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Citation: Dirbas, M.H. (2005). The human resource based view of the firm : the development of a model and its empirical evaluation in the commercial banking industry of Bahrain. (Unpublished Doctoral thesis, City University London)

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**THE HUMAN RESOURCE BASED VIEW OF THE FIRM: THE
DEVELOPMENT OF A MODEL AND ITS EMPIRICAL EVALUATION
IN THE COMMERCIAL BANKING INDUSTRY OF BAHRAIN**

A Doctoral Thesis Presented By

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Submitted to

Cass Business School City University

In fulfilment of the requirement for the degree of

Doctor of Philosophy

**Faculty Of Management
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London**

Submitted for Examination, September 2005

Chapter 7

Determinants of Sustainable Performance:

Empirical Results

7.1. Introduction

In this chapter, the researcher will discuss in detail the empirical results of this research and in particular the way in which canonical correlation and hierarchical regression analyses were used. Specifically, the author will discuss how they were used to explore the interrelationships between the independent variables incorporated in the nature of human resources in the banks, the nature of the banks' strategy, the nature of employee competence, the nature of HR practices, the style of management, the nature of organisational climate in the banks, the nature of organisation in the banks, and the dependent variables incorporated in the objective measures of the banks' performances over the period 1994-97 (Tables 7.1 and 7.2).

The hypotheses stated in chapter (3) and (4) will be tested in chapter (7) and (8) after regrouping them according to specific independent variables. That is, the hypotheses that are belong to human resource attributes, such as

value and unique and which are specified in various sections in literature review chapters, are grouped together before testing them statistically. In other words, the correlations between the independent variables and each performance outcome will be tested after regrouping the hypotheses.

The aim of this procedure is to facilitate clarity in testing the hypotheses and in providing explanations of the results of the statistical analysis. In addition, this procedure will develop specific sequence to follow when testing the hypotheses, which, in turn, improves the consistency of the testing throughout this chapter and subsequent chapters. In this sense, each performance outcome will be correlated, in sequence, with human resource attributes, differentiation strategy, employee competence, HR practices, Style of management, organisational climate and organisation (Refer to Appendix – E).

Table 7.1: Summary Hypotheses Headings

Correlation Hypotheses	
1	Relationships between HRBV Attributes and Performance
2	Relationships between Strategy and Performance
3	Relationships between Employee Competence and Performance
4	Relationships between HR Practices and Performance
5	Relationships between Style of Management and Performance
6	Relationships between Organisational Climate and Performance
7	Relationships between Work Organisation and Performance
Moderation Hypotheses	
8	HRBV Attributes as moderators of the strategy-performance relationships
9	Strategy as a moderator of the HRBV attributes-performance relationships
10	Style of management as a moderator of the employee competence-performance relationships
11	HR Practices as moderators of the employee competence-performance relationships

In addition, this chapter will highlight the results of the interviews of the Line and HR Managers of the sampled banks that support the statistical discussions. That is, the views of those managers were found to be in line with the results of the canonical correlations and hierarchical regression.

Table 7.2: Type of Hypotheses According to Nature of Hypotheses, Type of Respondents, No. of Hypothesis and Type of Statistical Technique

Type of Hypothesis	No.	Nature of Hypothesis	Type of Respondent (Sub-group)	No. of Hypothesis Tested	Type of Statistical Technique
Correlation	1	HR Attributes	Line and HR Managers	H.1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5	Canonical Correlation
	2	Differentiation Strategy	CEOs and Line and HR Managers	H.2.1	
	3	Employee Competence	Employees	H.3.1	
	4	HR Practices	Employees	H. 4.1, 4.2, 4.3, 4.4	
	5	Style of Management	Employees	H. 5.1	
	6	Organisational Climate	Employees	H. 6.1	
	7	Organisation	Employees	H. 7.1	
Moderation	8	HR Attributes	Line and HR Managers	H. 8.1	Hierarchical Regression
	9	Differentiation Strategy	Line and HR Managers	H. 9.1.1, 9.1.2, 9.1.3, 9.1.4, 9.1.5	
	10	Style of Management	Employees	H. 10.1	
	11	HR Practices	Employees	H. 11.1.1, 11.1.2, 11.1.3, 11.1.4	

7.2. Canonical Correlation: Empirical Results

This section will test the correlation hypotheses of this study between independent variables with dependent variables by using performance measures over four years.

7.2.1.1. Relationships Between Human Resource Attributes and Performance (Line and HR Managers' Perceptions)

H.1.1.1: “There will be a positive association between the value of a bank’s human resources and its performance*”.

H.1.1.2: “There will be a positive association between the uniqueness of a bank’s human resources and its performance*”.

H.1.1.3: “There will be a positive association between the immobility of a bank’s human resources and its performance*”.

H.1.1.4: “There will be a positive association between the inimitability of a bank’s human resources and its performance*”.

H.1.1.5: “There will be a positive association between the non-substitutability of a bank’s human resources and its performance*”.

The results of the canonical functions reported in Table (7.3) provide direct evidence that there is a significant and strong magnitude (i.e., canonical coefficients and redundancy measure) of relationship between the human resource attribute of unique and ROA, net bank operating margin, net profit margin, operating efficiency, employee productivity, market-share loans, and market-share deposits. Specifically, the results indicate that a significant and strong magnitude of relationship exists between the human resource attribute of value and ROA, net bank operating margin, net profit margin, operating efficiency, and market-share loans. Notably and importantly the research showed that there is a non-significant relationship with employee productivity, although it was strong in terms of magnitude.

The results of the canonical functions also argue a significant and strong magnitude of relationship between the human resource attribute of imperfectly substitutable and ROE, net bank operating margin and market-share loans. However, there is a significant and weaker magnitude of relationship with market-share deposits. The results also indicate a non-significant but strong magnitude of relationship exists between the human

resource attribute of imperfectly imitable and market-share loans and market-share deposits.

This study also indicates that there is a significant implication concerning the criticality of human resources. The results also suggest that employees are indeed a potential source of value. Specifically, and in keeping with the HRBV model, the human resource-performance relationship is statistically significant when Line and HR Managers perceive their employees' skills, experiences, and commitment as unique, valuable, hard to copy by competitors, difficult to transfer outside their banks and of little utility to competitors.

In addition to the above, the impact of these human resource attributes on performance provides support to the assertion that the business strategy should be formulated on a firm's resources (particularly employees' competencies and behaviour). Indeed this study's results indicate that banks should be encouraged to place special emphasis on and investment in the above attributes when they design their human resource strategies.

From the Line and HR Managers' interviews the HR Manager in BBME, Ms. Iman Mahfood, substantiates the statistical results and indicates that employees have contributed to the bank's performance through their innovation and developmental initiatives. The quality of the services in BBME's departments improved due to employees' initiation of new ideas and suggestions which are being extracted from the interaction with the customers.

Iman's views are backed up by the retail banking manager in BBME, Ms. Maraim Buchairi, who indicated that the bank has succeeded to cope efficiently with the intense competition in Bahrain by having employees with attributes of unique competencies, innovative, commitment, flexible, ability to work in teams (within and across departments such as personnel and corporate departments). The result is that employees at all levels are a valuable and driving force for the bank's success and competitiveness.

the Manager of Customer Services at Al-Ahli Bank, Ms. Dalal Abdulaziz contends similar views on the criticality of employees to performance and indicates that Al Ahli succeeded to develop unique and valuable employees' competencies that are difficult to imitate, substitute and imperfectly mobile.

Ms. Dalal explains that involvement between the management and employees has enhanced the contributions of employees to operations efficiency, while interactions with customers has assisted the bank to create products and services and modify existing ones according to market requirements.

The HR Manager at Al-Ahli Bank, Mr. Howard Winter, asserted that the Al-Ahli employees are unique and a valuable resource in terms of their skills and knowledge that emerged from the bank's culture, Al-Ahli-specific training, the job rotation, the job enrichment, expertise transfer through employees' involvement and participation in managing their work. He added that these practices have turned employees of Al-Ahli to be unique resources regarding the bank's technical and cultural competencies. 'Such unique competencies have added high value to the bank, particularly with the prevalence of dedicated and committed employees who are influenced by cooperative culture.

Furthermore, Mr. Winter states that 'an employee's competence contribution to value is measured by that employee's achievement of the stated performance objectives which are specified on a yearly basis and

monitored through performance appraisal and a performance rating system, and that performance objectives are extracted from an annual business plan’.

Further support to the influential role of employees on performance is provided by the Consumer Manager at Standard Chartered Bank, Mr. Chanderkhan, indicating that employees of the bank possess unique and valuable skills and knowledge because these are competencies that are emerging from the internal working conditions (e.g., teamwork, involvement, interaction with customers, job rotation) and culture (e.g., top management encouragement to innovation and multi-skilling) of the bank and have substantial influence on the success of the bank. These ingrained competencies are the ones the bank depends on to achieve success, higher levels of performance and profitability.

In support of the above argument, The HR Manager of Standard Chartered Bank, Mr. Bob, stresses that employees of the bank are the main source of value and their contribution to value is measured by the achievement of a set of specific objectives. In his comments on how valuable the employees are to the bank, he explains that “employees are absolutely critical and a

vital key-performance driver in this service industry (i.e., commercial banking) where people and their ability to interface with the customers assist the bank to understand the customers' needs, knowledge and perception of the products and their utility. Their unique skills and innovativeness have substantial impact on products and services developments, which in turn determine the level of the bank's successes.

It should be noted that the results provide partial support to the hypotheses that the human resource attributes of value, unique, imperfectly imitable, and imperfectly substitutable were a sustainable influence on the banks performance over a four-year period. However, it must be pointed out that the human resource attribute of imperfectly substitutable impacts fewer performance measures than do the attributes of value and uniqueness. Furthermore, the attribute of imperfectly imitable affects in a significant way, only the market-shares loans and deposits.

The study also found that the canonical correlation analysis reveals a surprising finding. Specifically, the human resource of imperfectly mobile as perceived by the managers does not emerge in the analysis at all. This might be attributed to some of the factors such as the fact the human

resource mobility among the commercial banks over the period between 1987-1997 indicates an extremely low percentage of employees' mobility. Further to this, the statistical analysis (hypothesis 4.3), which indicates significant influence of internal placement on banks' performances, might explain the lack of impact of the attribute of HR imperfect mobility on performance. This seems to have substantial influence on employees' high retention rate, particularly when the statistical analysis did not show any influence on employees' imperfect mobility factor on performance measures.

Further to this, the interviews with Line and HR Managers stated that the salaries across the commercial banks have a substantial impact on employees' retention and imperfect mobility. Commercial banks carry out salary surveys to ensure two main objectives to provide fair wages and to maintain staff retention (i.e., employees' imperfect mobility across banks). It seems that employees in the banks witness high retention among employees at all levels, which in turn develops a clear perception that such a factor does not exist or cannot be visualised as a critical determinant factor of performance.

7.2.1.2. Relationships Between Human Resource Attributes and Performance (Employees' Perceptions)

The results of the canonical functions reported in Table (7.3) provided clear evidence that there is a significant and relatively strong magnitude of relationship between the human resource attribute of value and ROA, ROE, net profit margin, operating efficiency, while the relationships with employee productivity, market-share loans, market-share deposits are statistically significant, but very weak in terms of magnitude. The results of canonical functions also indicate non-significant but relatively strong magnitude of relationship between the human resource attribute of imperfectly mobile and ROE. In this study, the attribute of imperfectly mobile played a less important role than that of value.

The results indicate a number of significant implications for the HRBV model and practitioners. First, employees of the banks viewed that the banks' success and profitability were related to the employees' competency and commitment. Second, the comparison of the results of the relationship between banks' performances and employee competence and organisational climate reported in Table 7.3 emphasise the complementary aspects between the tangible and intangible resources (human resource skills and

commitment) as a potential source of sustainable performance. Third, a comparison of the results reported in the previous section on the relationship between human resource attributes and performance (Line and HR Managers' perceptions) and the results of this section indicate that the findings on the relationship between the human resource attributes and performance provide unbiased data on the criticality and value of employees to banks' performances, since these results are based on the perceptions of two independent types of respondents: Line and HR Managers and Employees (Schular and Jackson, 1987). For the practitioners in commercial banks, this consistency between the views of both managers and their employees should encourage the decision makers in these banks to invest in people, as part of the human resource strategy, and to build their performance around human resource competencies and commitment.

Therefore, these statistical results suggest a very conservative estimation about the extent to which the employee was a valuable resource that should be dealt with as a strategic Assets.

The statistical results also provide partial support to the hypotheses and indicate that the human resource attributes of value and imperfectly mobile

did have a sustainable influence on the banks' performances. However, the human resource attributes (employees' perceptions) of unique and imperfectly imitable did not emerge in the analysis. This might be attributed to various justifications. First, employees of the banks may not have the necessary experience and the knowledge to perceive the concepts used in the questionnaires such as the attributes of unique and imitable and visualise their influence on the employee's and bank's performance. This is very crucial factor particularly since these concepts are not well known to practitioner in various industries, not only in commercial banking sector. Second, due to nature of employees' jobs, that is non-supervisory employees may lack leader skills and insight to depict the relationship between these attributes and performances. It is also might be related to the limited managerial knowledge and experience of employees that hinder them from perceiving the connection between these attributes and performances.

7.2.2. Relationships Between Differentiation Strategy and Performance (CEOs and Line and HR Managers' Perceptions)

H.2.1: "There will be a positive association between the extent of strategic differentiation displayed by a bank and its performance*".

The results of the canonical functions reported in Table (7.3) provide significant evidence of a strong magnitude (i.e., canonical coefficients and redundancy measure) of relationships between ROA and each of the differentiation strategy variables. These strategic variables include: a1 (our bank offers a narrow range of products), a5 (our bank has a variety of customers), a6 (the needs of our customers are very similar to one another), a7 (our bank offers many different services to customers); ROE and variables a1, a2 (our bank establishes and maintains stable product-market posture); net bank operating margin and the variables a1 and a7; net profit margin and each of the variables a1, a5, a6, a7; operating efficiency and each of the variables a1, a5, a6, a7; employee productivity and each of the variables a1, a5, a6, a7; market share-deposits and the variables a1 and a5, significant but weak magnitude relationships with a6, a7, a3 “Our bank is at the forefront of innovation and development” and market share-loans showed significant, but weak, magnitude relationships with a1, a2 and a5.

The results of the canonical functions for differentiation strategy variable a9 (the characteristics of our products are modified frequently) and banks’ performance measures, except for ROE, do, however, indicate non-significant relationships. However, the results of the redundancy measure

and the canonical correlation coefficients for the relationships between variable 9 and ROA, net bank operating margin, net profit margin, operating efficiency, employee productivity, market-share loans, market-share deposits indicate that the magnitude of the relationships between variable 9 and the individual variables in each performance measure variant were real and strong. That is, the non-significant canonical correlations between the predicted values of each performance variant and the predicted values of variable a9 in each canonical function do not mean that variable a9 is not related to each of the actual values or scores of the individual dependent variables that compose each of the performance variant. Similarly, the relationships between variables a3 and net profit margin and operating efficiency are strong and justifiable as well.

The analysis of the results indicates significant implication. First, it provides support to strategy theorists that differentiation strategy is a potential source of performance (i.e., value-creating strategy). Second, the strategy variables, particularly in a1, a5, a6, a7, a9, are factors critical to the commercial banks' success in the sense that product innovation via product modification and product breadth and differentiation are strong predictors of the banks' performance. What this could therefore suggest is that banks, specially those

with below industry-average performance, may need to emphasise all these variables in order to compete rigorously in the market.

The results also provide evidence that the two strategy variables (a3 and a9) are correlated with all the banks' performance measures, except that concerning how to operate efficiently. What these results suggest is that a moderate differentiation strategy rather than high differentiation strategy may be more suitable for competition in commercial banking in Bahrain.

The senior Line and HR Managers in the sampled banks who have been interviewed for this study support the results of the canonical correlations that suggest that a moderate differentiation strategy is perceived as the appropriate route for competition in the commercial banking industry in Bahrain.

The Retail Banking Manager in BBME, Ms. Mariam Buchairi, advocates that the Bahrain commercial banking industry is characterized by intense competition, slow growth and severe competition among the commercial banks in a small geographical area. This situation imposed restrictions on the banks to provide a wide variety of products and services. She argued

that these features of the market would require a moderate differentiation strategy where there is slow business growth and, changes in the needs of the market and customers.

This view is backed up by the Consumer Department Manager in Standard Chartered bank, Mr. Chanderkhan, who indicated that the bank is competing in a relatively stable, slow growing and intense competitive business environment which required a business strategy capable of maintaining moderate products and services differentiation as well as maintaining a constant fit between internal and external environments. The strategy maintains change in services and offerings according to the current and emerging requirements of the customers.

Further to this, he indicated that the bank has considered a moderate differentiation strategy designed on the basis of constant fit and alignment between the business environment and the internal environment (i.e., HR practices, HR competency, culture, and involvement).

The views of the Standard Chartered HR Manager, Mr. Bob, are consistent with the Consumer Department Manager and contend that these services are

introduced through the front-line workers to the customers who are requested to solicit feedback and views from the customers to carry out necessary modifications on these newly introduced products and services.

In similar strategic competitive mode the Manager of Customer Services at Al-Ahli Bank, Ms. Dalal Abdulaziz, indicated that Al-Ahli adopted a moderate differentiation strategy based on constant modifications in the products and services according to the changing needs of the customers which helped the bank to sustain its high performance. According to Ms. Dalal, front-line workers contribute around 80% of the views that lead to the changes in the products and services.

