PERTH LEADERSHIP INSTITUTE

WHITE PAPER

INCREASING COMPETITIVENESS WITH BEHAVIORAL STRATEGY

September 2011

EXECUTIVE SUMMARY

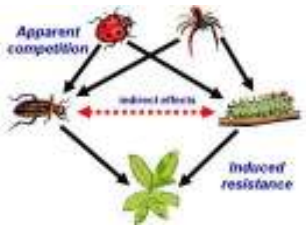
Competitiveness - a Behavioral Phenomenon

Basically it's a behavioral phenomenon, and great products and profitability are merely **symptoms** of those behaviors.

Needs to Take Account of Mixed Rationality

Competitive strategy must also be based on an analysis of **cognitive biases**, the behavioral drivers that are mostly **unconscious** and usually result in **adverse or sub-optimum business outcomes**.

Linking Behaviors with Financial Outcomes



This new behavioral model reveals the key behavioral drivers of competitiveness and shows how these can be **linked formally** to **business and valuation outcomes**.

To Measure Market Outcomes

The analysis must be measurable, to reveal the incidence of the drivers of competitive behaviors as a way of providing a **quantitative basis** for **competitive achievement** and expectations.

Allowing Prediction of a Company's Market Positioning

In this section we provide a **real example** of prediction of competitive outcomes **based on behavioral data**.

Resulting in Improved Competitiveness

It's all very well to provide analysis, but how can this model be used for the **practical purpose** of becoming the **number 1 in your industry?** This section provides **practical suggestions** on how to achieve this goal based on **whatever behavioral assets** you possess.

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Increasing Competitiveness with Behavioral Strategy

Competitiveness is a Behavioral Phenomenon

Traditionally competiveness has been seen as an economic phenomenon. The ultimate aim of companies is to out-compete all others in its industry or domain so as to have the best products at the lowest cost. This will cause the winner or winners to gain the most profits and the greatest rewards to its shareholders.

In traditional economic theory competiveness therefore translates into the best products, the lowest prices and the highest profitability. It will be reflected in a company's stock price which serves as a measure of its relative competiveness.

But there is another way to view competitiveness, that is, as a behavioral phenomenon. In this formulation, there are certain behaviors that are fundamental to being highly competitive. If we wish to understand how competitive a company will be, we first need to understand these behaviors.

In this view, the metrics of prices, revenues and profits are merely symptoms of competitive behaviors. Once we understand these behaviors we can measure them and use them to predict the future competiveness of a company. Even further, we can predict the competitiveness of other companies to forecast which company or companies will win the competitiveness race in an industry or market.

In this model a company does not already need to have good products, revenues and profitability to be competitive in the future since competitiveness is essentially a behavioral not a product or profit phenomenon. This addresses a major gap in current competiveness studies in which we can only decide on how competitive a company is or will be once these things are in place.

"…prices, revenues and profits are merely symptoms of competitive behaviors…."

The aim of this White Paper is to set out a behavioral model of competiveness that can be used to predict how competitive a given company will be in an industry and to predict what its actual competitiveness ranking will be.

In order to achieve this we are going to start with some concepts in the recently-emerged disciplines of behavioral economics and behavioral finance. These have developed the concepts of cognitive biases. We will show how this can extend our thinking about competitiveness. But we will also show how these concepts need to be extended in order to yield a new behavioral model of competitiveness.

This White Paper sets out in detail new ideas in cognitive biases developed by the Perth Leadership Institute. It demonstrates how these new concepts can be developed into a new behavioral model of competitiveness. It details how these can be used to yield

quantitative predictions concerning winning competitors in a particular industry and how we can apply them to specific companies and their management teams.

In sum we can extend these new cognitive biases into new behavioral drivers of competitiveness. These cognitive biases can be used to understand the competitive drivers of innovator leadership and cost leadership. These in turn can be used to predict the type of financial statements that will be generated by a specific company and how they compare to its competitors.

Using this knowledge we can use the model to predict the future competitiveness of a company that has already developed products and services, or of a company that has not yet achieved this stage.

The model can then be used to analyze the strategic and competitive positioning of a company for a number of purposes. These include:

- To see if its strategy is likely to be a winning strategy competitively.
- To identify if it has the right behavioral assets to achieve its desired competitive position.
- If not, to asses the level of alignment between its behavioral assets and its strategic objectives to see what changes much to be made in its talent and leadership line-up.
- To plot leadership and talent approaches that will best implement its competitive objectives.

Behavioral Strategy Focuses on Irrationality – As Competitiveness Should Too

A new discipline of behavioral strategy has emerged. This focuses on the unconscious drivers of behaviors, and particularly on the non-rational elements. These approaches have been particularly taken up by the disciplines of behavioral economics and behavioral finance.

Behavioral finance and economics embody a new concept in social science, namely that all decisions incorporate some degree of irrationality. Behavioral strategy merely generalizes this insight to all areas of social science, management and decision- making. This has crucial implications for the area of competitiveness.

Traditionally management disciplines have been based on the idea that when we make choices, we make the best choice according to rational considerations. These choices might be to take the most profitable route, the choice with the best payoff, the decision that has the most and best data supporting it and so on.

But increasingly the real world has demonstrated that this is simply not the case. We all tend to feel we are making rational decisions when in fact a good part of the time we are not.

This insight has now been formally incorporated into economics and finance via the new disciplines of behavioral economics and finance. These disciplines examine economic and financial phenomena under the conditions of mixed rationality. That is, when we sometimes make decision for non-rational reasons.

"….all decisions incorporate some degree of irrationality…."

More Information = Worse Decisions

The idea behind behavioral strategy is that we all have deep cognitive biases that unconsciously affect all decisions we make in ways of which we are not aware. These unconscious biases affect any job or task we perform and reduce dramatically the effectiveness of our decisions.

