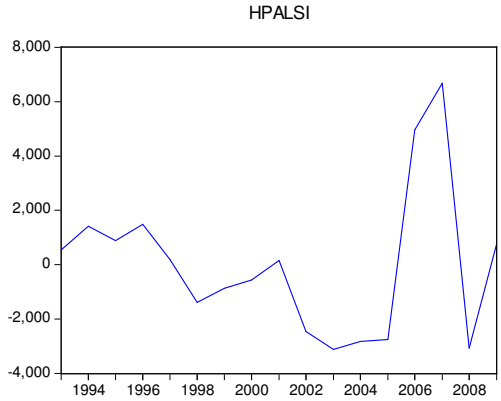


Figure A-3: Company Performance Cycles:



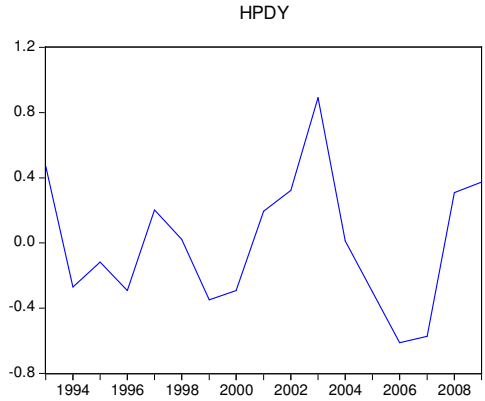
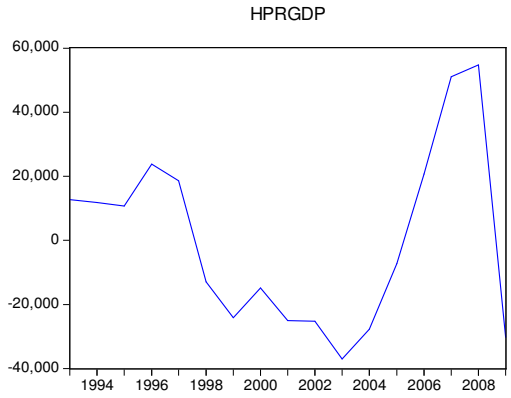


Figure A-4: Real GDP Cycle:



Appendix B: Business Cycle Variable Correlations

Figure B-1: Business Cycle Variable Correlation Table

Correlation	HPRGDP	HPCCI	HPBCI	HPALSI
HPCCI	0.397 (1.677)			
HPBCI	0.225 (0.895)	0.749 *** (4.383)		
HPALSI	0.523 ** (2.379)	0.526 ** (2.392)	0.267 (1.074)	
HPDY	-0.383 (1.604)	-0.697 *** (3.762)	-0.430 * (1.844)	-0.594 *** (2.860)

t-statistics are in parentheses.
***, **, and * represents significance at the 1%, 5% and 10% levels respectively.

Legend:

HPRGDP: Hodrick Prescott Filtered Cycle of real GDP

HPCCI: Hodrick Prescott Filtered Cycle of Consumer Confidence Index

HPBCI: Hodrick Prescott Filtered Cycle of Business Confidence Index

HPALSI: Hodrick Prescott Filtered Cycle of All Share Index

HP-DY: Hodrick Prescott Filtered Cycle of All Share Index Dividend Yield

Interpretation:

The relationship between the all-share index and all-share index dividend yield is highly significant (1% level) and demonstrates a negative correlation (-60%). In addition, the relationship between the real GDP and all-share index is strongly significant (5% level) and demonstrates a positive correlation (52%).

Note: The mind-map / brainstorming list, as well as the 'SMART' application framework on the research objectives were excluded from the Appendix as these were optional appendices as per confirmation from the supervisor (Shipham, 2010).