Ms. Mariam's argument is consistent with the views of other banks' senior managers regarding the impact of a moderate differentiation strategy on achieving high levels of performance. She contends that a moderate differentiation strategy in BBME has helped the bank to maintain its high performance, reserve its market share that focuses on a specific type of customers, and maintain quality services and products for quality customers. It is well perceived that the level of change in this service industry would require minor changes in quantity and quality of services and products.

Therefore, successful banks would need to base their competitive strategy on understanding these limited changes and incorporate these changes in modifying the current products and services.

The literature on commercial banking and business strategy in Western countries and the Gulf Cooperative Countries (GCC) is consistent with contentions of the Line and HR Managers in sampled banks and suggests that product differentiation and innovation is a clear strategic route for competition.

However, it generally seems that banks in Bahrain have chosen to base moderate differentiation on modification of their products and services rather than creating new products and offerings to their clients as a route to compete in their market. Some of the potential reasons for such a strategy option are as follow. First, the commercial banking market in Bahrain is characterized by intense competition, a very small geographical area and a small population (about half a million residents) (overbanking). Second, the banks have focused mainly on a small business segment for a long period of time (i.e., the market shift from corporate banking to retail banking started since mid-1986) which facilitated rapid duplication of new products and

services. This, in turn, encourages frequent modification of products and services rather than innovating new products. Third, the living standards and business development and growth in Bahrain did not increase over the past years in order to encourage the banks to respond rapidly with and new products and services to fulfil the emerging markets with their new requirements. It seems from this study, more realistic, to base competition on moderate differentiation to respond to a moderate base of change (e.g., the significant correlation between the variable of frequent modification of product characteristics and seven out of eight banks' performances measures).

The conclusion on moderate differentiation is a highly justifiable route of competition in the commercial banking industry, particularly when the results show that 'frequent modification of product characteristics' was a critical source of the banks' performances.

The overwhelmingly significant correlations provide partial support to the hypothesis and suggest that a moderate differentiation strategy can be a source of sustainable high performance. However, it must also be noted that not all strategy variables impacted significantly on each of the performance

measures. For instance, the canonical correlations between a4 (The characteristics of our products differed a great deal from one another.) did not affect any performance measure. Furthermore, a8 (Our business procedures have changed several times in the last eight (8) years) showed an impact only on DPMKSH.

7.2.3. Relationships Between Employee Competence and Performance (Employees' Perceptions)

H.3.1: "There will be a positive association between the level of employees' competence within a bank and its performance*".

The results of the canonical functions reported in Table (7.3) provide direct evidence that there is a significant but weak magnitude of relationship between employees' skills and abilities and ROA, net profit margin, operating efficiency, and market-share loans; and between employee adaptability and ROE, and employee productivity. The results also indicate a significant and relatively strong magnitude of relationship between employee effectiveness and ROA, net profit margin, operating efficiency, employee productivity, while the relationship with market-share deposits was significant but weak in terms of magnitude.

The results provide significant insights and understandings concerning the relationship between human resource competency and performance. Specifically, the results provide evidence that the banks' performances were directly related to the extent to which their employees were professionally competent. Second, a comparison between the results reported in Table (7.3) regarding the relationship between the banks' performances and human resource attributes (as perceived by Line and HR Managers and Employees), HR practices and organisational climate, provides consistent evidence to the importance of employees' competency to performance. Indeed this finding is in keeping with the HRBV model, that as banks adopted internally consistent human capital-HR enhancing systems (Youndt et al., 1996) and were more inclined to acquire, develop and retain human resource with firm-specific competencies, employees became more unique (firm-specific), valuable, imperfectly mobile, imperfectly substitutable, and more associated with high levels of performance over a longer period of time.

The interviews with Line and HR Managers supported the results of the statistical analysis on the influence of the employee's competence on performance. The HR Manager in Standard Chartered Bank stated that

employees' competencies have influenced the bank's performance because those employees possess multi-skills and are more flexible and adaptable to move from one task or job to another, which make them capable of performing various responsibilities at work.

The HR Managers' view is backed up by the Consumer Manager in Standard Chartered, Mr. Chanderkhan, who commented that 'more than 40% of the employees' competencies that, are unique and bank-specific (i.e., grown and developed from within) are not easily available in other commercial banks or in the market. In addition to that, employees are able to comply with the bank's request to focus on performance approaches rather than to follow literally job descriptions which turn them to be more valuable and influential on performance". This has contributed to the selection of Standard Chartered Bank as the best foreign bank in Bahrain last year.

Al-Ahli Bank's HR manager supports the previous argument and contends that "comments received from across the country state that front-line workers who are dealing with the customers are cheerful, flexible, more culturally oriented, more open minded and supportive which creates a

distinctive and unique feature that has impacted upon the bank's performance. To the contrary, I see from my experience that rigidity in the National Bank of Bahrain and Bank of Bahrain and Kuwait has caused their employees to be much less flexible”.

Similarly, The HR Manager at BBME, Ms. Iman, explained that “employees’ competencies influence on performance emerged from the empowerment approach adopted by the bank, where centralisation was disregarded and employees are given the authority to take decisions in dealing with various aspects of performance particularly in dealing with and satisfying customers needs”.

The above contentions are backed up by the Retail Manager at BBME, Ms. Mariam Buchairi, who indicated that “employees of the bank possess unique skills and experiences that emerged from the bank's culture and are shaped by the employees’ continuous involvement with top management and interaction with the customers”. Furthermore, these skills which can perform multiple jobs have helped the bank to develop steadily and maintain its special customers in an environment characterized by very

intense competition and slow business environment growth over the past years and to achieve BBME-stated performance objectives.

Finally, the statistical results provide only partial support to the hypothesis and indicate that an employee's competence had sustainable influence on banks' performance.

7.2.4. Relationships Between HR Practices and Performance (Employees' Perceptions)

H.4.1: "There will be a positive association between the effectiveness of recruitment and selection practices within a bank and its performance*".

H.4.2: "There will be a positive association between the impact of remuneration practices within a bank and its performance*".

H.4.3: "There will be a positive association between the importance of internal placement practices within a bank and its performance*".

H.4.4: "There will be a positive association between the effectiveness of training and development practices within a bank and its performance*".

The results of the canonical functions reported in Table (7.3) provide evidence that there is a significant and relatively strong magnitude of relationship between human resource training and net profit margin, operating efficiency and employee productivity. However, the results

suggest very clearly that there is a significant and weak magnitude in the relationship with market-share deposits.

The results also indicate a significant and relatively strong magnitude of relationship between selection and net profit margin and market-share deposits. However, there is a significant and weak magnitude in the relationships with operating efficiency and market-share loans. The results indicate that the relationship with ROE was non-significant but relatively strong in terms of magnitude.

Furthermore, the canonical functions indicate a non-significant but relatively strong magnitude in the relationship between remuneration and ROA, net profit margin, employee productivity; and between internal placement and ROA, net bank operating margin, net profit margin, operating efficiency, and employee productivity. The canonical coefficients associated with the canonical functions for remuneration and internal placement indicate that these HR practices were strongly and justifiably related to the aforementioned banks' performance measures.

The analysis of the results contains a number of significant and important implications. First, the results of the study provide evidence that internally consistent human capital-enhancing HR systems (Youndt et al., 1996) were related to the banks' financial performance measures. This could mean that investment in these practices is associated with higher levels of banks' profitability, lower levels of cost, and greater employee satisfaction and productivity. Second, the results suggest that as banks have better success in selecting, training, and motivating their employees, the latter became increasingly committed and more associated with higher levels of the banks' performance.

The results also suggest that the banks' success is contingent on effective selection of qualified employees (i.e., competency acquisition), effective training (i.e., competency renewal and development), and an effective motivation strategy. All of these work to ensure that employees' competence and behaviour is in line with the bank's goals (i.e., competency retention). It seems that one recommendation emerging from this study is for banks to ensure that their designs of HR practices are human resource-dependent.

The Line and HR Managers in the sampled banks have indicated that the banks' higher levels of performance have been substantially influenced by the external consistency between business strategy and HR practices and internal consistency between HR practices. The views of Line and HR Managers provided strong support for the results of statistical analysis and are consistent with the contention of HR theorists who argued that HR practices do impact an organisation's performance. More specifically, the study provided empirical qualitative and quantitative evidence on the influence of both types of consistency (external and internal) on banks' performances.

The HR Manager at Al-Ahli, Mr. Winter, stated that the bank succeeded in becoming a dynamic organisation in 1993 by maintaining external consistency between business strategy and HR strategy. Business strategy identifies the scope and functions of business, while HR strategy provides flexible, competent and adaptable employees to ensure efficient implementation of these functions. However, both strategies serve the bank's mission which focuses on customers.

Mr. Winter's views on the role and influence of HR practice on an employee's and bank's performance are consistent with Ms. Dalal who contends that internally consistent HR practices were underpinning the success of Al-Ahli Bank.

Standard Chartered is another successful bank advocating the same argument as Al-Ahli Bank and indicated through its HR Manager that the bank's success was influenced by maintaining an external fit between business strategy and HR practices on the one hand, and internal consistency between HR practices on the other hand. For example, the business strategy of the bank determines employees' competencies in which changes in business strategy will specify the competencies needed to implement the activities, while the internally consistent HR practices play a supporting role in ensuring proper selection, proper bank-specific training programmes, and relevant reward system.

The Consumer Manager's views at Standard Chartered Bank are consistent with the HR Manager's contentions. He indicated that Standard Chartered is guided by the business strategy where changes in business strategy require

modification in HR strategy to ensure effective implementation of business plans which are developed in light of the business strategy.

The HR Manager in BBME also emphasised internal consistency of HR practices and indicated that the selection of new employees in BBME is based on employee-job fit and employee-department fit. That is, the bank will consider the individual competencies once they are compatible with the requirement of both the job and the department. This has helped the bank to acquire competent staff that are able to meet the performance requirements at different levels of the job, department and across departments. The bank believes that the success of its operations, achievement of higher levels of performance and customer satisfaction is attributed to the quality of competent employees.

Furthermore, the Retail Banking Manager at BBME, Ms. Maraim strongly contended that the HR practices in BBME are internally consistent as well as externally consistent with the business strategy. The changes in the business requirements are reflected in the strategy which, in turn, influences the nature of HR practices. Such harmony is well articulated in the sense

that both the business strategy and HR practices are designed to achieve the goals of BBME.

Line and HR Managers in the commercial banks indicated that HR selection has assisted the banks to recruit competent employees and viewed that selection as having a substantial impact on banks' performances.

The HR Manager at Al-Ahli, Mr. Winter, indicated that "human resource selection is very critical to the bank's successful performance". The bank selects its staff according to a competency profile needed to perform specific tasks of the job. The recruitment at Al-Ahli usually holds a level of skills up to 50% and the remaining skills are developed once the employees start their work at the bank. Al-Ahli uses occupational standards to see the ability of the applicants and their suitability to the bank's operations.

Ms. Dalal backed up the HR Manager and stated that the selection of staff in Al-Ahli Bank is based on an intangible aspect of the employee's personality which is incorporated in the interaction ability with the customers and the ability to understand the features of the products and services. In fact, the employee's ability to deal with customers becomes a distinctive capability

that distinguishes the bank from its competitors, particularly when we are considering an industry with almost identical products and services in a small geographical area. Furthermore, the bank focuses on congruence between the bank's goal and employee's goal. This congruence, which incorporates a wide spectrum such as customer satisfaction, culture and values, has helped the bank to meet successful performance requirements.

In the Standard Chartered Bank, selection on the basis of a competency profile was seen to be a beneficial and influential tool that has an indirect impact on the bank's performance. The bank has been able to attract and recruit the right calibre that contributed to the improvement of performance quantity and quality. As evidenced, the bank in 1996, won the 'best foreign commercial bank prize' which is attributed to a large extent to the type of employees the bank successfully selected.

The Consumer Manager's views at Standard Chartered are consistent with the HR Manager. He stated that the influence of selection on performance in the bank was due to three interrelated factors. First, there is external consistency between business strategy and HR practices which allowed the bank to successfully recruit relevant competencies according to business

requirements. Second, selection was based on a competency profile that determined the needed skills and abilities for performing jobs. Third, selection emerged from the bank's culture and work conditions and processes.

Internal fit at various levels was emphasised in BBME. The HR Manager and the Retail Manager at BBME argued that the bank has succeeded to select competent employees to fill jobs at the entry and senior levels.

Internal placement has shown its influence on the employees' and banks' performances. According to the interviewed Line and HR Managers, the banks' HR strategies emphasise internal placement by which employees of the banks are given first priority to fill any senior vacancies once they emerge. Employees would in turn consider these opportunities as a motive to exert more effort and dedication to improve their performance and increase the productivity of the bank.

The Retail Manager at BBME stated that internal placement is perceived as crucial for filling senior positions in the bank, which gives the message that management appreciates the contributions of competent employees.

Furthermore, internal placement increases the competition among employees to improve their performance to be entitled to fill the senior posts particularly those employees who hold bank-specific competencies which are culturally nurtured.

This seems to have substantial influence on employees' high retention rate, particularly when the statistical analysis did not show any influence on the employees' imperfect mobility factor on performance measures.

The HR Manager, Mr. Winter and Consumer Manager Ms. Dalal, contended that Al-Ahli Bank's performance is influenced by the application of internal placement to fill senior positions. Internal placement achieved two interrelated objectives to provide the opportunity to current staff to grow, develop and satisfy and to maintain a high level of performance. Furthermore, the bank considers its growth as continuity of the growth of its internal pool of staff that possesses bank-specific competencies.

The HR Manager at Standard Chartered argued that internal placement has a substantial impact on achieving employees' career progression, satisfaction, commitment and loyalty and passes the message that employees with bank-

specific competencies are appreciated and given the priority to hold senior positions in the bank. Such culture influences employees to align their competencies and attitudes towards the bank's goals achievement.

In line with the HR Manager's views at Standard Chartered, the Consumer Manager indicated that the bank adopts a sound policy that it does not raid competitors for their competent staff. Internal placement is being viewed as strategy option for senior positions due to the belief that the bank's staff must be given the opportunity to hold senior jobs since they hold bank-specific competencies which are strategy relevant as well. Standard Chartered found that internal placement has affected both employees' morale and satisfaction and the bank's performance.

The Retail Manager at BBME holds similar beliefs about internal placement, which is perceived as crucial for filling senior positions in the bank, and passing the message that management appreciates the contributions of competent employees. Furthermore, the bank's management has seen that internal placement increases the competition among employees to improve their performance to be entitled to fill the

senior posts, particularly those employees who hold bank-specific competencies which are culturally nurtured.

The interviewed Line and HR Managers have emphasised the substantial impact of reward and HR practices as an internally consistent package of practices on both employees' and banks' performances.

On his comment on the impact of reward systems on bank's performance, Mr. Winter indicated that Al-Ahli has an objective rewards system which is based on employee performance. The system has shown that efficient and competent employees who have contributed to their job performance were given high ratings according to a performance appraisal rating system.

Mr. Winter added that the reward system, based on performance or achievement, has influenced the success of the bank over the past four years. Employees' morale was high and satisfaction was seen as a strong driving force in the success of the bank. Of most importance, it has assisted the bank to align employees' attitudes and competencies to the bank's achievement of its goals.

The internal consistency between reward and performance appraisal has assisted the banks to reserve their competent human resources. For example, the HR Manager explained that “the changes that started six years ago in Al-Ahli, including the pay scale, have influenced the retention of the bank’s competent staff”. The salaries across the commercial banks have a substantial impact on employees’ retention and imperfect mobility. Commercial banks carry out salary surveys to ensure two main objectives to provide fair wages and to maintain staff retention (i.e., employees’ imperfect mobility across banks).

The Retail Manager at Al-Ahli Bank, Ms. Dalal, holds similar views and added that the bank adopts a performance-based reward system in which the reward is determined by the employee’s contribution to the achievement of performance objectives. This practice has not only affects performance improvement but also increases employees’ commitment as well as strengthens the relationship between the bank and its staff. A reward system assisted the bank to pass a clear message that employees’ dedication, commitment, and loyalty are well perceived, appreciated morally and financially compensated. Furthermore, the bank emphasizes a link between reward and profitability. That is, employees were rewarded on the basis of

their contribution to performance and the bank's annual profitability that will determine the incentive rate for each individual employee.

The HR Manager at Standard Chartered backed up Al-Ahli managers' views and argued that employees' retention and imperfect mobility in the bank is affected by three main factors competitive salaries, morale and working conditions, and the opportunity to grow and develop. Furthermore, employees' imperfect mobility has been substantially influenced by morale and involvement. That is, employees' morale is influenced by their employees' involvement in discussing work-related issues and both morale and involvement helped create employees' satisfaction, which in turn affects performance.

Furthermore, the Consumer Manager at Standard Chartered reported that the reward system that is based on performance has influenced employees' productivity. He indicated that job security and rewards are determined solely by the employee's contribution to performance in the sense that competent staff who perform well will be appreciated and recognized while those who fail to meet their performance objectives will find it difficult to

work in a culture which appreciates only the dedicated and high-performance employees.

The Retail Manager at BBME emphasised the previous contentions and argued that a reward system that is based on performance has assisted the bank to appreciate and recognize dedicated employees, while at the same time encouraging fair competition. BBME has specific types of incentives that are related directly to the employee's contribution and added value to profitability that is measured according to certain criteria.

The Line and HR Managers in the banks advocated the impact of bank-specific training and competencies on employees' development and performance. Specifically, they argued that bank-specific competencies that are shaped by culture (i.e., intangible Assets) and business strategy have assisted the banks to achieve their intended high levels of performance.