For example, we often tend to make decisions to avert losses instead of taking the chance to make money, even if the latter is the better decision. We throw a lot of money at our poor stock-choosing decisions in order to "double down" on what are essentially losers. We make decisions according to previous frames of reference with which we are familiar even though they are not relevant.

One of the many cognitive biases that have been revealed in behavioral research is the so-called over-confidence bias. This is the tendency, particularly amongst managers who possess high qualifications in disciplines such as economics, finance and business to have strong but misplaced confidence in their ability to forecast accurately.

They often believe this because they feel that their education and qualifications confer better a superior ability to forecast on them. A good example is the failure of the PhD quants on Wall Street to forecast the global financial crisis in both 1998 (when LTCM, which was run by two Nobel Prize winners in economics, failed) and 2008, only 10 years later.

A fundamental tenet of traditional management and decision theory is that if we have more information of higher quality and reliance, it will lead to much better decisions. But the findings of modern behavioral theory actually reveal that the reverse can be the case; that the more information of higher quality we have, the poorer the decision.

Take for example the recent global crisis in which undoubtedly the major market players had massive amounts of data and information at their disposal, and where the data was undoubtedly seen as relevant by almost all market players. But in the event, the result was a cascade of poor decisions that almost led to the failure of the global economic and financial system.

Let's take another example; the outcome of mergers and acquisitions. Research shows clearly that at best no more than one-third of mergers or acquisitions are clear successes. At least one –third are clear failures. And in about one-third of cases, there is no benefit although the transaction does not actually fail. Another way of looking at this is that the outcome of M&A transactions is no better than chance. Yet M&A activity relies on the best analysis by the best executives in the best companies in the world.

Or look at investment analysis and returns. Research shows unambiguously that managed investing on average has much worse returns than investing via an indexing approach. Yet an index just follows the market's returns while managed investing uses the best analysis and the best minds in economics, finance and company analysis. Yet again, using the best analysis and the best minds does worse than just blindly following the market.

Traditional Competitiveness Theory Doesn't Explain Startups

We can extend these conclusions to the area of competiveness. In the classical models of economics and finance, the most competitive companies will be those with the best products, highest amounts of capital and the highest profitability. Yet the very emergence of new companies such as Google at its inception when none of these were present shows the acute limitations of the classical approach.

The classical model cannot explain the competiveness of startups which go on to disrupt an industry. In order to do this we can only turn to behaviors since that is the only information available to us in such situations and the only way we can explain new and disruptive competitors.

In other words to some extent we must regard competiveness as having non-rational roots that are not taken account of in traditional economics and finance. This means that strategic analyses that are based on non-behavioral thinking are likely to be too simplistic and often just plain wrong.

"…..**we must regard competiveness as having non-rational roots that are not taken account of in traditional economics and finance….."**

This may well be why it has been so difficult for economists and market analysts to explain the emergence of new competitive threats in an industry. Usually the only way they can do this is through an ex post facto analysis.

This White Paper does not assert that we just disregard traditional strategic analyses of competitiveness. It is merely asserting that if companies try to conduct strategic competitive analysis without using the new behavioral approaches and tools, that they are likely to make errors some of which will be strategically significant.

And Doesn't Account for Impact of Unconscious Biases

Behavioral strategy is the analysis of thinking processes that incorporate non-logical processes that are usually unconscious but adversely affect intended outcomes. A cognitive bias is the tendency to acquire and process information by filtering it through one's own likes, dislikes, and experiences (Wikipedia).

Some of these biases are as follows:

- **Framing** effects: The way a problem or decision is presented to the decision maker will affect their action.
- **Sunk cost fallacy**: The tendency to continue to invest in something, even if it is a hopeless case
- **Status quo bias**: people prefer that things remain the same, or that things change as little as possible, if they absolutely must be altered.
- **Endowment effect:** people value a good or service more once their property right to it has been established.
- **Loss aversion:** people's tendency to strongly prefer avoiding losses to acquiring gains. Some studies suggest that losses are twice as powerful, psychologically, as gains
- **Anchoring effect:** the tendency to rely too heavily, or "anchor," on a past reference or on one trait or piece of information when making decisions

- **Overconfidence effect:** excessive confidence in one's own answers to questions. For example, for certain types of question, answers that people rate as "99% certain" turn out to be wrong 40% of the time.
- **Survivorship bias:** concentrating on the people or things that "survived" some process and ignoring those that didn't, or arguing that a strategy is effective given the winners, while ignoring the large amount of losers.

Most of these biases will be present in some shape or form in all companies**. The new behavioral disciplines assert that these will also adversely impact the competitiveness of all companies to a greater or lesser degree, although in the vast majority of cases the management of such companies will be unaware of these biases.** In addition, if confronted with them, they are most likely to deny them.

However the problem in current behavioral science is that there is no practical way to measure these biases within a normal corporate environment (as distinct from a purely academic research exercise) so that they can be used on a routine basis for company analysis. In addition these biases have no direct link to financial outcome and valuation.

Even if a company acknowledges the existence of some or all of these biases we cannot formally link them with specific financial and valuation outcomes, in a quantitative and rigorous way.

In the next section we present such a model which allows us to formally link behaviors with competitive outcomes in a rigorous way. This allows us to formally show financial and valuation outcomes in ways that can be compared directly with the financial statements of companies.

We Need a New Behavioral Model of Competitiveness

That Incorporates Cognitive Biases

The Perth Leadership Institute has conducted research over a period of 10 years on the issue of cognitive biases and financial outcome. As part of that work we have specifically examined the issue of cognitive bias and competitiveness. This work has identified two cognitive biases which are crucial to competitiveness, or the lack of it. These two biases are:

The status quo bias: the tendency to prefer current ways of doing things over new way even when the new way is compelling.

The resource utilization bias: the tendency to prefer using more rather than less resources to achieve a given task.

Status Quo Bias

Most people tend to stick with the status quo since it is more comfortable and less threatening. Those who are less biased in this area take more risk, and have a higher risk/reward threshold. Those with a lower status quo bias are more inclined to try new things, which may succeed or fail. Therefore they are more likely to be more innovative.

Note that this has little or nothing to do with intelligence in its conventional formalistic definition of IQ or ability to see unusual relationship[s; it is simply a behavioral trait that reflects a tolerance for more risk sometimes in return for a higher reward.

The status quo bias acts to filter out practices and approaches which would bring about an objective improvement in an individual's or company's environment from a material, productive, financial, profitability or margin perspective.

From this point of view the bias is not rational since it emphasizes the current over change even if the status quo is less valuable or more threatening, or represents a less desirable state of affairs.

People who have a lower status quo bias are more likely to develop new products and services. Where they do this, these will attract higher prices premiums and therefore higher gross margins. Thus we can say that the lower the status quo bias, the higher the value-adding characteristics of this type of behavior.

Therefore when a person has a lower status quo bias they will have higher value-adding characteristics from a product or services perspective. This will result in higher gross margins as a proportion of revenues.

Thus we can see that the status quo bias is directly linked to competitiveness. Those with lower status quo bias will have higher value-adding characteristics and therefore will have higher competiveness since they are more likely to develop very new products and services which results in higher gross margins and profitability. If we can measure this bias we have a direct link with a key part of competiveness, namely the ability to produce highly differentiated products and services.

"….the status quo bias is directly linked to competitiveness…."

Resource Utilization Bias

More people tend to use more resources even if they are not needed from a purely instrumental point of view since more resources provides a number of personal and inspirational benefits even if it means the outcome is less functional. For example people use more resources than strictly needed for the following reasons:

- Personal gratification
- Desire to do societal good
- Power
- Achievement of high levels of quality
- Desire that the end-product be as near to perfect as possible
- Perception that they have more control
- Laziness – taking the path of least resistance.

People with a lower intensity in this bias tend to use less resources and are therefore less affected by this bias. In other words this bias reflects unconscious and not always rational action which tends to move the outcome of a decision away from the lowest level of resource utilization necessary to a higher level of utilization driven by reasons other than pure utility.

People with a high level of this bias tend to use a lot more resources than those with a low level. By "resources" we refer to things such as money, people, things, real property, time and intangible resources such as loyalty and engagement.

People who score high on this bias will tend to have high expenses both personally and within a corporate environment. Therefore this will impact their financial statements in the area of indirect expenses which will be higher as a proportion of revenues than for someone who has a lower level on this bias. Thus the higher level of this bias, the higher the level of expenses.

This is a direct competitive issue since if all other things are equal, then a company with a higher level of resource utilization bias will be less competitive than another company with a lower level because it needs more resources to achieve a given outcome thus lowering profitability and capital creation.

And Can Show How They Interact in Competitive Situations

We can now see that competiveness is determined by the interaction of the status quo and the resource utilization biases. Companies that are dominated by a low level of status quo bias will create new and more innovative products, will generate higher gross margins and will, other things being equal on the expenses side, and be more competitive.

Companies with a lower resource utilization bias will have lower expenses and, product innovativeness and gross margins being equal, will be more competitive than companies with higher resource utilization bias.

For companies that have both a lower level of status quo bias and a lower level of resource utilization bias, they will be more competitive than companies with a higher level of status quo bias and a higher level of resource utilization bias.

Thus we can say that certain behavioral biases will result in higher levels of competiveness than other levels. This will occur even if we do not yet know the actual financial performance of a company or are unaware of what its products and services actually are e.g. in the case of a startup or new company.

That is, these cognitive biases, if they can be measured, will be predictive of competiveness and financial outcomes as they appear on the financial statements, even before the products and services are in the market, or before they become well established.

Formally Linking to Financial Behaviors and Outcomes

We can use the cognitive biases to build a model of financial styles and financial outcomes. We can link these styles with precise financial outcomes ranging from capital creation to capital consumption and we can also link these styles with valuation outcomes. Thus it is possible to build a behavioral model of competiveness that links directly and quantifiably with market results, and competiveness and competitive outcomes.

Our individual financial styles are essentially behaviors which are at least partly irrational in nature. They mean that we each approach the exact same financial situation in a

somewhat different way which is dictated by our individual financial personality. Our financial styles impose a systematic bias on all of our decisions. This systematic bias is irrational in that it will result in our decisions departing from the optimal, rational decision which classical economic theory says we should all make.

Our research is based on the observation that we all have individual financial traits. Just as we all have individual personal traits that impact us and others in every day of our lives, so too all of us have financial traits. For example one person may be frugal, another extravagant.

"….Our financial styles impose a systematic bias on all of our decisions…."