The HR manager at Al-Ahli Bank emphasised the external consistency between business strategy and training and its impact on performance. Mr. Winter explained that training and development at Al-Ahli is shaped by the bank's mission of customer satisfaction and has substantially influenced the

employee's competency development and the bank's performance. He indicated the bank runs training and development according to the mission, business requirements and culture of the bank. The training is aimed at developing the right competencies to serve the goal of customer satisfaction. For example, soft skills such as communication and problem solving support the bank's mission and business strategy.

Furthermore, the bank applies job rotation by which employees are exposed to new jobs to appreciate other employees' roles in the bank, to develop their multi-skills and to become more appreciative of the business at the bank level. The wide exposure provided to employees improves their competencies and makes them a source of high added value.

The Retail Manager at Al-Ahli, Ms. Dalal's argue that the developed competencies have shown substantial influence on employees' and the bank's performances. Al-Ahli focuses on bank-specific training to develop employees' competencies. The bank believes that it has its own culture, operating system and procedures that would require tailor-made training programmes. Job rotation is considered to achieve many interrelated

objectives such as multi-skill development, employee's flexibility, adaptability and job enrichment.

The HR Manager at Standard Chartered hold's a strong belief that the employee's and the bank's performance are also influenced by bank-specific training which aims to equip employees with skills needed for efficient performance. They develop their training programmes according to requirements such as customer services and developing performance appraisal skills. These skills are compatible with the bank's competencies specified in the competency profile.

Consistent with the data reported above and advocated by senior managers in other banks, the HR Manager at Standard Chartered argued that career development is utilised to encourage employees to improve their performance. Career development practice encourages competition among the staff to exert more effort toward the achievement of their personal and the bank's goals. Furthermore, the bank is committed to internal placement that is viewed as one way to appreciate employees' contributions to the bank's performance.

The HR Manager at BBME stated that training and development in the bank are based on bank-specific training which is carried out through various ways, such as tailor-made training and job rotation. These types of training have helped the bank to create unique competencies that reflect the quality services provided by the bank to its customers. For example, the regional office of BBME designed tailor-made training that incorporates the international experiences of BBME and shares it with the employees bringing about an effective transfer of unique and bank-specific knowledge and experiences.

The Retail Manager at BBME holds similar beliefs and advocates that training and development are based on BBME-specific systems where the tailor-made training programmes and on-the-job training are aimed at developing employees' competencies in accordance with the business strategy operations in the bank. Furthermore, these types of training are designed according to the changing nature of the bank's operation as well as changes in customers' attitudes and needs.

The results provide partial support for the hypotheses and indicate that HR practices, specifically in terms of employees' competency and behaviour,

can have a sustainable influence and impact on the banks' performance. Indeed, it seems that each one of the variables pertaining to HR practices does impact and will exert an influence on a substantial number of performance measures.

7.2.5. Relationships Between Style of Management and Performance (Employees' Perceptions)

H.5.1: "There will be a positive association between the extent of participative management in a bank and its performance*".

The results of canonical functions reported in Table (7.3) provide evidence that there is a significant and relatively strong magnitude of relationship between human resource utilisation and ROE, net profit margin, operating efficiency, employees' productivity, market-share loans, and market-share deposits. However, the findings found that the relationship with ROA and net banking operating margin were significant but weak in terms of magnitude. The results also indicate a significant and relatively strong magnitude of relationships between human resource involvement and REO, net profit margin, operating efficiency, employee productivity and market-share deposits. However, the relationships with ROA, net bank operating margin and market-share loans were weak in terms of magnitude.

The results provide for a number of significant conclusions to be made. First, the results found that employees' involvement (i.e., participative management) and utilisation affected to a significant degree the banks' performances. This effect, as an intangible resource, was found to be critical to sustained high performance since it emerged from, and had been shaped by, social interaction and complexity, causal ambiguity, and the banks' culture and history all of which were imperfectly imitable, imperfectly mobile, and imperfectly substitutable.

Furthermore, the relationship between banks' performance and organisational climate reported in the table (7.3) shows that employees' involvement and utilisation complemented and enhanced employees' commitment, organisational motivation, and the informal organisation. Employees' involvement and utilisation turned out to be a tacit source of performance. That is, the presence of employees' positive attitudes toward the achievement of the banks' goals (i.e., sense of ownership) may be attributed to, and/or associated with, the presence of employees' involvement and vice versa (Cotton et al., 1988; Ford et al., 1992).

The HR Manager at Al-Ahli states that the bank has a strong belief and desire to incorporate employees' involvement and participation in the bank's culture to secure maximum utilization of employees' talents and skills and to achieve the bank's goals. The employees attitude survey carried out by the bank indicated that the bank's strong conviction of management by participation has helped Al-Ahli to achieve simultaneously employees' satisfaction and the bank's goals. Employees are able to discuss work-related issues in an open environment and to give their opinion without any reservations and fear. The outcome of employees' involvement and satisfaction is the employees' competency and commitment alignment to the bank's goals and achievement.

Ms. Dalal the Customer Services Manager at Al-Ahli backed up the HR Manager's views and stated that the bank's culture views employees' commitment and involvement as interrelated having a substantial impact upon the employees' and bank's performances. In Al-Ahli Bank, the employees do not feel that decisions are imposed on them. They believe they are part of the decision making process which, in turn, ensures their commitment toward the bank's objectives. It is believed that employees' involvement influences staff satisfaction, commitment, and performance.

Consistent with the previous argument, the Consumer Manager at Standard Chartered Bank indicated that involvement is another of the bank's cultural benchmarks. Employees' participation in criticizing the bank's ways of managing work, people and HR practices has created a culture of cooperation and understanding that, in turn, enhanced employees' satisfaction, retention and commitment. It is worth noting that 'the financial incentives incorporated in various rewards schemes are not the driving force for a high-retention rate and high performance in the bank per se'.

The HR Manager at Standard Chartered Bank emphasised the Consumer Manager's point of view and stated that the corporate strategy of the bank is based on the belief that involvement is crucial for achieving high performance. Employees will share in the management decision making which in turn makes them feel they are a strategic asset and a major contributor to the bank's success and performance. Involvement of the bank's employees in managing their work-related affairs has enhanced employees' satisfaction which influenced their dedication to achieve higher levels of performance.

The HR Manager in BBME argued that work culture typified by teamwork and cooperation between managers and employees has contributed to the value added by all staff. This total involvement also improved employees' performance quality toward the bank's customers. As well, top management believe that the new staff ideas and initiatives are crucial for the development of the bank's services and products and appreciate such improvements.

The Retail Manager at BBME stressed the influential role of employee involvement and explained that the bank considers teamwork as an approach for business development. Teams are formulated from different functional areas such as personnel, consumer and corporate departments to discuss services and products with the aim of providing superior quality services. Teams at BBME, incorporating staff from top management, middle management and front-line workers, have improved the services provided to specific customer segments who value quality of services apart from the cost of these services.

Indeed the implication of these results is that employees' involvement and utilisation constitute a significant intangible source of high performance;

and, therefore, the banks would be wise to emphasise participation as a basis to manage their employees. However, the style of management variables of “managers’ support to employees”, “goal participation” and “decision participation” did not figure in the analysis.

Furthermore, the statistical results only provide partial support to the hypothesis and indicate that employees’ involvement and utilisation in managing their work had sustainable influence on the banks’ performances.

7.2.6. Relationships Between Organisational Climate and Performance (Employees’ Perceptions)

H.6.1: “Banks displaying a more positive organisational climate are more likely to display higher levels of performance*”.

The results of the canonical functions reported in Table (7.3) provide clear evidence that there is a significant and relatively strong magnitude of relationship between goal commitment and ROE, and market-share deposits. However, there is a significant and weak magnitude of relationship with net profit margin, operating efficiency, and employee productivity. Furthermore, the relationship with market-share loans was not significant

but nevertheless relatively strong in terms of magnitude. The results also indicate a non-significant but relatively strong magnitude of relationships between goal responsibility and market-share deposits and between the informal organisation and net profit margin.

The analysis of the results suggests the following conclusions. First, out of the five variables of organisational climate, “goal commitment” emerges as a crucial factor and was found to impact on quite a number of performance measures. However, “job satisfaction” and “organisation motivation” did not figure in the analysis. The relationship between banks’ performances and HR practices reported in Table (7.3) indicate that the level of management motivation and the employees’ commitment to the organisation played a significant and influential role in affecting banks’ performances. This finding provides support to the HRBV model that employees’ contributions to performance is substantially related to employees’ commitment, particularly in the presence of effective HR practices in terms of remuneration.

Furthermore, the study found that employees’ commitment to an organisation is human resource-dependent, their contribution to the banks’

success and value is imperfectly imitable, imperfectly mobile, and unique. Given this, it would seem plausible that banks should be encouraged to provide and build an organisational climate that is human resource dependent.

However, it is to be noted that the statistical results provide only partial support to the hypothesis and suggest that the intangible aspects of human resources such as commitment and sense of responsibility, have a sustainable and direct influence on the banks' performances.

7.2.7. Relationships Between Organisation and Performance (Employees' Perceptions)

H.7.1: "There will be a positive association between the use of human resource enhancing work systems and bank performance*".

The results of canonical functions reported in Table (7.3) provide direct evidence that there is a significant and relatively strong magnitude of relationship between feedback (JCM) and ROA. It also indicates a significant but weak relationship between operating efficiency, market-share loans and market-share deposits. However, the relationship with ROE was

non-significant but relatively strong in terms of magnitude. The canonical functions also indicate a significant and relatively strong relationship between identity and ROA. There was a significant but weak magnitude of relationship with market-share loans.

The results also indicate a significant relationship between communication and performance. Employee information initiation was significantly related to all banks' performance measures of ROA, ROE, net bank operating margin, net profit margin, operating efficiency, employee productivity, market-share loans, and market-share deposits. Among these, the relationship with ROA, operating efficiency, and market-share loans was relatively strong in magnitude. Lateral communication between employees was found to be significantly related to all, except market-share loans, performance measure variates of ROA, ROE, net bank operating margin, net profit margin, operating efficiency, employee productivity, and market-share deposits.

The results also provide evidence that there is a significant relationship between employees' communication and the interaction with ROA, net profit margin, employee productivity, market-share deposits, as well as

between information flow and net bank operating margins. The canonical correlation between communication and interaction and ROA indicates a relatively strong magnitude in the relationship. The analysis reveals that the variables of formalisation, teamworking, flexible structure and autonomy did not figure. It is indeed surprising that teamworking did not feature, particularly given that the concept of teamwork is part of quite a few other variables.

The analysis of the results indicates a number of important implications. Employees' involvement via job design and information diffusion, which is an intangible resource, was a significant contributor to the banks' performances. A comparison of the results of the relationship between the banks' performances and HR attributes (employees' perceptions), employee competence, HR practices, style of management, and organisational climate reported in Table (7.3) suggests that as the banks adopted internally consistent innovative HR practices (MacDuffie, 1995), this encourages intensive information sharing among all levels and in different directions and empowers employees through task design and employees' involvement via information initiation.

Additionally when there is a real emphasis on employees' satisfaction, there appears to be a commitment toward work and performance progress. When these factors are present, employees' contribution become increasingly intangible. However, because this contribution is human resource-dependent (i.e. related to culture, social complexity, human interaction, causal ambiguity), imperfectly imitable, imperfectly mobile, imperfectly substitutable, valuable, it is, as a consequence, more associated with sustained higher levels of performance.

The statistical results provide substantial support to the hypothesis. Specifically the results from this study clearly indicate that when a human resource management system emphasising innovative HR practices is provided as a package and is internally consistent, this can influence banks' performances particularly when it also encourages human resource involvement in managing work.

Table 7.3: The Canonical Correlations Between the Dependent Variables and the Independent Variables of All the Factors

The IV		The Dependent Variables Entered in the Canonical Correlations for the Period 1994-1997																		Hypol
		ROA		ROE		NBOM		NPM		OPEF		EMPRD		LNMKSH		DPMKSH				
		R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)	R _{can}	R ² _{can} (λ)			
HR Attributes (Managers' Perception)	Value	.557**	0.31	0.463	0.214	.482*	0.233	.568**	0.322	.515*	0.266	0.451	0.204	.519*	0.27	.579**	0.335	partii supp		
	Unique	.547**	0.299	0.314	0.099	.546**	0.298	.539*	0.281	.582**	0.339		0.339	.517*	0.267	0.408	0.167			
	Imperfectly imitable																			
HR Attributes (Employees' Perception)	Imperfectly substitutable			.544**	0.296	.497*	0.247									.496*	0.246	partii supp		
	Value	.337**	0.113	.324**	0.105			.319**	0.102	.330**	0.109	.268*	0.072	.329**	0.109	.276*	0.076			
	Imperfectly mobile			0.221	0.049															
Differentiation Strategy	1	.635**	0.403	.636**	0.404	.511**	0.261	.629**	0.395	.631**	0.398	.612**	0.375	.646**	0.417	.565**	0.32	partii supp		
	2	.462*	0.213	.471*	0.222			.450*	0.203					.472*	0.223					
	3					.479*	0.229	0.43	0.185	0.343	0.118					.500*	0.25			
	4																			
	5	.560**	0.313					.543**	0.295	.555**	0.308	.554**	0.307	.484*	0.234	.555**	0.308			
	6	.485*	0.235					.525**	0.275	.492*	0.242	.521**	0.271			.475*	0.225			
	7	.471*	0.222			.494*	0.244	.580**	0.337	.550**	0.302	.511**	0.261			.463*	0.215			
	8															.442*	0.196			
	9	0.389	0.152			0.34	0.116	0.372	0.139	0.392	0.154	0.407	0.166	0.281	0.079	0.389	0.151			
Employee Competence	Employee skills & ability	.254*	0.065					.245*	0.06	.256*	0.065			.255*	0.065			partii supp		
	Employee effectiveness							.310**	0.096	.313**	0.098	.317**	0.1			.318**	0.101			
	Employee adaptability			.269*	0.072							.254*	0.064			.271*	0.073			
HR Practices	Training							.322**	0.104	.329**	0.108	.281*	0.079			.361**	0.13	partii supp		
	Selection			0.247	0.061			.270*	0.073	.268*	0.072			.262*	0.069	.370**	0.137			
	Remuneration	0.178	0.032					0.181	0.033			0.186	0.035							

	Internal Placement	0.208	0.043			0.215	0.046	0.229	0.052	0.23	0.053	0.224	0.05				
Style Management	HR Utilisation	.278*	0.077	.263*	0.069	.259*	0.067	.282*	0.08	.276*	0.076	.279*	0.078	.253*	0.064	.267*	0.071
	HR Involvement	.306**	0.093	.302**	0.091	.308**	0.095	.285**	0.081	.277*	0.077	.271*	0.074	.274*	0.075	.281*	0.079
Organisational Climate	Goal Responsibility															0.212	0.045
	Goal Commitment			.264*	0.069	.257*		.257*	0.066	.258*	0.067	.263*	0.069	0.245	0.06	.261*	0.068
	Informal Organisation					0.226		0.226	0.051								
Organisation	Feedback	.289**	0.083	0.243	0.059					.267*	0.071			.277*	0.077	.267*	0.072
	Identity	.260*	0.067											.282*	0.079		
	Communication	.249*	0.062					.261*	0.068	.258*	0.066	.261*	0.068			.250*	0.063
	Information					.255*	0.065										
	Initiation	.251*	0.063	.279**	0.088	.314**	0.099	.252*	0.064	.268*	0.072	.276*	0.076	.266*	0.071	.318**	0.101
	Lateral	.290**	0.084	.297**	0.088	.248*	0.061	.335**	0.112	.326**	0.106	.334**	0.112			.338**	0.114

R_{can} : canonical correlation. R_{can}^2 : squared canonical correlation which is equal to eigenvalue λ : shared variance between the IVs set and DVs set in canonical correlation [i.e., $\lambda = R^2 / (1 - R^2)$].

Pillai's trace, Hotelling's trace, Wilks' Lambda & Roy's gcr are multivariate tests of significance used to assess the significance of canonical correlation (R_{can}). * $p < .05$. ** $p < .01$. N = 148.

7.2.8. Application of Canonical Correlation: Rationale

It has been found that univariate analysis has a severe limitation to address research questions when the phenomena under study cannot be adequately expressed and/or measured by a single variable at a time. On some occasions, there is a potent conceptual basis for expecting both the criterion and predictor variables to be like composite sets with relationships between the sets. Thus, the use of any single dependent variable taken in isolation in the analysis is at best indicative of only a part of the overall relationships. In this sense, an analytical technique, such as the bivariate correlation analysis, that examines only two variables at a time in an integral set, may fail to detect fully and describe accurately prevailing relationships.

In the context of this study, the bivariate correlation analysis indicated a severe limitation and inability to extract significant relationships between the variables. The bivariate correlations carried out for each year of performance measures reveal several correlations which are statistically significant but which explain little variance of each performance measure through each of the various independent variables (i.e., limited practicality). For example, the intercorrelations between differentiation strategy variables and performance measures would be expected by chance due to the limited

number of correlations. That is, an overwhelmingly large percentage of bivariate correlations are about what would be expected through chance sampling error, and that the amount of variance explained by what appears to be significantly strong bivariate correlations is never large.

Another alternative technique to carry out the correlation analysis is through considering the entire performance measure for each performance ratio rather than a mere year-by-year performance analysis. Specifically, by viewing a four-year measure for each performance ratio as an interrelated set of performance measures, powerful relationships may be found between various independent variables (e.g., differentiation strategy) and banks' performances.

The canonical correlation technique has been considered in this study to introduce the moderators among the independent variables. That is, the canonical correlation analysis was used to discover significant correlations between the independent and performance measures at the prerequisite stage before carrying out the hierarchical regression analysis, which is designed to examine the moderating effects.