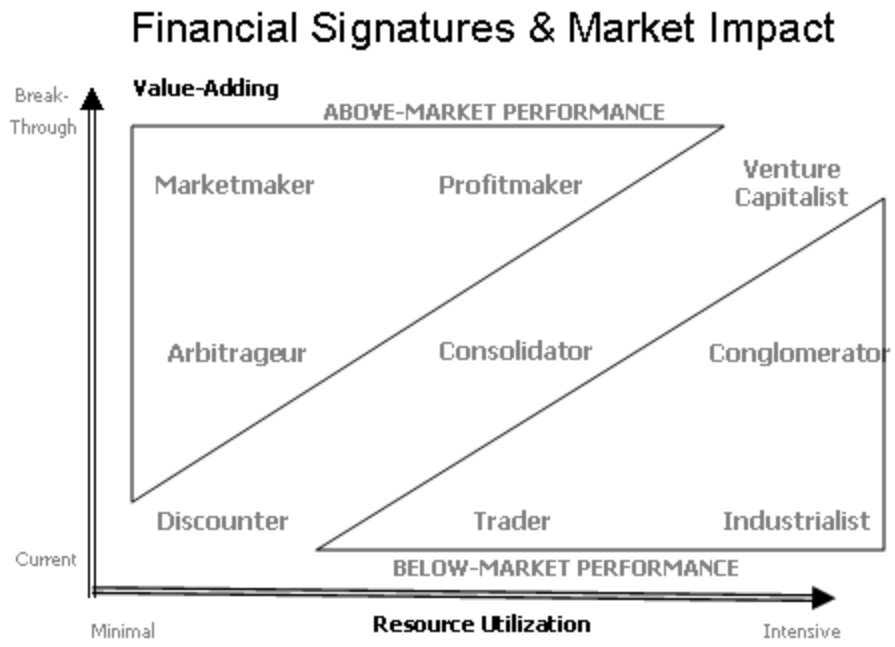
These financial traits lie deep within us, so we shall call them innate. We sidestep for now the issue of whether they are of genetic or environmental origin. But we can say that these traits reveal themselves at a very early age and will be stable for most, if not all, of our lives. These financial traits constitute an internal calculus which drives how each of us approaches decisions involving risk and reward and cost and benefit. They imprint themselves on all of our decisions, in the vast majority of cases without us knowing this.

Our research shows that there are distinct behavioral patterns which reflect different ways that individuals are driven by these internal factors to create financial value. These behavior patterns are called financial signatures.

The financial signatures are the results of the two interacting cognitive biases that we have identified earlier. The status quo cognitive bias can be viewed as a value-adding tendency and it can be identified and measured psychometrically. The resource utilization bias can be viewed as a resource utilization tendency and can also be identified and measured psychometrically.

This allows us to identify nine financial signatures each of which is the product of the intersecting tendencies to add value and to use resources. We show at Figure 1 Financial Signatures & Market Impact.

Figure 1 Financial Signatures & Market Impact



The Y axis shows us the value-adding propensity of a manager. This is measured by gross margin as a % of revenues to achieve comparability across companies and industries. The X axis shows us the resource utilization propensity of a manager. This is measured by indirect expenses (in this context all costs after gross margin) as a % of revenues to achieve comparability across companies and industries.

The nine resulting financial signatures show us the nine behaviors that either generate or consume capital relative to their market. These are divided into three financial styles, Value-Centric, Balanced and Resource-Centric. Value-Centric financial signatures generate capital and Resource Centric financial signatures consume capital relative to their close competitors.

These financial behavior patterns, or financial signatures, are composed of two dimensions of financial traits. These are the propensity to utilize resources to a greater or lesser degree in achieving business goals, and the propensity to add commercial value to products or services, again in achieving business goals.

Each financial signature is in effect at least in part a non-rational or partly rational response to a financial situation which imposes a systematic and predictable bias on all of our financial decisions. That is we make these decisions on the basis of an internal calculus which embodies mixed rationality, that is a mixture of both rational and non-rational expectations and calculations.

We can imagine a situation in which a person is confronted with a particular situation which requires that the resource utilization expended on it requires a particular and optimal response according to classical finance theory, and when it requires a particular

value-added approach, again leading to an optimal outcome in conventional finance theory.

In this case the individual will actually superimpose a characteristic bias on the resource utilization and value-added dimensions of the decision which will lead the outcome to be financially suboptimal according to classical financial theory. Thus individual behavior and individual cognitive effects have led the decision to be either partly rational or partly irrational in the particular manner which is dictated by the particular position that the manager occupies on the above diagram.

The resulting financial signature shows us the behavioral propensity of an individual to generate capital to a greater or lesser extent. In Figure 1 Financial Signatures & Market Impact, financial signatures to the upper left generate more capital since their propensity to add relatively high amounts of value more than outweighs the resources they are behaviorally inclined to consume in achieving this value.

On the other hand, on the right hand lower side of the diagram, individuals will be using a level of resources which generally will not be outweighed by the value-added contribution, which will lead to the generation of less or even the consumption of capital.

Financial signatures represent the most basic level of financial behavior. These can be grouped into styles which aggregate the signatures into a higher level representing the financial impact of these styles.

We can divide the nine financial signatures into three financial styles based on this diagram. These are the Value-Centric, Balanced and Resource-Centric styles. The first will tend to outperform the market and the last to under-perform while the Balanced styles will perform at the market level.

Thus financial signature and style can tell us not only about the level of individual performance we can expect, but what will happen if a company is composed mainly of a particular financial signature or style relative to its close competitors and to the market it participates in as a whole.

So That Product Leadership is Seen as a Result of Innovator Behaviors

If a company possesses a significant number of people who are innovators in their behavioral style, and these innovators have influence on the company, then this behavior will eventually be reflected in the gross margins of the company. The company will be able to charge premium prices for its products and services.

This will lead to its gross margin as a proportion of its revenues being significantly higher than its competitors. This will lead to it being significantly more competitiveness

than these other companies providing that its expenses are not significantly higher than those of its competitors.

Thus we can say that innovative behaviors are a crucial component in competitiveness. Innovative behaviors are crucial if there is to be innovation. Without innovative behaviors there is unlikely to be much if any innovation.

We can define innovator behaviors as a behavioral propensity to add value, either to a product or a service. Most people will have a relatively low propensity to add value and very will have a high propensity**. If we can measure this factor psychometrically we will have a proxy for gross margin relative to revenues, as set out above.** This provides us with a behavioral approach to one side of the behavioral equation in competitiveness, namely the propensity of a company to add value.

In such a case we can say that the innovativeness of the company does not simply derive from internal processes that encourage and guide innovation, even if none of the company's employees are innovative behaviorally. The innovativeness of the company derives from the fundamental behaviors of the company's employees independent of any internal processes that are implemented to promote and guide innovation.

So we can distinguish between innovativeness that derives from process and innovativeness that derives from inherent behaviors. In this model of competitiveness, we focus on innvoat4ro behaviors rather than innovation processes. The model fundamentally asserts that it is innovator behaviors that drive competigvene3ss rather than innovation processes since the latter may formalize processes that may not be effective since they are not enshrined in the actual behaviors of the employees and leadership of the company.

And Cost Leadership a Result of Resource Utilization Behaviors

We can use the same reasoning for resource utilization behaviors. Other things being equal, the lower the level of expenses relative to revenues, the higher the level of competitiveness for any given level of value-adding or gross margin.

This behavior will lead to its indirect expense relative to its revenues being lower than most of its competitions. In this case it will be significantly more competitive than its competitors at any given level of value-adding since its operating margins will be higher than in their case.

Thus we can also say that resource utilization behaviors will be a crucial factor in competiveness since they lead to financial outcomes involving either higher or low expenses which directly impact competitiveness at any level of value-adding.

We define resource utilization behaviors as a behavioral propensity to use resources, to a smaller or to a greater extent. If we can measure this factor psychometrically we will have a proxy for indirect expenses relative to revenues, also as set out above. This provides us with a behavioral approach to the other side of competitiveness, namely the propensity to use resources.

"…In a company in which resource utilization behaviors are aligned with cost objectives we will truly achieve cost leadership…."

Again we can distinguish between resource utilization behaviors and resource utilization processes. In a company in which resource utilization processes are the way a company controls costs, there may be no behavioral component which naturally keeps costs to an acceptable level.

In a company in whi8ch resource utilization behaviors are aligned with cost objectives we will truly achieve cost leadership. However the corollary is that in a company where cost practices are guided by process and not by fundamental behaviors, it is much less likely we will get cost leadership since the behaviors are not truly aligned with cost objectives.

Determining a Company's Level of Competitiveness

Where innovator styles are powerful, other things being equal a company will be more competitive than otherwise, even if its innovation derives from processes. Where resource uti8lization styles are frugal, the company will be more competitive than otherwise, even if the resource utilization were otherwise based on process and not on behaviors.

The relationship between these two sets of styles, which are driven by the underlying cognitive biases, will determine how competitive the company will be. We can determine the level of competiveness by translating these cognitive biase3s into financial signatures and then comparing the results for different companies in an industry.

This is what we will show in the next section as a way of demonstrating the practical uses of the model in a real competitive situation.

We Can Measure Competitive Behaviors Behaviorally

The Perth Leadership Institute has been conducting research on these competitive behaviors for several years. It has developed online assessments which are completed by managers and executives that conduct its programs.

In Figure 2 Incidence of Innovator Behavioral Styles we show data for the proportions of each of the three levels of innovator styles in these programs. Note that we are not drawing any inferences as to the general population of executives and managers since these relate just to the programs conducted by Perth.

Both Innovator Behaviors

Figure 2 Incidence of Innovator Behavioral Styles

Innovator Behavioral Level	% of sample
High	18
Medium	45
Low	37

High levels of innovator styles occurred in just under one-fifth of the sample. 80% of the sample had low to medium levels of innovators styles. These results are probably what we would expect since it would not be expected to find most individuals or companies would be populated with high levels of innovator styles.

And Resource Utilization Behaviors

We can also show similar data for resource utilization behavioral styles at Figure 3 Incidence of Resource Utilization Behavioral Styles. Note that although we have found that various factors such as gender affect these figures, we can find no correlation with level of management that is these data are in the same proportions no matter what the managerial level or rank.

Figure 3 Incidence of Resource Utilization Behavioral Styles

Resource Utilization Behavioral Level	% of sample
Low	13
Medium	49
High	38

The incidence of individuals with low resource utilizations behavioral styles, that is people we would normally regard as being frugal, is 13% of our overall sample. Those in the middle tier total 49% or around half. Those individuals with high levels of resource

utilization behaviors total around 38% of the sample. Note again that although we have found that these data are affected by factors such as gender, we can find no correlation with level of management that is these data are in the same proportions no matter what the managerial level or rank.

To Depict the Range of Market Outcomes

Finally we can show the incidence of financial signatures that is behaviors that are categorized simultaneously by both innovator and resource utilization behavioral styles. These are at Figure 4 Incidence of Financial Signatures.

Figure 4 Incidence of Financial Signatures

	Low Resource Utilization	**Medium Resource Utilization**	**High Resource Utilization**
High Value-Adding	Marketmaker 1%	Profitmaker 8%	Venture Capitalist 9%
Medium Value-Adding	Arbitrageur 3%	Consolidator 20%	Conglomerator 22%
Low Value-Adding	Discounter 9%	Trader 20%	Industrialist 8%

To the extent that this sample is representative of the general population, it provides us with a framework to understand not only the range of behaviors between individuals but also the range of behaviors by companies. Essentially financial signatures can also be viewed as representing nine types of financial cultures that are spread between companies possibly in similar proportions to the above. In other words we can view the above as showing the range of competitive behaviors that exist in most industries and markets together with the likely incidence of those behaviors.