The analysis of the canonical correlations provides strong evidence of the existence of significant interpretable relationships between the study's dependent and independent variables that could not be found and examined through the use of the bivariate correlation analysis (or even through simple regression analysis). This, in turn, provided substantial support to the hypothesis that significant interrelationships between the independent and dependent variables existed, which is not due to chance, particularly when performance ratios over four years were viewed as a set of interrelated measures. These findings, in their own right, provided very strong evidence and justification to canonical correlation analysis as a more effective bivariate analysis technique for revealing robust interactions among the banks' performance measures and the various independent variables.

7.3. Hierarchical Regression: Empirical Results

This section will discuss the results of moderating effects of strategy and managerial factors. For example, with regard to the influence of strategic moderating effects, each of the human resource attributes (e.g., HR as valuable) and all variables of differentiation strategy, each strategy variable that was the hypothesised moderator at one time, was tested in hierarchical regression as independent variables with respect to each of the eight

performance measures over a four-year period. Similarly, with regard to the influence of managerial moderating effects, each of the HR attributes and employee competence (e.g., HR as unique or HR skills) and all HR practices; style of management; and organisational climate variables (Refer to Appendix - F for detailed statistical tables).

The HRBV model asserts that human resources have a sustainable influence on organisational performance. The model also contends that this sustainable influence becomes increasingly substantial when human resource contribution to performance is moderated by factors related to the differentiation strategy, human resources practices, style of management, organisation, and the organisational climate. The assertion necessitates, then, an investigation to identify whether these factors are, or are not, substantially moderating a human resource sustainable influence on the banks' performances over a four-year period (i.e., 1994-97).

7.3.1. Human Resource Attributes Moderate Differentiation Strategy- Performance Relationships (Line and HR Managers' Perceptions)

H.8.1: "The relationship between the extent of strategic differentiation of a bank and its performance* will be moderated by its HRBV attributes".

The results reported in Table (7.4) clearly provide evidence that the relationship between moderate differentiation strategy variable a9 and banks' performance measures of net bank operating margins (95 & 96), operating efficiency (95 & 97), and employee productivity (94 & 95) were significantly moderated by the human resource attribute of imperfect mobility.

One of the reasons for this outcome is that the contribution of moderate differentiation strategy via frequent product modification to bank's sustainable net bank operating margin, operating efficiency, and employee productivity increased, when the skills and experiences of the employees, who implemented the strategy, were difficult to transfer outside the bank thus being of little utility to competitors. That is, this study has found that the presence of accumulated bank-specific skills and experiences, along with the adoption of frequent product modification, lead to a sustainable increase in employee productivity, decrease in production costs, and increases in net bank operating margins. As explained earlier in the canonical correlation discussions, the interviews with Line and HR Managers concur with this finding and indicate that HR practices (such as

salary across the banking industry and internal placement) and constant fit between employee competencies, HR practices, business strategy and bank's culture, contributed to employees high retention and imperfect mobility. This further reinforces the assertion that when banks adopt a business strategy that is human resource-dependent, this will create a greater potential for sustainable value addition through 'human resource-strategy Fit'.

The results reported in Table (7.4) provide evidence that the relationship between a moderate differentiation strategy and the banks' performance measure ROA (95 & 96) was significantly moderated by the human resource attribute of imperfect imitability. The results also indicate that the moderation effect on the relationship between a7 (Our bank offers many different services to customers) and a9 (The characteristics of our products are modified frequently) and ROA was not consistent.

One of the reasons for this lack of consistency may be because the association between strategy variables a7 and a9 and sustained ROA was not consistently dependent on this attribute. A comparison between the results reported in Table (7.4) suggest that the success of the banks in the

commercial banking market in Bahrain was contingent on the premise that the moderate strategy of differentiation should be designed on the competencies of human resources (e.g., imperfectly imitable competencies) rather than vice versa. It is to be noted that the human resource attribute of imperfect imitability moderated the relationship between only two differentiation variables (a7 and a9) and ROA.

The results reported in Table (7.4) confirm that the relationship between moderate differentiation strategy variable a9 and banks' performance measures ROA (94 & 95), and employee productivity (94 & 96) were consistently and significantly moderated by the human resource attribute of imperfect substitutability rather than vice versa.

This could mean that the contribution of an innovation strategy incorporated in the frequent modification of product characteristics to banks' sustainable profitability (ROA) and employee productivity increased when banks depended on their employees who are perceived as an indispensable resource. That is, banks' sustainable profitability and employee productivity are maintained and increased when banks adopt frequent product

modification and depend on employees' skills, knowledge and commitment – all of which are difficult to substitute by technology and/or work design (Wright et al., 1994). Indeed as frequent modification in product characteristics requires more human input and contribution, employees' competencies and commitment to banks' sustainable success, employees become increasingly critical and difficult to replace or substitute; and as a consequence, they create a greater potential for sustainable value addition to the banks.

The results of this study provide partial support for the hypothesis of human resource moderating effect. The results suggest that there is a complementary aspect between generic business strategy and the RBV of the firm. Specifically, the successful formulation and implementation of value-creating strategy was dependent on the quality of the firm's human resources and that these human resources are imperfectly mobile²³. It is to be noted that no other strategy variable other than a9 (Frequent product modification) emerged in the equations.

²³ The rate of manpower recruitment in the commercial banking industry over the past ten (10) years provides evidence on the human resource attribute of imperfect mobility. The total number of manpower in commercial banks was 2041; 2102; 2157; 2257 in 1987; 1990; 1993; and 1997 respectively (BMA: Bahrain International Financial Centre). The very low growth rate in manpower may suggest manpower stability and the human resource attribute of imperfect mobility at the industry level.

7.3.2. Differentiation Strategy Moderates Human Resource-Performance Relationships (Line and HR Managers' Perceptions)

H.9.1.1: “The relationship between the value of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.2: “The relationship between the uniqueness of a bank’s human resources and its performance will be moderated by the extent of strategic differentiation*”.

H.9.1.3: “The relationship between the immobility of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.4: “The relationship between the inimitability of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.5: “The relationship between the non-substitutability of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

7.3.2.1. Human Resource Attribute of Value

The results reported in Table (7.4) provide evidence that the relationship between the human resource attribute of value and the banks’ performance measures of net bank operating margins and operating efficiency were significantly moderated by moderate differentiation strategy variables of a1, a5, a6 and a7. The results also indicate that none of these four strategic variables were shown to have consistent moderating effect on the

relationship. This could mean that the contribution of employees' skills and commitment to the banks' sustainable performances was not dependent on a specific strategy variable but rather it was contingent on the prevalence of moderating differentiation variables simultaneously. What this suggests is that the contribution of employees to banks' sustainable performances is more significant when Line and HR Managers perceive the skills and commitment of their employees as a valuable source to the bank's success and profitability, and when the banks adopt a moderate product and service diversification and have a variety of customers with different needs.

7.3.2.2. Human Resource Attribute of Unique

The results reported in Table (7.4) provide evidence that the relationship between the human resources attribute of unique and the banks' performances measures net bank operating margins, net profit margin, operating efficiency, and employee productivity are significantly, or almost significantly, moderated by a moderate differentiation strategy. The following strategy variables show consistent and significant moderating effect: Strategy variable a1 (Our bank offers narrow range of products) moderated the relationships between human resource attributes of unique

and net profit margin (94 & 96) and operating efficiency (94 & 97); variable a3 (Our bank is at the forefront of innovation and development) moderated the relationships between human resource attribute of unique and operating efficiency (94 & 97); and variable a5 (Our bank has a variety of customers) moderated the relationship between human resource attribute of unique and employee productivity (94, 96 & 97) and market-share deposits (96 and 97).

The results indicated a number of important inferences. Specifically, the interaction between the human resource attribute of unique skills and commitment and the variables of moderate differentiation strategy explain the significant amount of variance in banks' performances. That is, employees became increasingly a potential source of sustainable performance for the banks when Line and HR Managers perceived their employees' competencies as unique and firm-specific and when the banks adopted a moderate differentiation strategy (i.e., when banks provided a wide variety of products, were at the forefront of innovation, and had a wide variety of customers).

Further to this, a comparison of the results between banks' performances and human resource attributes (Line and HR Managers' perceptions)

reported in table (7.3) indicate that the contribution of employees with unique skills and commitment to the banks' sustainable performance increased significantly when the relationships between employees and banks' performances was moderated by a moderate differentiation strategy. Therefore, it seems that the attribute of uniqueness is moderated by both customer and product differentiation strategies.

7.3.2.3. Human Resource Attribute of Imperfectly Mobile

The results reported in Table (7.4) provide evidence that the relationship between the human resource attribute of imperfectly mobile resource and the banks' performance measure ROE was significantly moderated by moderate differentiated strategy variables a2, a4, and a9.

Strategy variable a9 (The characteristics of our products are modified frequently) indicated a significant effect on the relationship between the human resource attribute of imperfectly mobile and ROE (94 and 95). The significance of this could mean that since employees' skills and experiences, as perceived by Line and HR Managers, are of little utility to competitors and because they are difficult to transfer, these skills and

experiences by definition are firm-specific and unique and a source of sustainable performance.

Penrose (1959) largely concurs with the aforementioned assertion, suggesting that heterogeneity, unique products and services are available or potentially available from resources (such as personnel) that are unique. In this sense, the high level of the sustainable performance contributed by imperfectly mobile and unique competencies of employees is contingent on, and influenced by the bank's adoption of, frequent product modification as a basis for competition. This concludes, in keeping with HRBV model, that strategy design around employees' competencies (i.e., 'human resource-strategy Fit') provides greater potential for sustainable added value from employees. Further to this, the interviews with Line and HR Managers stated that constant fit between HR competencies, business strategy of moderate differentiation and HR practices were underpinning the success and achievement of high performance in concerned banks.

7.3.2.4. Human Resource Attribute of Imperfectly Imitable

The results reported in Table (7.4) suggest that the relationships between the human resource attribute of imperfectly imitable and banks' performance measures, market-share loans and market-share deposits were significantly moderated by moderate differentiated strategy variable a3, a5, a9.

Strategy variable a9 (The characteristics of our products are modified frequently) indicated a consistent and significant moderation effect on the relationship between the human resource attributes of imperfectly imitable and sustained market-share loans (94 & 96). The inference here is that the frequent modification of products produced innovative skills within the workforce and amongst employees and that, in turn, secured the achievement of sustainable higher rates of market-share loans. The point to be taken from this is that when Line and HR Managers perceive their employees' skills and commitment as hard to copy by competitors and their bank relies on these skills to maintain frequent modification of bank's products, then the contribution of these skills and commitment to the bank's sustainable performance is hard to copy, particularly under the adoption of moderate product innovation. Generally, with the human resource attribute

of imperfect imitability, product-oriented differentiation strategies are seen to be more important.

In conclusion, this study indicates that the hypotheses of moderation effect are partially supported. Specifically, the relationship between four out of five human resource attributes (except for the human resource attribute of imperfectly substitutable) and some performance measures were found to be moderated by eight (8) out of nine (9) factors of differentiation strategy.

7.3.3. The Style of Management Moderates Employee Competence - Performance Relationships (Employees' Perceptions)

H.10.1: “The relationship between the level of competence of a bank’s employees and its performance* will be moderated by the extent of participative management”.

The results reported in Table (7.4) confirm that human resource utilization consistently and significantly moderated the relationship between employees’ adaptability and net profit margin (96 & 97) and between the employees’ ability of decision making and market-share deposits (96 & 97).

Further to this, the results also indicate that employee participation in goal setting consistently and significantly moderated the relationship between employees' adaptability and operating efficiency (96 & 97) and between employees' effectiveness and operating efficiency (96 & 97). Indeed the analysis of the hierarchical regression provides support to the argument that the relationship between employees' competence and banks' sustainable performance is related to the extent to which the banks adopt a participative style of management (i.e., employees' participation in goal setting and utilisation). In keeping with the HRBV model, it seems from this research that when banks adopt a participative management style the competencies of employees become increasingly valuable and more strongly associated with sustainable higher levels of banks' performances. For instance, the comparison between the results in Tables (7.3) and (7.4) suggests that employees' involvement increased the contribution of employees' competence to the sustainable performance. However, the management style variables of 'managers' support to the employees', and 'decision participation' on the one hand and, the employee competence variable of effectiveness, on the other, did not emerge in the equations. This suggests that the management style of appropriate guidance and openness is more crucial than, say, decision participation.

The interviews with the Line and HR Managers support the statistical results and indicate that banks do encourage employees' involvement and participation in managing their work-related issues as well as taking decisions when interaction with bank's customers. Furthermore, banks adopt teamwork across all managerial levels that include top and middle management and front-line workers. Such practice has encouraged employees to be more dedicated and loyal toward the achievement of a bank's performance objectives.

The statistical results provide only partial support to the hypothesis that employees' contributions to banks' the sustainable performances was greater when employees were involved in managing work in their banks.

7.3.4. HR Practices Moderate Employee Competence-Performance Relationships (Employees' Perceptions)

H.11.1.1: “The relationship between the level of competence of a bank's employees and its performance* will be moderated the effectiveness of the bank's recruitment and selection practices”.

H.11.1.2: “The relationship between the level of competence of a bank's employees and its performance* will be moderated by the effectiveness of the bank's training and development practices”.

H.11.1.3: “The relationship between the level of competence of a bank’s employees and its performance* will be moderated by the importance of the bank’s internal placement practices”.

H.11.1.4: “The relationship between the level of competence of a bank’s employees and its performance* will be moderated by the impact of the bank’s remuneration practices”.

The results reported in Table (7.4) substantiate that remuneration consistently and significantly moderated the relationship between the employees’ ability of making decision, employee productivity (96 & 97), and ROA (94 & 97), and between employees’ adaptability and employee productivity (96 & 97). The results suggest that internal placement consistently and significantly moderated the relationship between employees’ skills and ability, and ROA (95 & 96).

Furthermore, the analysis of the hierarchical regression supports the proposition that the relationship between employees’ competence and banks’ sustainable performance (i.e., profitability and employee productivity) are contingent upon remuneration and promotion within the banks. In keeping with HRBV model, it seems that when banks appreciate employees’ contributions to their banks’ value (i.e., profitability), the competencies of employees become valuable and more strongly associated with sustainable and higher levels of banks’ profitability and performance.

The comparison of the results in Tables (7.3) and (7.4) indicates the criticality of how employees influence banks' performances increased, and is sustained, when a reward system is capable of influencing employees' performances. The hierarchical regression analysis indicates that the variable of effectiveness (People in the department are good at what they do) does not figure in the equation. Also, remuneration was found to be more important than internal placement.

However, the HR practices of recruitment and selection and training and development did not show moderating effects on employees' competence on any of the performance measures (Hypotheses 11.1.1 and 11.1.2). This might be attributed to the possibility that the competencies of banks' employees were being developed mainly after recruitment and not prior to it. Employees' competencies development was achieved through bank-specific training, job rotation, interaction with customers, employees' involvement, and culture. As indicated by the interviews of Line and HR Managers in the discussion of the canonical correlations that newly recruited employees have a certain percentage of the required competencies (e.g., according to HR Manager in Al-Ahli, the recruits usually holds a level of skills up to 50% and the remaining skills are developed once the

employees start their work at the bank) and the remaining skills are developed after those employees join the bank. The impact of training moderating effects on employees' competence-performance relationship is partially incorporated in internal placement practice. That is, internal placement is dependent on how efficient employees are in performing their duties which is highly affected by various ways such as teamwork, involvement, job rotation, interactions with customers and not related necessarily to formal training programmes solely. This may suggest that banks are substantially considering those methods that are bank-specific, besides tailoring training to influence employees' competencies development and its impact on performance.

The statistical results provide only partial support to the hypotheses that the impact of employees' competencies in decision making, and adaptability to work requirement on banks' sustainable performance is influenced by remuneration and internal placement.

7.4. Discussion of the Results of Moderation Effect

The evolution of the RBV of the firm as a new theory in strategic management has intensified the debate over the source(s) of competitive

advantage and sustainability of competitive advantage. For instance, Porter (1991), Grant (1998) and Miller (1995) suggest that the robustness of the RBV needs to be tested by specifying the types of advantage that can be created by hard to copy resources. They also suggest that it is necessary to identify the external environment in which different kinds of resources would be most productive in order to complement its internal focus. They conclude that it is necessary to examine the conceptual claims of the RBV theorists as stated in the five resource attributes as a source of sustained competitive advantage.

In this research, the analysis of the canonical correlation and hierarchical regression of the banks' performances on human resource attributes, differentiation strategy factors as moderators supported the conceptual claims of the theorists of the RBV of the firm. Specifically, the results of this study reveal that human resources' skills and commitment per se are associated with the banks' sustainable performances over a number of years (sustainable predictors of a bank's performance). A key factor in all of this is when Line and HR Managers perceive their employees as valuable, unique, imperfectly imitable, imperfectly substitutable and imperfectly mobile.

When this situation occurs, greater value is added through the employees. Indeed, in this study it was found that when banks adopt a moderate differentiation strategy, employees become increasingly valuable, unique, imperfectly imitable, imperfectly substitutable, and imperfectly mobile and more strongly associated with sustainable higher levels of the banks' performances. This indicates that the banks' sustainable success and profitability are highly viable when they formulate their business strategy around their employees' skills and commitment.

Further to this, the results of this study suggest that when the management of the commercial banks give special attention to build competent employees with the above attributes, they secure a constant and dynamic 'Fit' between those attributes of employees and a moderate differentiation strategy. This is of particular importance to banks with performance below the industry average.