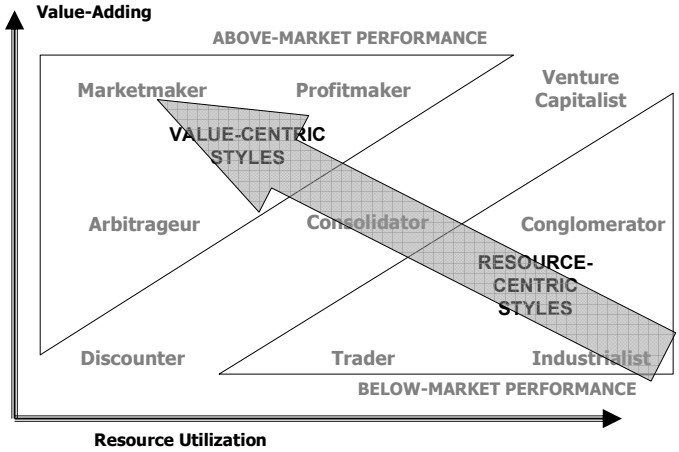
Showing How to Improve Competitive Outcomes

We can now see that in order to gain a competitive advantage, there are three possibilities. The first is that a company can improve its innovator styles, either by getting more people with them or improving those that it already has, while leaving resource utilization styles unchanged.

Second it can improve resource utilization behaviors by reducing (in most cases) resource utilization, while leaving innovator behaviors unchanged. The third is that it can do both that is improve innovator behaviors while simultaneously improving resource utilization behaviors by reducing resource uti8lization.

Within the framework of competitive behaviors this means that over the long-term in order to become more competitive, a company must move to the upper left of the financial signature diagram, as show in
Figure 5 Competitive Advantage.

Figure 5 Competitive Advantage Model



There are some important factors that must also be considered in achieving competitive superiority using behavioral means. First if the move is from the lower left to the upper right, there is no competitive advantage per se since although innovators behaviors increase, so do resource utilization intensive behaviors so there is no net addition to capital creation..

A move from bottom upwards does confer more competitive advantage since innovators behaviors increase with no change in resource utilization behavior intensiveness. A move from right to left also improves competitiveness since resource utilization behavioral intensiveness decreases while innovator behaviors undergo no change so there is a net increase in capital.

In sum, we now have a behavioral map which shows a company how to improve its competitiveness through behavioral means. The map shows the best directions to move, which will lead to sustained capital creation.

It also shows us those behavioral moves that will lead it to become less competitive. Finally it gives us a way to plot not only the moves of one's own company, but also those of other companies that occupy the same market space. We will show this in the following section.

We Can Predict a Company's Competitiveness

Using a Real Example

In the preceding sections we have built up a behavioral model and showed how this links formally to competitive outcomes via innovator and resource utilization behaviors. The aim of this section is to show how this model can be applied in practice in order to formally portray competitive outcomes in specific cases and to show how this can lead to actual predictions of future competitive strength and outcomes. It will also show how such an analysis can be used to develop specific recommendations which will improve the competitive position of such a specific company.

As the basis for this analysis we will use the example of an actual company in the financial services area and its competitors. This particular company, like most others has different divisions devoted to sales and distribution of specific products. The names of these have been changed to preserve confidentiality of the client.[1]

In this case the company has separate product divisions. Each of these is managed separately. Each area has a different set of competitors in the market so before analyzing the position of the overall company it is necessary to analyze the situation of each separate product so that separate predictions can be made before folding them into an overall analysis for the competitive position of the company.

We obtain the behavioral information on our case example by using online behavioral assessments of senior managers in each of the main product areas of the company. This provides us with quantitative behavioral data on each of these individuals which can then be analyzed at the team level to yield averages and ranges for each of the major product teams in a company.

How do we derive the conclusions on the innovator and resource utilization behaviors of competitors? We do this by meeting with key managers and salespeople in each of the product areas who, after being trained in this behavioral competiveness methodology, are able to produce their assessments of the innovator and resource utilization behaviors of the main competitors based on their interactions in the filed with the competitors themselves, from clients, suppliers and other observers.

The result is a qualitative evaluation of the innovator and resource utilization behaviors of each of these competitors based on a comparison of there the company itself stands by a number o experienced managers and salespeople who are expert and experienced in the product area and have direct knowledge of it.

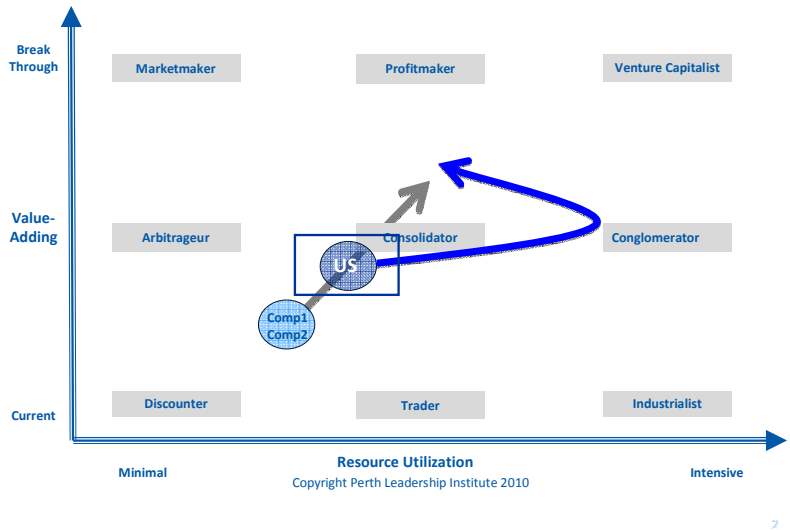
[1] The analysis in the following diagrams Figures 6-9 was carried out by Dr. Peter Levin of RHR International.

Across Several Product Areas

Moving to the first of these three products, fixed annuities, the position of the company is shown Figure 6 Company Competitive Analysis – Product A**.** The company (US) has been in a Consolidator position, which left it fairly competitive but has been on a trajectory of rapidly increasing resource utilization behavior coupled with a slight increase in innovation behaviors.