The results of this study could be considered to add positively to the research quest that the development of HRM theory is more likely to focus on developing certain configurations. In this sense, the results of the

interaction effects, which provided support to the contingency theme that underpins the HRBV model, constitute a critical contribution to the development of HRM theory. This finding is in its own right a contribution to, and extension of knowledge domain, of SHRM and the RBV of the firm.

Furthermore and most significantly, the results of the hierarchical regression of the banks' performance measures over four years on human resource attributes as a moderator of a moderate differentiation strategy provide positive support to the claims of the generic strategy theorists that business strategy is the potential source of value. The results clearly show that the correlation between moderate product innovation (i.e., frequent product modification) and the banks' sustainable performance is dependent on the presence of human resource attributes of unique, imperfectly imitable, imperfectly substitutable, and imperfectly mobile. What we can take from these results is that there is a strong suggestion from the research that the banks' sustainable success is contingent on the alignment of these human resource attributes to moderate differentiation strategy (i.e., human resource-strategy Fit). Additionally the results also provide support to the contention, as proposed earlier, that the HRBV model is complimentary to,

rather than a substitute for Porter's (1980) well-known structural perspective of strategy.

The HRBV model asserts that the contribution of the level of human resource to performance is contingent on the organisational context. Specifically, the value added by employees is a function of both human resource competence and the human resource process. That is, the contribution of the human resource to performance is sustained when the banks adopt participative management (i.e., innovative HR practices) and when the employees' contributions are fairly rewarded and compensated. Moreover, the results also clearly validate the important role of human resource involvement as an intangible source of high performance.

In keeping with the HRBV model, it seems that the attainment of sustained performance is contingent on, and/or related to, the adoption of human resource involvement (which incorporates social complexity, causal ambiguity, and unique history and culture). Furthermore, the findings from this study support the HRBV model premise that the relationship between human resource and a sustained high level of performance is a function of 'human capital advantage' and 'human process advantage'.

In addition, the analysis of the study's results clearly support the contingency view underpinning the HRBV model. Specifically, the study has found that the criticality of employees' attributes to sustainable performance is contingent on the prevalence of a moderate differentiation strategy, participative management, and a reward system that is part of an innovative human resource-dependent organisation. Furthermore, the constant 'Fit' between human resource and strategy, human resource and participative management, human resource and reward is critical to the achievement of sustainable higher levels of the banks' performances. This conclusion is in its own right a contribution to, and an extension of, the RBV of the firm theory, generic business strategy theory, and SHRM. Moreover, the results provide the opportunity for more research to be conducted, particularly around the applicability and robustness of the core theoretical concepts underpinning both the RBV of the firm and HRBV model. Industries other than the banking sector could clearly benefit if this research were to be conducted across various economic sectors and business environments in different countries.

7.5. Summary

The results of the canonical correlation reported in Table (7.3) clearly indicate that the banks' performances was directly related to a number of factors. Specifically, these factors included areas such as product differentiation and innovation strategy, as well as the training and selection of staff, remuneration and internal placement and the prevalence of human resource involvement and human resource utilisation. Other factors that had a direct influence included the collective commitment and responsibility toward the banks' goals and informal organisation, how adequate and efficient the communication and information sharing was within the organisation, the feedback and identity of the job and the employees' competence in terms of skills and abilities, effectiveness, and adaptability. Additionally, the attributes of value, unique, imperfectly imitable, imperfectly substitutable, imperfectly mobile of employees do have an impact on the banks' overall performances.

In addition to the above factors, the hierarchical regression analysis Table (7.4) is particularly relevant to the discussion of performance. Specifically, the relationship between the attributes of value, unique, imperfectly

imitable, and imperfectly mobile and the banks' performances was moderated by the banks' strategies. This could mean, in keeping with the HRBV model, that as the banks adopt a more moderate differentiation strategy, employees become increasingly valuable, unique, imperfectly imitable, and imperfectly mobile, and therefore more associated with higher levels of the banks' performances.

The analysis provides evidence that the relationship between the banks' strategies and the banks' performances was moderated by the extent to which human resources were imperfectly imitable, imperfectly substitutable, and an imperfectly mobile resource. This could mean, in keeping with the HRBV model, that the extent to which employees of the bank are imperfectly imitable, imperfectly substitutable, and imperfectly mobile, there is a greater addition of value to the moderate differentiation strategy; and, therefore, the strategy is more associated with higher levels of the banks' performances.

Further to this, the results also indicate that the association between human resource competence and banks' performances was moderated by the prevalence of a participative management style and motivation. This could

mean, in keeping with the HRBV model, that when the banks adopt a more participative management style (e.g., human resource involvement), there is potential for more motivation and the competence of employees becomes not only more valuable but also more associated with achieving higher levels of performance.

In addition, the qualitative results collected from the interviews indicate and support the quantitative (i.e., statistical) results. These interviews were conducted with the Line and HR Managers. They showed that sustainable a high level of banks' performances was influenced by external consistency between a differentiated strategy and HR practices, internal consistency between HR practices, external consistency between differentiation strategy and HR attributes, external consistency between employees' competencies and both HR practices and style of management (e.g., participative management).

The measures of human resource attributes, strategy, employee competence, HR practices, participative management style, organisational climate and organisation were based on the perceptions of managers and employees rather than objective measures. Therefore, the study employed measures of

association rather than causal analysis. The results provide support for the HRBV model.

Table 7.4: Summary of the Hierarchical Regression Analysis - Moderating/Interaction Effects*

No.	IV Category		Moderator Category		DV Performance Measures	Hypothesis No.	Sig.	Hypothesis
	Category	Variable	Category	Variable				
1	Differentiation strategy	9	HR (Managers' Perceptions)	Attributes	NBOM, OPEF, EMPRD	H. 8.1	Yes	Partially supported
		7, 9						
		9						
2	HR (Managers' Perceptions)	Value	Differentiation strategy	1, 5, 6, 7	NBOM, OPEF	H.9.1.1	Yes	Partially supported
		Unique						
		Imperfectly mobile						
		Imperfectly imitable						
		Adaptability, ability of making decision						
3	Employee competence	Adaptability, ability of making decision	Style of management	HR utilisation, goal setting	NPM, OPEF, EMPRD, DPMKSH	H. 10.1	Yes	Partially supported
		Imperfectly mobile						
		Imperfectly imitable						
		Adaptability, ability of making decision						

* This table summaries all hierarchical regression Tables 7.4.1 to 7.4.9 in the study (Refer to Appendix - F).

Chapter 8

Determinants of Sustained Competitive Advantage

in the Commercial Banking Industry:

Empirical Results

8.1. Introduction

This chapter examines the determinants of sustained competitive advantages in the commercial banks in Bahrain. To this end, Two-group Discriminant Analysis was used to explore the relationships between the predictors of sustained bank performance incorporated in the nature of human resources, the nature of banks' business strategies, the nature of HR practices, the nature of style of management, the nature of organisational climate in the banks, organisation in the banks, and objective measures of sustained high performance (i.e., sustained competitive advantage) over the period 1994-97.

The results of the Two-group Discriminant Analysis provide evidence that sustained competitive advantage was positively related to the unique skills of human resources, the extent of product differentiation, employee commitment, and the effectiveness of internal placement practice.

Furthermore, the analysis also provided evidence that the banks' sustained competitive advantage was also positively related to the interaction between the human resource attributes of unique, imperfectly substitutable, and imperfectly mobile and differentiation strategy. This could mean, in keeping with the HRBV model, that as banks adopt more moderate differentiation strategy employees become increasingly unique, imperfectly substitutable, and imperfectly mobile, and more associated with the banks' sustained competitive advantage.

Finally, the results indicate that the banks' sustained competitive advantage was positively related to the interaction between employees' skills and effectiveness and the HR practice of internal placement. This could mean, in keeping with the HRBV model, that as banks effectively apply internal placement, employees' skills and effectiveness become more valuable and more associated with the banks' sustained competitive advantage.

Considering that the study measures of human resource attributes, strategy, employee competence, HR practices, style of management, and organisational climate, which are based upon managers' and employees' perceptions rather than on objective measures, and that the study is utilising

measures of association rather than a causal design, the results of the Two-group Discriminant Analysis provide support for the premises of the HRBV model.

8.2. Hypotheses of Discriminant Analysis

The final section of data analysis is carried out to examine the three types of discriminant hypotheses. These hypotheses are developed on the basis of findings of the results of canonical correlation and the hierarchical regression. That is, the determinants of sustained performance identified by the canonical correlation and hierarchical regression analysis are tested in this section on the grounds of their ability to discriminate between banks with sustained competitive advantage and banks without sustained competitive advantage, as well as to predict group membership (Tables: 8.1-a and 8.1-b).

8.3. Classification Accuracy and Predictive Accuracy Tests

The results of the discriminant models should satisfy specific criteria to be legitimate for interpretation and inference. That is, the discriminant models should be tested in order to validate their predictive accuracy. The objective of this procedure is to enhance the confidence level of the prediction

significance. In this vein, two types of tests are carried out for each of the investigated discriminant models (Z score-Model); namely, Cross-validation of U-method of jack-knife test, and Proportional chance criterion test.

8.3.1. Classification Accuracy Test: U-method of jack-knife

The Cross-validation U-method of jack-knife test is carried out to examine classification accuracy/predictive accuracy (i.e., Hit ratio). The method is based on the 'Leave-one-out classification' principle to create multiple subsets of samples. That is, the method creates 'N' new samples from 'N' the original sample size. Each time a new sample is created; one observation/case is omitted. Thus, each sample has sample size of 'N-1' with different observation/case omitted in each sample. This means that the discriminant function is fitted to repeatedly drawn samples of the original sample. The advantage of this process is to determine the 'change' in the 'Hit ratio': change in the number of observations/cases On-diagonal: correct classification (Hits: H_s), and Off-diagonal: Miss-classification (Miss: M_s). The change is used to validate the classification accuracy (Hit ratio) (Hair et al., 1998; Mardia et al., 1980; Lachenbruch, 1967)

8.3.2. Predictive Accuracy Relative to Chance Test

The decision a researcher takes to continue data analysis and data interpretation should be based on an acceptable statistical test. That is, the statistical test should prohibit subjectivity and increase objectivity of the research. It is, then, a source for enhancing the confidence in the results of the research. In this vein, a Proportional chance criterion test is carried out to answer the question, ‘what is and what is not considered an acceptable level of predictive accuracy for discriminant function?’

Proportional chance criterion is a chance model used to specify the acceptable level of predictive accuracy (Hit ratio) when group sizes are unequal. The decision rule according to the chance model is that: if the predictive accuracy (Hit ratio) is larger than what would be expected by chance, then the prediction of the discriminant function is reliable and at an acceptable level of predictive accuracy (Hair et al., 1998). The formula of the Proportional chance criterion is as follows:

$$C_{pro} = p^2 + (1-p)^2$$

Where

C_{pro} = Proportional chance criterion

p = proportion of the above-industry average cases of the first group.

$1-p$ = proportion of the below-industry average cases of the second group.

Table 8.1-a: Average of Financial Measures of the Seven Banks and Commercial Banking Industry Over Four Years 1994-1997

Variable	ROA	ROE	NBOM	NPM	OPEF	EMPRD	LNMKSH	DPMKSH	Market-share Loans	Market-share deposits
Bank/year										
Al-Ahli										
1994	2.29	14.2	2.48	54.63	40.86	19.7	11.21	7.98	126584	146323
1995	4.44	14.63	2.73	52.97	41.41	22.26	10.72	8.01	127236	140715
1996	4.86	15.14	5.85	49.78	40.1	25.01	11.34	9.53	136717	177181
1997	2.48	15.07	2.92	48.38	43.1	26.72	10.84	10.1	147706	203157
Mean	3.6	14.76	3.44	51.44	41.36	23.42	11.02	8.9	134560	166844
Arab										
1994	-0.04	-1.08	-0.04	-1.28	101.28	-0.23	1.39	1.53	15784	28181
1995	0.11	2.62	0.11	4.3	95.69	0.94	2.03	2.38	24161	41876
1996	0.35	6.56	0.4	12.93	84.92	2.96	1.81	2.12	21926	39506
1997	-0.35	-6.48	-0.2	-14.08	108.13	-2.92	1.67	1.94	22785	39167
Mean	0.01	0.4	0.06	0.46	97.5	0.18	1.72	2	21164	37182
BBME										
1994	1.85	37.82	1.85	34.74	65.25	10.33	4.66	4.96	52598	91051
1995	2.1	43.24	2.24	37.21	60.38	11.81	5.13	5.25	60930	92224
1996	1.93	38.31	2.76	32.74	53.29	12.56	5.83	5.68	70549	105586
1997	2.27	47.01	2.3	43.82	55.55	17.98	6.36	6.35	86713	127812
Mean	2.03	41.69	2.28	37.12	68.61	13.17	5.49	5.56	67697	104168
Grndlays										
1994	1.32	13.17	1.33	37.89	61.75	9.64	3.62	2.6	40934	47824
1995	1.34	10.93	1.27	40.24	61.74	10.69	3.53	3.54	41949	62262
1996	1.57	11.83	1.62	38.53	60.28	12.07	3.81	3.36	45978	62536
1997	1.57	11.5	1.55	36.55	63.83	12.23	3.7	3.18	50442	64000
Mean	1.45	11.85	1.44	38.3	61.9	11.15	3.66	3.17	44825	69166
Islamic										
1994	1.48	12.71	1.51	30.67	68.7	16.63	11.56	6.64	130552	121846
1995	1.13	11.09	1.25	17.99	80.23	12.43	10.57	6.98	125460	122647
1996	0.64	6.37	1.02	10.13	83.88	7	10.46	6.51	126152	121013
1997	1.57	15.65	1.71	24.74	73.06	18.59	9.8	6.58	133476	132331
Mean	1.2	11.45	1.37	20.88	76.46	13.66	10.69	6.67	128910	124469
Melli										
1994	2.26	15.56	2.26	44.56	55.43	16.67	0.69	0.77	7867	14184
1995	1.67	10.7	1.66	30.48	69.8	11.46	0.75	0.83	8981	14606
1996	0.13	0.86	0.5	3.12	87.96	0.92	0.7	0.86	8483	16128
1997	0.08	0.56	0.83	1.83	81.4	0.6	0.87	0.83	11897	16690
Mean	1.03	6.92	1.31	20	73.64	7.41	0.75	0.82	9307	15402
Standard Chartered										
1994	1.26	24.3	1.41	31.18	65.22	10.33	8.39	7.3	94779	133992
1995	0.64	13.96	1.17	16.13	70.85	5.93	9.16	8.37	108687	146937
1996	1.49	33.6	1.55	37.51	61.17	14.28	6.22	8.34	75035	155054
1997	1.42	50.1	1.44	46.8	52.27	21.29	6.23	8.87	84869	178379
Mean	1.2	30.49	1.39	32.9	62.37	12.95	7.5	8.22	90842	153590
Banking Industry						*	**	**	***	***
1994	1.36	12.99	1.53	41.07	53.97	15.5	0	0	59402	96503
1995	1.34	12.53	1.51	38.76	56.43	15.32	0	0	62448	92373
1996	1.56	14.27	1.81	40.18	53.01	18.12	0	0	63431	97819
1997	2.22	21.09	2.46	51.01	43.31	29.66	0	0	71664	105815
1997 ^A	1.82	16.54	2.08	42.36	51.58	21.14				
Mean	1.61	14	1.73	40.59	53.74	17.52	0	0	64236	98127

* The total number of labour force in the commercial banking industry is 2257 employees in 1997 (1967 are Bahraini employees and 281 are non-Bahraini employees) based on the BMA reports 1998.

** The percentage is not possible for the industry performance.

*** This figure represents the average industry performance. The total commercial banks operating in Bahrain is 19.

A The averages are calculated after excluding the performance of Bahrain and Kuwait Bank from the industry performance.

Source: The calculations are based on Bahrain Monetary Agency (BMA- the Central Bank) reports on annual accounts for commercial banks - Bahrain operations only 1994-1997.

Table (8.1-b): Commercial Banks with SCA According to the Eight SCA (Bank's Performance) Measures

BANK	SCA : Measures							
	ROA	ROE	NPM	NBOM	OPEF	EMPRD	LNMKSH	DPMKSH
<i>Al-Ahli</i>	SCA	SCA	SCA	SCA	SCA	SCA	SCA	SCA
<i>Arab</i>								
<i>BBME</i>	SCA	SCA		SCA			SCA	SCA
<i>Grindlays</i>								
<i>Islamic</i>							SCA	SCA
<i>Melli</i>								
<i>Standard</i>		SCA					SCA	SCA

1 SCA Refers to Banks with Above-Industry Average Performance over the Period from 1994-1997.

2 ROA: Return on Assets; ROE: Return of Equity; NBOM: Net Bank Operating Margin; NPM: Net Profit Margin; OPEF: Operating Efficiency; EMPRD: Employee Productivity; LNMKSH: Market-Share Loans; DPMKSH: Market-Share Deposits.

8.4. Empirical Results

The results of the nineteen (19) discriminant functions reported in Table (8.2) provide evidence that there are significant and strong relationships between the independent variables of; human resource attributes of unique, imperfectly mobile, and imperfectly substitutable; business strategy; employee competence; organisational climate (i.e., commitment); the interaction between some business strategy variables and some of the human resource attributes; and the interaction between employee competence and HR practices and banks' group memberships on the basis of the dependent variables incorporated in the banks performance measures ROA, ROE, NPM, NBOM, OPEF, EMPRD, LNMKSH, and DPMKSH. The results indicate that the independent variables significantly discriminated and classified banks into their actual groups (i.e., prior grouping of above-industry average performance and below-industry average performance).