Its main competitors in this area have been increasing their innovator behaviors more rapidly but they are still increasing their resource utilization behavioral intensiveness although not as rapidly as our company. Unless our company changes its resource utilization behaviors to reduce resource utilization behaviors it will increasingly be at a competitive disadvantage with markedly higher costs than its competitors which will not be offset by higher margins.

Figure 6 Company Competitive Analysis – Product A



Moving to the next product area, as shown in Figure 7 Company Competitive Analysis – Product B, the picture is somewhat better. Our company is moving higher in innovator behaviors and consequently margins while its resource utilization behaviors are moving up too.

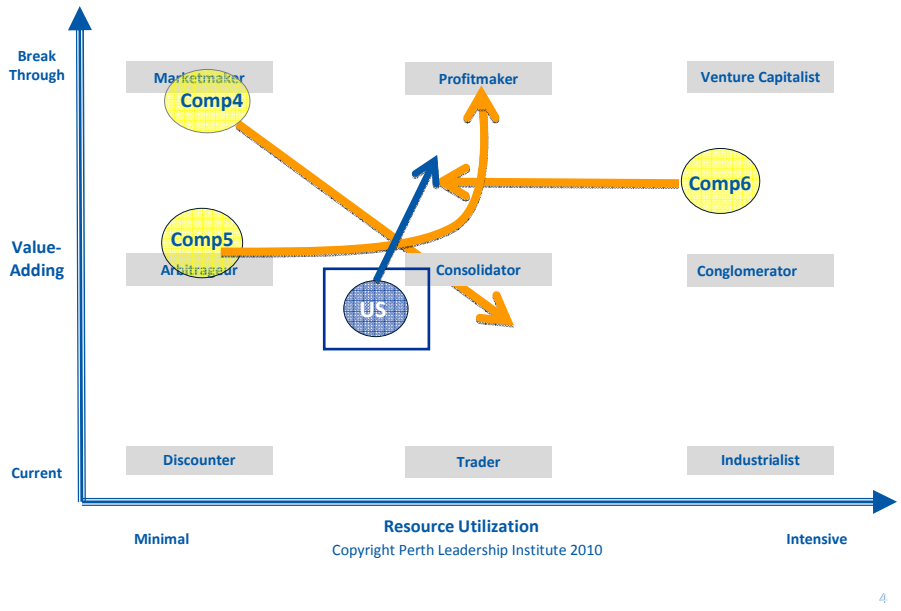
This implies a shift to a more profitable model in the future for our company. The leading competitor has been fallen on its sword with innovator behaviors leading to much lower margins and resource utilization increasing quite rapidly so our company should be able to beat it competitively.

On the other hand it has another competitor which is rapidly reducing its resource utilization behaviors leading it to become far more competitive. The only saving grace for

our company is that this competitor is not increasing its innovator behaviors so the two companies looked to be evenly matched competitively in the future.

The real threat though is another competitor (Comp5) formerly a low-cost competitor whose innovator behaviors seems to be increasing more rapidly than is their resource utilization behavioral intensity. This tends to predict that our company will have major competitive issue with this company over the next couple of years and will need to take countervailing action.

Figure 7 Company Competitive Analysis – Product B



In the third product area, our company has many more competitors but these fall into three main groups as we show at Figure 8 Company Competitive Analysis – Product C. However our company is taking a major new competitive leap by rapidly reducing resource utilization behaviors and staying with its same level of innovator behaviors.

This positions it as a high value-adding low-cost competitor, in theory at least a very good position to be in. However there is one group of 4 competitors who are also following the same strategy. They look to be lower-cost with lower value-adding so they could be threat to a low-cost strategy based on low resource utilization behaviors. The betting by our company is that its higher innovator behaviors will allow it to win competitively although it is clearly somewhat of a gamble.

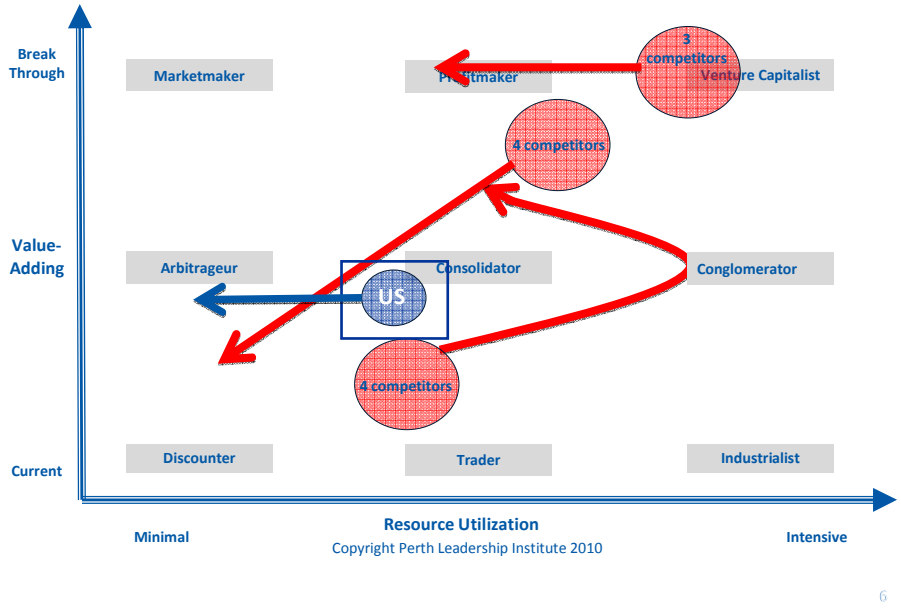
The other two groups of competitors are relying on leveraging or improving innovator behaviors in order to achieve competitive superiority. The first is a group characterized

by high resource utilization behaviors but with high innovator behaviors also. However it is reducing its resource utilization and competitively looks as if it could be the premium leader competitively in the future.

Another group is also following an innovator behaviors strategy but it is coming from below and it has let its resource utilization behaviors get somewhat out of control. So although this group is essentially a challenger, it doesn't look as much as a threat as the other high leverage innovator behavioral group.

So the net effect is that our company looks like it has some chance at becoming the low-cost leader in the future based on its innovator behaviors but it will have abandoned the high value-adding space to its competitive rivals and will not be able to get back into that competitive area.

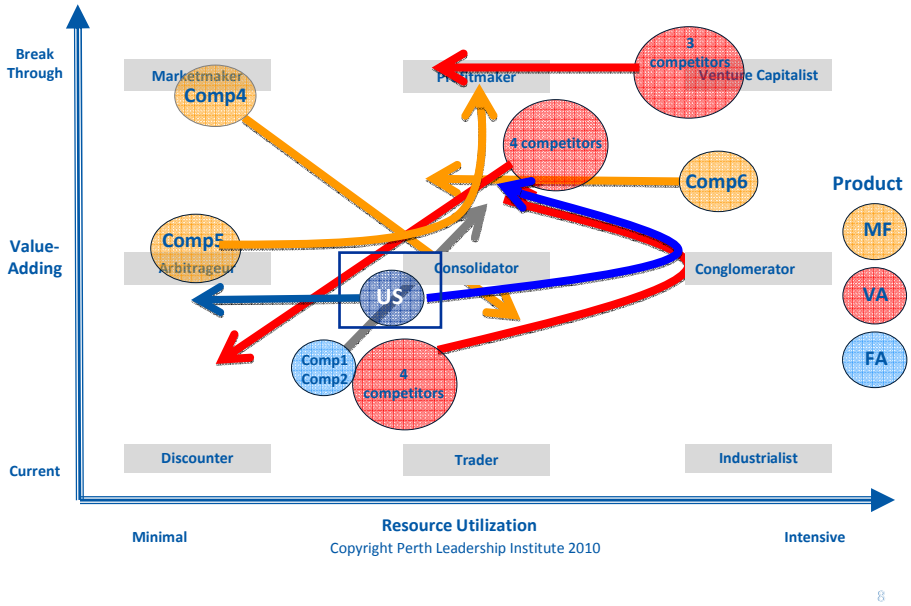
Figure 8 Company Competitive Analysis – Product C



Resulting in an Overall Competitive Evaluation

Finally we can look at the overall impact of these different competitive positions on the competitive position of this insurance company as we show at Figure 9 Company Competitive Analysis - Overall Competitive Position. On balance our company looks to be making a late challenge in the premium products area for one product and to be a stronger challenger in the Product C area.

Figure 9 Company Competitive Analysis - Overall Competitive Position



What does this analysis tell us overall? Note that we have nowhere consulted any financial statements to provide financial data since there is not one to consult. All of these analyses relate to the future for which there cannot yet be any financial statements.

But we can use the assessments data on innovator and resource utilization behaviors in order to provide predictions as to the future competiveness of our company and the associated impacts of thee behaviors on the financial statements of our company. In other words we have used behavioral analysis as a way of predicting future competitive outcomes. And this provides us with a clear guide as to actions we could take in order to improve our competitive positioning.

We Can Use Behavioral Analysis to Improve Competitiveness

Via Behavioral Change

We have asserted that competitiveness is essentially a behavioral, not an economic phenomenon. This phenomenon derives from the interaction of two cognitive biases, the status quo and the resource utilization bias. As we have seen we can measure these through the value-adding and resource utilization drivers so that we can predict competitive outcomes.

It is clear that changing behavior requires that, as a minimum, we need to work on changing the intensity of these two biases in the required direction. The change doe3s not need to be towards the opposite ends of the spectrum. The amount of change will be determined by a number of factors. These include:

The level of competiveness desired in the context of the industry and market and the positioning of other competitors.

- The level of maturity of the market
- The stage of evolution of the company
- The level of capital intensity of the company
- The intensity of the cognitive biases in the management team of the company and the key leaders.

Depending on these factors we need to do the following:

- Measure the level of cognitive bias in the main management teams
- Conduct training to show them the extent to which these biases are impacting their competitiveness and financial outcomes
- On both an individual and team levels, conduct specific training to reduce the level of status quo bias and also to change the level of resource utilization bias to the optimum indicated by the factors noted above.

The level of behavioral change we can expect will depend on the level of mental agility of the participants. This will vary significantly within the groups. Some people will have more agility than others so we can expect different levels of behavioral change depending on these different levels of agility.

And Via Process Change

We can also bring about behavioral change using process approaches. Some of these approaches include:

- Compensation: using compensation to reinforce certain behaviors and to penalize others.
- Organizational: changing roles and putting a person into a structure which changes reporting relationships and tasks.
- Collaboration type: changing the type of collaboration from and visual to team, team type, or using a technique such as committees.
- Non-monetary incentives: using non-monetary incentives including points, recognition, and other types of rewards to reward certain types of behavior.
- Management approach: using an approach such as MBO (management by objectives), balanced scorecard to show where to focus and to focus someone's time and effort in a way that promotes the desired competitive behaviors.

And Finally Via Strategy Change

It is possible that we decide that the competitive positioning we desire is not achievable given external and internal circumstances. This might include the parts of the market that we cannot achieve because of the strength of competitors. It might also include a realization of the fact that we simply cannot change competitive behaviors within our company sufficiently to be able to achieve a desired competitive outcome. In that case we might decide to change strategy on the basis of a new consideration of the competitive outcomes that are achievable.