The results of the discriminant functions number 3, 7, 8, 9, 13, and 15 indicate that the classification accuracy was slightly below the level expected by chance according to the proportional chance criterion test.

8.4.1. Human Resource Attributes (Line and HR Managers' Perceptions)

H.1.2.1: "Banks whose human resources are more valuable are more likely to display sustained competitive advantage*".**

H.1.2.2: "Banks whose human resources are more unique are more likely to display sustained competitive advantage*".**

H.1.2.3: "Banks whose human resources are more immobile are more likely to display sustained competitive advantage*".**

H.1.2.4: "Banks whose human resources are more inimitable are more likely to display sustained competitive advantage*".**

H.1.2.5: "Banks whose human resources are more non-substitutable are more likely to display sustained competitive advantage*".**

The first four discriminant functions (1), (2), (3) and (4) indicated (Table 8.2) that the perceived human resource attributes of unique and imperfectly substitutable were able to differentiate between banks with above-industry average performance (i.e., sustained competitive advantage) and those with below-industry average performance.

This could mean that banks which succeed in sustaining competitive advantage achieve this performance because they develop firm-specific

competencies, prevent competencies of the employees from being obsolete, and ensure that the competencies of their employees are related to the banks' operation and performance requirements through continuous learning and skill development. Furthermore, the results support the complementary aspect between these two human resource attributes in the sense that the prevalence of unique or firm-specific competencies, which are developed on the basis of bank's business strategy and organisational climate (i.e., culture), should lead to imperfectly substitutability of these competencies.

The results indicate that the hypotheses are partially supported. That is, the evidence of significant discrimination was provided by only the human resource attributes of unique and imperfectly substitutable. The results did not provide support of significant discrimination for the other attributes. At least in the context of the banks in Bahrain, the attributes of value, imperfectly imitable, and imperfectly mobile, by themselves, are not important for SCA. The attribute of value may have been considered by the respondents as being generally vague. The banks may find it more helpful to compete on the basis of unique and imperfect substitutability.

8.4.2. Strategy of Differentiation (CEOs and Line and HR Managers' Perceptions)

H.2.2: “Banks reporting a greater level of strategic differentiation are more likely to display sustained competitive advantage”.**

The results indicate that discriminant functions (5), (6), and (7) provide evidence that there was a significant association between “a bank offers a wide range of products and ROE”; “the needs of our customers are very different from one another” and net profit margin, operating efficiency, employee productivity; and “a bank offers many different services to customers” and ROA, net bank operating margin.

The results suggest that as banks pursue differentiation strategy to provide wide products and services in order to meet and satisfy the diverse and changing needs of different customers, they are able to gain and sustain competitive advantage in six performance measures. The relationship between the strategy variables of the banks' products posture (i.e., diverse services and products) and market posture (i.e., diverse customers' needs) suggests that the banks' success in gaining sustainable competitive advantage is dependent on their capabilities in maintaining a fit between market needs and the banks offering on constant basis. Furthermore, the

results also indicate that these three differentiation variables were the determinant factors of sustainable competitive advantage and thus could be considered as an appropriate and effective approach to compete in the commercial banking industry in Bahrain.

The results indicate that the hypothesis is partially supported. That is, the evidence of significant discrimination was provided by three out of nine variables of differentiation strategy (although the classification accuracy was slightly below the level of the classification expected by chance according to the proportional chance criterion test). It may be noted that the differentiation strategy variable 9, “Frequent product modification”, which was found to be a powerful moderator of some of the HR attribute variables, did not emerge in the discriminant analysis, although it figured in conjunction with “imperfectly substitutable” and “imperfectly mobile.”

8.4.3. Employee Competence (Employees’ Perceptions)

H.3.2: “Banks whose employees are more competent are more likely to display sustained competitive advantage*”.**

The results of the discriminant functions (8) and (9) indicate that employees’ effectiveness and employees’ skills and abilities were able to

differentiate between the banks with above-industry average performance and those with below-industry average performance on the basis of the dependent variables incorporated in the banks' performance of NPM, OPEF, and EMPRD.

The results indicate that the sustainability of high performance over a long period of time in the commercial banks in Bahrain was dependent on the availability of employees' effective skills and abilities. This could mean that as banks invest in developing employees' competencies, employees become more capable and more productive, and more predictive of banks' capabilities for achieving sustainable above-industry average performance in net profit margin, operating efficiency, and employee productivity.

The perceptions of both managers and employees were complementing each other in the sense that they both held and advocated the same views of the positive relationship between employees' competencies and the banks productivity. The significant discriminant functions of human resource attributes and employees' competence suggested an interlinked view that committed and effective employees created unique human resource skills

and abilities and that this attribute became imperfectly substitutable when it underpinned value creation over a long period of time.

The results indicate that the hypothesis is partially supported. That is, the evidence of significant discrimination was provided only by two variables of employees' competency; namely, employees' effectiveness and employees' skills and abilities. The classification accuracy was slightly below the level expected by chance according to the proportional chance criterion test. The variable of adaptability, which had figured in the canonical correlation analysis, was not able to discriminate between the banks with above-average and below-average performance. This is probably because in comparison with effectiveness and skills and abilities, it is a fairly common competency.

8.4.4. Organisational Climate (Employees' Perceptions)

H.6.2: "Banks displaying a positive organisational climate are more likely to display sustained competitive advantage".**

The results indicate that in the opinion of the employees, responsibility and commitment toward the organisational goal attainment were associated with gaining competitive advantage in market-share deposits.

The results of the discriminant functions (10) and (11) indicated that the employees' positive attitudes were a source of value to the banks. This result is important because the employees' attitudes are an 'intangible' resource which, by nature, cannot be clearly identified and codified in order to be duplicated by competitors. Furthermore, the prevalence of positive attitudes among employees working in the banks which obtain competitive advantage would reflect the existence of a corporate culture that emphasises collaboration, teamwork, ownership, and involvement. This could mean that as banks adopt a human resource-dependent culture, employees become more dedicated and committed, and more predictive of the bank's sustained competitive advantage of market-share deposits.

The results provide partial support to the hypothesis. That is, the evidence of significant discrimination was provided only by two variables out of the five incorporated in the organisational climate. The variable of informal organisation, which was correlated in a near significant way only with net profit margin, did not figure in the discriminant analysis. Probably, in these days of more flexible administrative structures, the difference between formal and informal organisation is much less.

8.4.5. Interaction Between Human Resource Attributes and Differentiation Strategy (Line and HR Managers' Perceptions)

H.9.2.1: “The relationship between the value of a bank’s human resources and its sustained competitive advantage will be moderated by the extent of strategic differentiation”.**

H.9.2.2: “The relationship between the uniqueness of a bank’s human resources and its sustained competitive advantage will be moderated by the extent of strategic differentiation”.**

H.9.2.3: “The relationship between the immobility of a bank’s human resources and its sustained competitive advantage will be moderated by the extent of strategic differentiation”.**

H.9.2.4: “The relationship between the inimitability of a bank’s human resources and its sustained competitive advantage will be moderated by the extent of strategic differentiation”.**

H.9.2.5: “The relationship between the non-substitutability of a bank’s human resources and its sustained competitive advantage will be moderated by the extent of strategic differentiation”.**

The results indicate the interactions between a) human resource attribute of unique and each of the differentiation strategy variables 1, 3, 5, and 7; b) human resource attribute of imperfectly mobile and differentiation strategy variable 9, and c) human resource attribute of imperfectly substitutable and differentiation strategy variable 9 as indicated in discriminant functions 12, 13, 14, 15, 16, and 17 respectively. The prevalence of interactions between these attributes and differentiation strategy created sustained competitive advantage.

The results corroborate the assertion that human resource competencies and commitment become increasingly value creating when they emerge from, or are shaped by, banks' cultures, and are path-dependent, which transforms them into hard to substitute and of little value for competitors (i.e., imperfectly mobile). These competencies and commitment are a source of sustained competitive advantage when banks adopt a moderate differentiation strategy in which its successful formulation and implementation is largely dependent on employees who possess unique, imperfectly substitutable, and imperfectly mobile competencies, and commitment.

Differentiation strategy variables no. 1, 3, 5, 7 and 9 are activities that are human resource-based. That is, conceptualisation and implementation of these activities depend on human resource competencies in innovation, change, planning and development, as well as human interaction and personal relationships. That is, the adoption of moderate differentiation strategy based on innovation, frequent product modification and change, and product and market diversification created greater opportunity for employees to utilise their competencies and commitment in inventing ideas

and innovating new alternative solutions or processes to deal with challenging, complex and ambiguous tasks. The success of the employees' competencies and commitment will transform them into unique, imperfectly substitutable, and imperfectly mobile source of sustained competitive advantage.

However, the mere existence of both differentiation strategy and human resources with the attributes of unique, imperfectly substitutable, and imperfectly mobile competencies and commitment separately does not necessarily lead to sustained competitive advantage; but the prevalence of successful interaction and match between differentiation strategy and these attributes underpin the achievement of sustained competitive advantage.

Miles and Snow (1978) advocate the concept of 'fit' between business strategy of prospector (i.e., differentiation) and human resource characteristics to achieve high performance. For example, Arab Bank contended that it adopted differentiation strategy to run the banks operations and to compete in the commercial banking market in Bahrain. But due to the mismatch between the adopted business strategy of differentiation and the attributes of the employees, the bank's performance was below the industry

average on all the performance measures. The bank's management perceived that 1) their employees lack the attributes of unique competencies and commitment, and they are not a source of high value creation; and 2) the management is uncertain if their employees' competencies and commitment are imperfectly substitutable, imperfectly imitable and imperfectly mobile.

The results indicate that the hypotheses of interaction between differentiation strategy and human resource attributes were partially supported. That is, the evidence of significant discrimination was provided only by some of the interactions between the human resource attributes of unique, imperfectly substitutable, and imperfectly mobile with some of the differentiation strategy variables (i.e., no.1, 3, 5, 7, and 9 and which were found to be predictors of the banks' sustained performance). The interactions of the attribute of value and differentiation strategy variables of 1, 5, 6 and 7 and those of imperfectly imitable, 7 and 9, which figured in the hierarchical regression, were unable to discriminate between the banks with above-average, and those with below-average performance.

8.4.6. Interaction between Employee Competence and HR Practices (Employees' Perceptions)

H.11.2.3: “The relationship between the level of competence of a bank’s employees and its sustained competitive advantage will be moderated by the importance of the bank’s internal placement practices”.**

The results provide evidence that the interactions between internal placement and employees’ skills and abilities and employees’ effectiveness, as indicated in the discriminant functions (18) and (19) respectively, were associated with sustained competitive advantage on the basis of return on assets (ROA).

The implication is that the mere existence of competent employees will not necessarily lead to high performance. But the effective utilisation of competent employees will ensure, or contribute to, high performance. Furthermore, employees’ skills and abilities become well articulated with usage at work. Internal placement not only ensures competency improvement via usage, but also strengthens the ties between the employees and the organisation, which, in turn, leads to employees’ commitment. This could mean that as banks acknowledge employees’ competencies as a strategic assets and give them the first priority in occupying higher and

more senior positions in the banks, the employees' competencies become increasingly improved, relevant and valuable, and more committed to the banks' goals, and more predictive of the banks' high performance.

The results indicate that the hypothesis is partially supported. That is, the evidence of significant discrimination was provided only by one HR practice of internal placement and two variables of employees' competencies; namely, employees' skills and abilities and their effectiveness. The interaction between the employee competence of the ability of decision making and the HR practice of remuneration, which had figured prominently in the hierarchical regression analysis, did not emerge in the discriminant analysis.

Table 8.2: Summary of the Two-group Discriminant Functions

Hypothesis No.	Serial No. of D. F.†	IV	DV	Canonical Correlation	Wilks Lambda	Chi-square (sig.)	Classification Matrix %	Classification accuracy: U-knife %	Proportional Chance Criterion %	N	Hypothesis
H. 1.2.2	1	Unique	ROA & NBOM	0.334	0.888	4.331*	69.2	69.2	62	39	Accepted
	2	Unique	LNMKSH & DPMKSH	0.478	0.771	9.473**	69.2	69.2	59	39	Accepted
	3	Unique	NPM, OPEF, EMPRD	0.395	0.844	6.198**	66.7	66.7	77	39	Partially accepted
H. 1.2.5	4	Imperfectly substitutable	ROE	0.317	0.90	3.863*	69.2	69.2	50	39	Accepted
	5	Strategy variable 1	ROE	0.353	0.876	5.783*	65.2	65.2	50	46	Accepted
H. 2.2	6	Strategy variable 6	NPM, OPEF, & EMPRD	0.367	0.866	6.277**	67.4	67.4	78	46	Partially accepted
	7	Strategy variable 7	ROA & NBOM	0.334	0.888	5.155*	61	61	61	46	Accepted
	8	Employee effectiveness	NPM, OPEF, EMPRD	0.274	0.925	11.391**	66.9	66.9	74	148	Partially accepted
H. 3.2	9	Employee skills & abilities	NPM & OPEF	0.168	0.972	4.181*	64.2	64.2	74	148	Partially accepted
	10	Goal responsibility	DPMKSH	0.197	0.961	5.744*	62.2	62.2	52	148	Accepted
H. 6.2	11	Goal commitment	DPMKSH	0.189	0.964	5.288*	60.1	60.1	52	148	Accepted
	12	Unique & strategy variable 1	NPM & OPEF	0.507	0.743	10.672**	79.5	79.5	77	46	Accepted

	13	Unique & strategy variable 3	OPEF	0.395	0.844	6.115*	66.7	64.1	77	46	Partially accepted
	14	Unique & strategy variable 5	EMPROD	0.631	0.602	18.296**	87.2	87.2	77	46	Accepted
	15	Unique & strategy variable 7	OPEF	0.494	0.756	10.069**	74.4	71.8	77	46	Partially accepted
H.9.2.3	16	Imperfectly mobile & strategy variable 9	OPEF	0.40	0.84	6.276*	87.2	87.2	77	46	Accepted
H.9.2.5	17	Imperfectly substitutable & strategy variable 9	EMPRD	0.433	0.812	7.476*	89.7	87.2	77	46	Accepted
H.11.2.3	18	Employee skills & abilities & Internal placement	ROA	0.215	0.954	6.866*	58.1	58.1	52	148	Accepted
	19	Employee effectiveness & internal placement	ROA	0.226	0.949	7.612*	56.8	56.1	52	148	Accepted

* Estimates are significant at the significance level of <0.05.

** Estimates are significant at the significance level of <0.01.

† Refers to discriminant functions

8.5. Discussion of the Results

The study explored the factors that influence the achievement of sustained competitive advantage in the commercial banking industry in Bahrain. Specifically, the study focused on the influence of human resources incorporated in human resource attributes of sustained competitive advantage, firm-specific competencies, and values at work; the nature of differentiation strategy, the style of management; the nature of organisational climate, and the nature of organisation, and the nature of HR practices, on the achievement of sustained competitive advantage in the commercial banking industry in Bahrain during the period 1994-97.

The results of the Two-group Discriminant Analysis indicated three types of influential factors that have been associated with sustained competitive advantage. The first type of factor represents the human resource attributes of unique and imperfectly substitutable, employees' competence variable of effectiveness and organisational climate variable of commitment towards banks' goals. The second type of factor represents the interaction between human resource attribute of unique, imperfectly substitutable, and imperfectly mobile and banks' differentiation strategy and interaction between employees' skills and effectiveness and the style of motivation.

The third type of factor represents the nature of differentiation strategy. These three types of factors, in combination, emphasise three main implications regarding the behaviour of organisation.

First, the results of the discriminant analysis only partially upheld the theoretical HRBV model as graphically depicted in Figure 4.1. The human resource attribute of value, either by itself or as actualised through job design variables, did not emerge in the analysis.

The results emphasise the importance of the 'human organisation', as identified by Rensis Likert (1967), and the definition of human resources in this study that asserts that 'Competitive advantage' is a function of 'Human capital advantage' and 'Human process advantage'.

Second, the prevalence of 'fit' between human resource attributes and competencies on the one hand, and each differentiation strategy and internally consistent human resource-dependent practices on the other, creates effective working conditions under which human resources become a potential source of sustained competitive advantage. In such a situation, employees develop a sense of ownership by which their competencies and

commitment (tangible and intangible) are dedicated to the achievement of the organisational goals.

The theory of the RBV of the firm provides an explanation of the nature of competitive advantage and sustained competitive advantage via the introduction of the concepts and premises of the firm's resources. Furthermore, the results provide evidence through human resource-strategy fit on the relevancy of the 'contingency approach' to the 'human resource-sustained competitive advantage' relationship that can be viewed as a useful complement to Porter's (1980) well-known structural perspective of strategy.

The results of the statistical analysis support the contingency approach. The results of ANOVA showed great homogeneity of HR practices among the investigated banks, which might be the results of duplication of HR practices, although these banks hold different competitive positions in the market. A strong possible explanation is that the way HR practices are implemented is bank-specific. In other words, given the condition that all the banks may possess homogeneous material and/or codified resources, the

banks with sustained competitive advantage are expected to manage their people differently from those without sustained competitive advantage.

Third, the impact of differentiation strategy on sustained competitive advantage is due to the fact that the activities of differentiation are human resource-based. This may suggest that the influence of differentiation strategy on the attainment of sustained competitive strategy is, in fact, a reflection of the influence of human resource competencies and commitment. The importance of this interpretation is that organisations are highly likely to achieve sustained competitive advantage when they build their business operations around human resources potentials.

The results of the examination of the HRBV model constitute sound guidance for HR managers and business strategy makers in commercial banks. For the banks with SCA, the results imply that the management of these banks should re-emphasise and maintain 'Fit' between human resources and business strategies in order to conserve SCA. For the banks without SCA, the results imply that the management of these banks should re-design their human resources and business strategies and the 'Fit'

between these two strategies in order to enhance their competitive position in the industry.

8.6. Summary

The results supported the theory underpinning the HRBV model that the 'human resource' is the 'base of value', particularly under the prevalence of the human organisation culture in which business strategy, the HR practices, the style of people management, the organisational culture and climate, and the organisation are all based on the attributes, competencies and values of human resources (i.e., human resource-dependent).

Chapter 9

The Contribution and Recommendation of the Study

9.1. Overview

The resource based view (RBV) of the firm has introduced five attributes that should be incorporated in a resource as a potential source of sustained competitive advantages, namely: value, unique, imperfectly imitable, imperfectly substitutable and imperfectly mobile. However, no previously published empirical research (to the best of the knowledge of the researcher) has examined the precision and robustness of the conceptual claims of the RBV. This study attempts to operationalise the attributes and the notion of resources to examine the conceptual claims of the RBV theorists. By doing so, the study is, in its own right, a contribution to, and an extension of, the knowledge domain of strategic management.

The study has developed a Human Resource-Based View (HRBV) Model as an instrument to test the claims of the RBV. The model has benefited from the two streams of thought of strategic management; namely, the Resource-Based View (RBV) of the firm and generic approaches of business strategy

(i.e., externally focused), although it is more inclined toward the conceptual claims of the RBV. The HRBV model adopts a contingency approach to the human resource and the sustained competitive advantage relationship that integrates the internal and external environments of the firm in order to identify the strategic and managerial conditions under which human resources can be a potential source of sustained competitive advantage.

The key point in the HRBV model is that it considers the resource attributes of value, unique, imperfect imitability, imperfect substitutability, and imperfect mobility as indispensable to develop sustained competitive advantage, particularly when the organisation is pursuing a differentiated (rather than cost-leadership) strategy. This is a useful complement to Porter's (1980) well-known structural perspective of strategy. In this sense, the HRBV model is a contingency approach.

9.2. The objectives of the study

The objectives of the study were to:

- Develop a Resource-Based View model of the firm that adequately describes the role of human resources, their management and human resource practices in the attainment of sustained competitive advantage.
- Empirically test this model and in so doing estimate the contribution of human resources, their management and human resource practices to sustained competitive advantage.
- Revise the HRBV model in the light of the empirical findings.

9.3. The Contributions of the Study

9.3.1. The Importance of the HRBV Model

The RBV of the firm theory has been criticized by strategy theorists. Porter (1991), Grant (1998) and Miller (1995) suggested that the robustness of the RBV needs to be tested by a) specifying the type of advantages that can be created by hard-to-copy unique resources; b) identifying the external environment in which different types of resources could be most productive in order to complement its internal focus; and c) examining the conceptual

claims of the RBV theorists specified in the five resource attributes as a potential source of sustained competitive advantage.

The HRBV model adequately responds to these criticisms. First, the model identifies human resources as a potential source of sustained competitive advantage through the five attributes advocated by the RBV theorists. Second, the model specifies the style of management, the nature of HR practices, the nature of organisational climate, the nature of organisation, and the type of business strategy that could be reasoned to impact upon the human resources and the sustained competitive advantage relationship (i.e., integrating internal and external environment). Third, the model develops operational measures for the conceptual claims and the notion of resources and capabilities advocated by the RBV theorists to investigate their role in the attainment of sustained competitive advantage. The HRBV model identifies the nature of the external environment under which the claims of the RBV can be empirically tested. By so doing, the model contributes to the development of the theory of strategic management, particularly the RBV of the firm theory.

9.3.2. The Contribution to the Debate on the Source(s) of Sustained Competitive Advantage

The evolution of the RBV of the firm as a new theory in strategic management has intensified the debate over the source(s) of sustained competitive advantage. The theorists of the externally focused generic strategy approach, like Porter (1980), consider that resources of the firm are intermediate between activities and advantages. The underlying ability to create linkages between activities constitutes the organisational capabilities. This means that value creation from resources is likely to be a result of managerial decisions and choices to assemble resources in unique and different combinations that are consistent with the requirement of a value-creating strategy, and not from the attributes of the firm's resources per se. These theorists argue that resources are homogeneous and mobile among competing firms. The RBV theorists argue that when the firm's resources are heterogeneous and imperfectly mobile, they constitute the source of sustained competitive advantage. Theorists, like Barney (1991), assert that if a firm's resources are homogeneous and mobile, competing firms can simultaneously implement value-creating strategy and gain the same competitive advantage and sustainability of the advantage.

The empirical results of the HRBV model provide evidence to support the claims of both the RBV theorists and the externally focused approach of generic strategy. The results of the statistical analysis of empirical data (canonical correlation, hierarchical regression and discriminant analyses) indicate that human resource attributes of unique and imperfectly substitutable are, by themselves, associated with the banks' sustained competitive advantage, and are also moderated by differentiation strategy. Also, differentiation strategy, by itself, was found to be associated with the banks' sustained competitive advantage.

There are three significant implications. First, the results support the assertions of the HRBV model regarding a human resource and a differentiation strategy fit. This fit supports the relevancy of the "contingency approach" to the human resource and the sustained competitive advantage relationship, which can be viewed as a useful complement to Porter's (1980) well-known structural perspective of strategy.

Second, the results support Porter's views on the strategy and sustained competitive advantage relationship, although the impact of differentiation

strategy on sustained competitive advantage is due to the fact that the activities of differentiation (e.g., product innovation and differentiation) are human resource-based. This may suggest that the influence of differentiation strategy on the attainment of sustained competitive advantage is, in fact, a reflection of a human resource's attributes (e.g., competence and commitment).

Third, the results also indicate that the HRBV model adequately specified the external environment that could impact on the human resource and the sustained competitive advantage relationship. The identification of both the external and internal environments for relationship is a contribution to the development of the RBV of the firm theory, which has been criticized for being internally focused theory of strategy.

9.3.3. The Role of Intangible Resources in the Attainment of SCA

Strategic management has emphasised the importance of intangible resources in the attainment of sustained competitive advantage. Rumelt (1982) points out that competitive advantage is sustained when the resources and capabilities that underpin it depend on skills and knowledge, which have a strong tacit dimension (e.g., it is influenced by social

complexity, causal ambiguity and unique history). Hall (1993) emphasizes the role of intangible resources and argues that human resource competency becomes an imperfectly imitable source of sustained competitive advantage when it is associated with human resource interaction and social complexity (i.e., communication and information sharing, and participation and involvement in decision making).

The empirical results indicate that intangible resources, represented by human resource involvement and commitment, were found to be associated with the banks' performances and sustained competitive advantage. The results support the assertions of the RBV and HRBV model and suggest further research on the importance and relevancy of intangible and tacit resources and their role in the attainment of sustained competitive advantage under different internal and external business environments in different industries.

9.3.4. The Role of Formal HR Practices in the Attainment of SCA

Wright et al. (1994) argue that human resources, rather than formal HR practices, can achieve the attributes of, as well as be a potential source of, sustained competitive advantage. On the contrary, some of the HRM

theorists, like Ulrich (1991), and Schuler and MacMillan (1984) contend that formal HR practices constitute a source of competitive advantage and sustainability of the advantages, and stress the role and importance of formal HR practices in developing sustained competitive advantage through the development of a human capital pool and through moderating the relationship between a human capital pool and sustained competitive advantage by affecting human resource behaviour.

The empirical results support the assertions of the RBV, HRBV model and HRM theorists on the role and importance of both human resources and formal HR practices in regard to achieving sustained competitive advantage. The results indicate that human resource competency, incorporated in employee effectiveness, skills and abilities, is associated with the banks' performances and sustained competitive advantage and that HR practice of internal placement (i.e., career advancement) is found to moderate the human resource and the sustained competitive advantage relationship. The significant contribution is that the results support the contention regarding the role and importance of both human resources and the formal HR practices, and their relationship with sustained competitive advantage, as hypothesized and argued in the HRBV model.

9.3.5. The Investigation of the Relationship Among the Concepts of Codified Knowledge, Imperfectly Imitable and SCA

The RBV of the firm theory argues that a resource must be imperfectly imitable for it to be a potential source of sustained competitive advantage. HRM theorists have extended the debate and contended that formal HR practices do not constitute a source of sustained competitive advantage because these practices are codified knowledge that can be easily imitated or duplicated by competitors.

The empirical results significantly contribute to the assertions of the RBV and HRBV model and also give rise to speculation about the extent of relevancy of Bahrain commercial banking as a business environment for the empirical investigation of the model. The results support the hypotheses of association between formal HR practices and sustained performance, but could not support the hypotheses of association with sustained competitive advantage. However, there is support for formal HR practices as a moderator of human resources competency and sustained competitive advantage relationship.

The significant implications of the results for the RBV, HRBV model and the HRM theory are as follow. First, the view of “HR practices as codified knowledge” was supported in this study. That is, although formal HR practices are associated with the banks’ sustained performance, these practices are not related to the banks’ sustained competitive advantage, which might be related to the imitation of these HR practices. This finding supports the empirical study of MacMillan et al. (1985) on commercial banking products in the US market that imitation of products and service strategy is much easier than imitation in the manufacturing industry. Carey (1989) supports the arguments, and asserts that duplication and imitation of products and systems constitute a benchmark of the commercial banking industry.

Second, the nature of commercial banks as an environment to test the HRBV model might be a possible explanation of the failure of finding support for the hypotheses of association between formal HR practices and sustained competitive advantage.

9.3.6. The Operationalisation of the SCA Attributes and Notion of Resources

Another contribution to the development of the RBV theory is the operationalisation of the concepts of the RBV. The questionnaires and interview schedules used to operationalise and measure the concepts of the HRBV model, particularly the attributes of sustained competitive advantage, provide a base for further research. These operational measures need further testing to increase their validity and reliability. Replications of the empirical work reported in this study are needed to corroborate these results. Further to this, more empirical studies are also needed to involve new and emerging ideas in the field.

9.4. Discussions of the Results

9.4.1. Results of Associations and Moderations with the Banks' Performances

The results of the canonical correlation and regression analysis revealed evidence that banks' performances were partially related to the extent of product differentiation and innovation strategy; remuneration and internal placement; the prevalence of human resource involvement, utilization, and

goal participation; commitment and responsibility toward goals; and the human resource attributes of value, unique, imperfectly imitable and imperfectly mobile. Furthermore, the analysis provided only partial support for the moderation effects. That is, partial support was provided to some of the relationships between the interaction among human resource attributes of value, unique, imperfectly imitable, imperfectly substitutable and imperfectly mobile and differentiation strategy, on the one hand, and the banks' sustained performance, on the other; and, the relationship between the interaction among the employees' competence and human resource involvement and motivation, on the one hand, and banks' sustained performance, on the other.

9.4.2. Results of Associations and Moderations with the Banks' SCA

The findings only partially supported, as it often happens in social science research, the theoretical model of HRBV. The human resource attributes of value and imperfectly imitable could not, either by themselves or along with any variable of differentiation strategy, discriminate between the banks with above-industry average level, and those with below-industry average level of performance. These attributes were expected to be actualized and made operational through job design (and organisational structure) and

participative management, respectively. Job design and organisational structure failed to moderate the human resource attribute of value in this research. The fine distinctions among the JCM features may not be particularly relevant in the context of the Bahraini banks. Again, imperfect imitability was supposed to be actualised through involvement of the employees. Probably, the Bahraini bank employees expect more guidance, and less actual discussions with the superiors, and that the banks are more likely to adopt a mechanistic organisation structure.

In the banking industry in Bahrain, with the banks having to conform to the strict regulations of Bahrain Monetary Agency (BMA), there is likely to be a higher degree of managerial centralisation than in any other industry where there are many competing firms. Therefore, the contribution of participative management to causal ambiguity, social complexity and unique history is likely to be much less than in other industries where there are many competing firms.

It is found that the human resource attribute of unique, in its own right, emerges as a major discriminant. Also, in conjunction with differentiation strategy variables 1, 2, 5 and 7, it is able to discriminate between the banks

with above-industry average and those with below-industry average performances. In the context of the banking industry in Bahrain, the human resource attribute of unique is more important than any other human resource attribute. It may be noted that the human resource attribute of unique, unlike as theorised, was not actualised through HR systems. As indicated by an HR manager in one of the sampled banks, all Bahraini banks, more or less, have similar pay scale systems, where jobs are more likely to be identical and well defined, which indicates the reason why the HR practice of remuneration and selection was not bank-specific across the banks. It can be seen from the findings that the Bahraini banks have specifically maintained their uniqueness. They are able to do so mainly through customer-related strategies, although a product-related strategy is factored in.

The analysis revealed the importance of the differentiation strategy variable a9. In conjunction with imperfectly substitutable and imperfectly mobile, it could significantly discriminate. But, the HR practice of a reward system did not actualize imperfect mobility. Again, competency variables did not actualize imperfectly substitutable. One explanation is that the manpower in

Bahrain commercial banks did not increase over the 10 years (i.e., during late 1980s and early 1990s).

The variable of employee effectiveness, by itself emerged as a discriminant. Again, in conjunction with the HR practice of internal placement, it could discriminate between the banks with the above-industry average, and those with below-industry average performance. The variable of employee skills and abilities, by itself and in conjunction with internal placement, emerged as a discriminant. It is noteworthy that the variable of internal placement, and not remuneration, is moderating both 'effectiveness' and 'abilities and skills'. Proper career advancement of the employees, and not monetary incentive, contributes to a bank's performance and SCA. It is more likely that career advancement is a bank-specific HR practice and thus, as hypothesized in the HRBV model, has an impact upon the HR-SCA relationship. The role of goal setting and goal commitment in discriminating between the banks with above-industry average, and those with below-industry average performance is significant. This indicates the importance of intangible resources and capabilities of HR as bank-specific resources in attaining SCA.

The discriminant analysis supported the claim that the moderate differentiation strategy variables 1, 6 and 7, in their individual capacities, could discriminate between the banks.

Thus, it is found, at least in the context of the Bahrain banks, that path-dependency theories do not entirely hold good. This finding has to be taken into account in any further research.

9.4.3. The Significant Implications of the Results

The significant implication of the results is that sustained competitive advantage was predicted by (a) human resource; (b) interaction between human resource and differentiation strategy (human resource-strategy fit); (c) the effect of the intangible resource (i.e., employees' commitment) as a potential source of human resource involvement and motivation; and (d) the interaction between employees' competence and HR practice (i.e., internal placement or career advancement). In sum, the partial support for the claims of the HRBV model, in its own right, constitutes a significant contribution to, and an extension of, the knowledge base of strategic management and SHRM.

The empirical results did not support all of the hypothesized associations with banks' performances and SCA. There are several factors that might explain only the partial support for the associations that were hypothesised.

The setup of the internal and external environments of the banks may have a direct impact on the results. Commercial banks incorporate peculiar features such as high capital-intensive operations, differentiation strategy, identical operations (i.e., basically deposits and loans), mechanistic structure and well-defined tasks, skills of the people, similar nature of the HR practices, and small size of market which are directed by the strict and specific rules laid down by the regulatory body of the BMA.

The performance of the sampled population hindered, to some extent, the empirical testing of the hypotheses of the HRBV model. The small sample size of 7 banks in this study encountered two extreme values (Al-Ahli Bank as a strong performer and Arab Bank as a very weak performer) (i.e., influential observations). This might inhibit many of the associations to come up from the analysis.

9.5. Revisiting the HRBV Model

The empirical results regarding the association with banks' performances and SCA necessitate modifications on the HRBV model. The revisited model, as depicted in Figure 9.1, shows that the sources of SCA are incorporated in the human resource attributes of unique and imperfectly substitutable, human resource competency, human resource involvement and commitment and differentiation strategy. It identifies differentiation strategy and HR practices as moderators of the relationship between SCA and both human resource attributes and human resources competency, respectively.

Several significant implications can be drawn from the revised model. First, the revised model provides a base for further careful investigation of the roles of human resource attributes of SCA, intangible resources, HR competency, HR practices, and differentiation in the attainment of SCA.

Second, the results encourage replication of empirical studies to test the hypotheses, concepts, robustness and reliability of the revised model in different business environments and in different industries.

Third, comparative studies can also be considered to develop a better understanding of the contingency perspective of the HRBV model: ‘when’, ‘how’ and ‘under what environmental conditions’, and which specific configurations can support the human resource and the sustained competitive advantage relationship. Such studies will contribute to the development of the SHRM theory, in which specific configurations of internally consistent HR practices, business strategy, and human resources are expected to lead to high performance.

9.6. The recommendations for further research

The rapid change, increasing complexity and uncertainty in many business environments, particularly in the information and service industries, has simultaneously intensified the competition and increased the vulnerability of the firm to the volatile market. To deal with such a situation, strategic management theorists recommend that the firm must seek to base long-term strategy upon its internal resources and capabilities more than upon external markets (Grant, 1998). In this sense, the HRBV model is a crucial instrument for the firm’s success. The HRBV model shows ‘how’ and ‘when’ human resources can be a potential source of sustained competitive advantage. This being a pioneering and exploratory study, further

refinement and re-testing of the concepts and assertions of the HRBV model could provide more precision and robustness to the model.

In this study, the HRBV model has been empirically tested, and has provided encouraging results to carry out further research. Researchers can use the HRBV model as an instrument to conduct studies aiming at examining the human resource and the sustained competitive advantage relationship under strategic, managerial, and organisation context in different economic sectors. The results of such studies can be compared. Furthermore, using the HRBV model to build a database will help the researchers in developing and testing frameworks and theories in the field of strategic management and SHRM. Researchers can also use the premises underpinning the HRBV model to conduct further research in these areas and increase the understanding of the human resource and the sustained competitive advantage relationship.

The current findings may suggest that future investigation on the human resource and the sustained competitive advantage relationship should specifically focus on factors or variables that are human resource-dependent, such as innovation variables within differentiation strategy,

innovative HR practices index (MacDuffie, 1995), human capital and HR enhancing systems (Arthur, 1994), and participative management and culture.

The implication of the HRBV model is significant for HR managers and strategy makers in commercial banks. Both banks with SCA and without SCA have to follow different strategies. Those with SCA should strengthen their human resources strategies. Those without it should redesign them. Given the fact that the investigated banks without SCA are also considering a differentiation strategy as a route to enhance competitiveness, particular emphasis should, therefore, be given to the design of HR strategy and HR practices. Internal fit (internally consistent HR practices) and external fit (strategy and HR practices consistency) should receive considerable attention.

9.7. The Limitations of the Study

There are several factors that limit the generalisability of the findings of the study. The study has focused on the investigation of the commercial banking industry to control between-the-industry differences. Therefore, the findings may not be generalisable to other industries. For example,

commercial banks incorporate peculiar features such as high capital-intensive operations, differentiation strategy, operations (i.e., basically deposits and loans), structure and tasks, skills of the people, nature of the HR practices that differ substantially from other economic sectors.

However, the generalisability is also limited by the small sample size. Because the study was carried out on a small sample size of seven (7) banks, many statistical functions were constrained by the size, reducing the power to detect other possible relationships that might exist. Furthermore, small sample size and the power of the statistical tests are related to each other; because an increase in the sample size will also increase power of the statistical test (Hair et al., 1998; Cohen and Cohen, 1983). The small sample size in this study encountered two extreme values (Al-Ahli Bank as a strong performer and Arab Bank as a very weak performer) (i.e., influential observations). Therefore, the inferential statistics obtained from the study should be interpreted with a high degree of caution and within the population of the commercial banks in Bahrain.

The quest for broader and more concise conceptualization of the attributes of sustained competitive advantage becomes imperative. Further research is

required using the index of the attributes of SCA adopted in this study as a base to develop and validate more reliable and comprehensive actionable measures in order to test the robustness of these attributes in relation to performance and SCA. Clearly, the empirical study of the RBV is in its infancy. This research contributes to the literature of management by developing conceptual and operational definitions of the attributes of SCA and testing them empirically to provide evidence of their relevancy.

The attributes of sustained competitive advantage have been measured through the perceptions of Line and HR Managers and Employees. The rating or score given to each of the attributes reflects the way in which Line and HR Managers and Employees perceive the employees as valuable, unique, imperfectly imitable, imperfectly substitutable, and imperfectly mobile resource at a particular point in time. In the context of the preceding assertions, these perceptions represent the internal states of the managers' minds at the time of conducting the study that are highly likely to change due to changes in the personality of the managers themselves and their context. As a consequence, this may cause perceptual fluctuations and inconsistency of the results. The study recognizes that the attitudinal measures of the attributes of sustained competitive advantage impose a

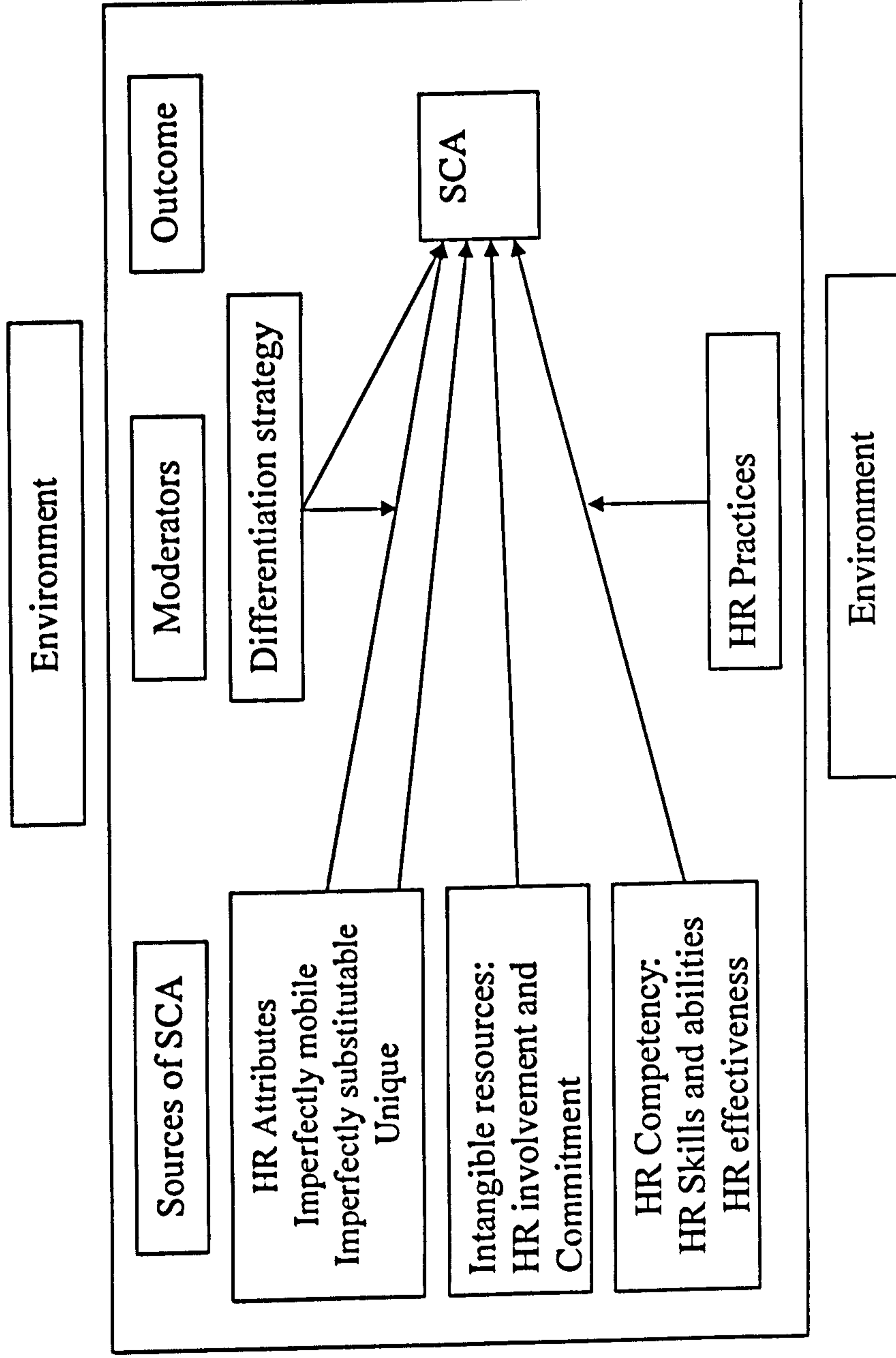
limitation on the generalisability of the results and, accordingly, encourage further empirical research to replicate the study to enhance its reliability.

The research recognizes the limitation associated with the use of cross-sectional data when an attempt to draw conclusion about causality is made. Although the study asserts that human resource attributes, differentiation strategy, employee competence, HR practices, style of management, organisational climate, organisation, the interaction between human resource attributes and differentiation strategy, and the interaction between employee competence and HR practices and management style are related to performance and sustained competitive advantage, the cross-sectional research design used in this study does not fully determine causality. The issues of causality can be better addressed and understood through longitudinal research designs.

Despite the limitations, the research has provided some support for the claims of the RBV of the firm and generic strategy. Evidence was provided for some of the human resource attributes' contribution to SCA. Evidence for direct contribution of HR practices to SCA is less strong. The research has provided some support for direct contribution of 'Fit' between

differentiation strategy and human resource attributes to SCA. The study contributed to the ongoing debate and future research of the role and importance of the firm's resources and their management toward the attainment of SCA.

Figure 9.1: The Human Resource-Based View (HRBV) Model - Re-visit



Appendix – A: Research Questionnaires

Questionnaire for Bank's General Managers

on

Environment and Business Strategy

Business School - City University

London - UK

1998

Dear General Manager,

Contemporary research on Strategy and Human Resource Management (HRM) emphasise high performance over a long period of time in competitive markets. This questionnaire is about examining the role of people, both managers and employees, in achieving high performance in the commercial banking sector in Bahrain.

I am administering this questionnaire as part of my Ph.D. research on Human Resource Management at City University Business School. The success of the examination depends on your frank, valuable opinion.

As part of research ethics, I assure you that your opinions will be dealt with “strict confidentiality”. To ensure confidentiality, please put the questionnaire, after completion, into the attached envelope and seal it with any sign (if you do not prefer to use your signature). The questionnaire will be analysed by the “researcher only”.

In case of any inquiry, please do not hesitate to contact me on telephone **700943** or **9469055**.

Your cooperation and contribution are highly appreciated.

Yours sincerely,

Mohammed H. Dirbas

Questionnaire instructions

Please read the instructions **carefully** before completing the questionnaire:

1. General information.

2. Statements (1-9) measure the degree of breadth and change in your bank's products or markets. These statements position your bank along "a continuum ranging from 1-5" on which low values represent narrow, stable strategic postures and high values represent broad, varied strategic postures. Please circle the number on the scale beside each of the statements that best describe your bank strategy and its products. Try to be accurate as possible.

3. Statements (10-23) measure nature of competitive environment on a 5-point scale. Please circle the number on the scale beside each statement that best describes your opinion. The scale is as follows:

<u>Opinion</u>	<u>The Number</u>
strongly disagree	1
disagree	2
uncertain	3
agree	4
strongly agree	5

Try to be as accurate as possible.

First: General Information

Name of the bank

Current job Years of experience

Previous job Years of experience

Number of subordinates Age

Nationality: a. Bahraini () b. Non-Bahraini (specify).....

Specify your **last** academic qualification and specialisation:

a. Secondary()

b. Bachelor (BA/BSc).....()

c. Master()

d. Other (specify).....()

Specialisation.....

Second: Strategy of Product Variation

	strongly disagree	disagree	uncertain	agree	strongly agree
1. Our bank offers a narrow range of products.	1	2	3	4	5
2. Our bank establishes and maintains stable product-market posture.	1	2	3	4	5
3. Our bank is at the forefront of innovation and development.	1	2	3	4	5
4. The characteristics of our products differ a great deal from one another.	1	2	3	4	5
5. Our bank has a wide variety of customers.	1	2	3	4	5

6. The needs of our customers are very similar to one another.	1	2	3	4	5
7. Our bank offers many different services to customers.	1	2	3	4	5
8. Our business procedures have changed several times in the past eight (8) years.	1	2	3	4	5
9. The characteristics of our products are modified frequently.	1	2	3	4	5

Third: Nature of Competitive Environment

strongly disagree disagree uncertain agree strongly agree

The competition in the retail banking sector environment in Bahrain requires:

10. The use of technological innovation in ways of delivering services.	1	2	3	4	5
11. Offering a wide variety of services (to satisfy a very diverse customer group).	1	2	3	4	5
12. Innovativeness in terms of the number of new services offered.	1	2	3	4	5
13. Innovativeness in terms of the novelty of new services offered.	1	2	3	4	5
14. Offering high quality services in comparison to the competition.	1	2	3	4	5
15. Giving customers more facilities (benefits) for their money than competitors.	1	2	3	4	5
16. Allot a large amount of resources to					

customers services/products.	1	2	3	4	5
17. Ability to raise a large amount of financial resources for long-term investments.	1	2	3	4	5
18. Bank has abundant supply of material resources.	1	2	3	4	5
19. Heavy investment in production equipment and facilities.	1	2	3	4	5
20. Ability to systematically assess organisational performance, focusing on internal trends and developments.	1	2	3	4	5
21. Ability to systematically track the opportunities and threats in the environment in order to design long-term strategies.	1	2	3	4	5
22. Willingness to make commitment which involve many resources and risky projects.	1	2	3	4	5
23. Attempts to shape the business environment, as opposed to merely reacting to trends.	1	2	3	4	5

Questionnaire for Department Managers

on

Environment, Business Strategy and Human Resource Attributes

Business School - City University

London - UK

1998

Dear Manager,

Contemporary research on Strategy and Human Resource Management (HRM) emphasise high performance over a long period of time in competitive markets. This questionnaire is about examining the role of people, both managers and employees, in achieving high performance in the commercial banking sector in Bahrain.

I am administering this questionnaire as part of my Ph.D. research on Human Resource Management at City University Business School. The success of the examination depends on your frank, valuable opinion.

As part of research ethics, I assure you that your opinions will be dealt with “strict confidentiality”. To ensure confidentiality, please put the questionnaire, after completion, into the attached envelope and seal it with any sign (if you do not prefer to use your signature). The questionnaire will be analysed by the “researcher only”.

In case of any inquiry, please do not hesitate to contact me on telephone **700943** or **9469055**.

Your cooperation and contribution are highly appreciated.

Yours sincerely,

Mohammed H. Dirbas

Questionnaire instructions

Please read the instructions carefully before completing the questionnaire:

1. General information.

2. Statements (1-9) measure the degree of breadth and change in your bank's products or markets. These statements position your bank along "**a continuum ranging from 1-5**" on which low values represent narrow, stable strategic postures and high values represent broad, varied strategic postures. Please circle the number on the scale beside each of the statements that best describe your bank strategy and its products. Try to be accurate as possible.

3. Statements (10-35) measure nature of competitive environment and human resource attributes on a 5-point scale. Please circle the number on the scale beside each statement that best describes your opinion. The scale is as follows:

<i>Opinion</i>	<i>The Number</i>
strongly disagree	1
disagree	2
uncertain	3
agree	4
strongly agree	5

Try to be as accurate as possible.

First: General Information

Name of the bank Department/Unit.....

Current job Years of experience

Previous job Years of experience

Number of subordinates Age

Nationality: a. Bahraini () b. Non-Bahraini (specify).....

Specify your **last** academic qualification and specialisation:

a. Secondary()

b. Bachelor (BA/BSc).....()

c. Master()

d. Other (specify).....()

Specialisation.....

Second: Strategy of Product Variation

	strongly disagree	disagree	uncertain	agree	strongly agree
1. Our bank offers a narrow range of products.	1	2	3	4	5
2. Our bank establishes and maintains stable product-market posture.	1	2	3	4	5
3. Our bank is at the forefront of innovation and development.	1	2	3	4	5
4. The characteristics of our products differ a					

great deal from one another.	1	2	3	4	5
5. Our bank has a wide variety of customers.	1	2	3	4	5
6. The needs of our customers are very similar to one another.	1	2	3	4	5
7. Our bank offers many different services to customers.	1	2	3	4	5
8. Our business procedures have changed several times in the past eight (8) years.	1	2	3	4	5
9. The characteristics of our products are modified frequently.	1	2	3	4	5

Third: Nature of Competitive Environment

strongly disagree disagree uncertain agree strongly agree

The competition in the retail banking sector environment in Bahrain requires:

10. The use of technological innovation in ways of delivering services.	1	2	3	4	5
11. Offering a wide variety of services (to satisfy a very diverse customer group).	1	2	3	4	5
12. Innovativeness in terms of the number of new services offered.	1	2	3	4	5
13. Innovativeness in terms of the novelty of new services offered.	1	2	3	4	5
14. Offering high quality services in comparison to the competition.	1	2	3	4	5
15. Giving customers more facilities (benefits) for their money than competitors.	1	2	3	4	5

16. Allot a large amount of resources to customers services/products.	1	2	3	4	5
17. Ability to raise a large amount of financial resources for long-term investments.	1	2	3	4	5
18. Bank has abundant supply of material resources.	1	2	3	4	5
19. Heavy investment in production equipment and facilities.	1	2	3	4	5
20. Ability to systematically assess organisational performance, focusing on internal trends and developments.	1	2	3	4	5
21. Ability to systematically track the opportunities and threats in the environment in order to design long-term strategies.	1	2	3	4	5
22. Willingness to make commitment which involve many resources and risky projects.	1	2	3	4	5
23. Attempts to shape the business environment, as opposed to merely reacting to trends.	1	2	3	4	5

Fourth: Human Resource Attributes

24. Many people in the retail banking department possess unique skills.	1	2	3	4	5
25. The skills and attributes needed by employees for high job performance are scarce in the external labour market.	1	2	3	4	5
26. Our competitors would find it difficult to duplicate the skills of our people.	1	2	3	4	5
27. Competitors take a long time to duplicate the skills of our people.	1	2	3	4	5

28. People skills are shaped by the bank's culture (i.e., leadership style, values and interaction between superiors, subordinates, customers, bank systems).	1	2	3	4	5
29. It would be difficult to design work in order to reduce our staff level (i.e., number).	1	2	3	4	5
30. It would be difficult to substitute our staff skills with new technology.	1	2	3	4	5
31. Recruiting people from competitors is not an appropriate strategy for selecting qualified employees.	1	2	3	4	5
32. The people of high performance in our competitor banks would find it difficult to perform well in a short time in our bank.	1	2	3	4	5
33. The skills and experiences of the people in our retail banking department are of little utility to our competitors because they are difficult to transfer.	1	2	3	4	5
34. The success of many profitable customer services products is largely the result of people skills and commitment.	1	2	3	4	5
35. People are critical to our success.	1	2	3	4	5

Questionnaire for Employees in the Bank
on the Role of
Human Resources and Organisation in High Performance
Business School - City University
London - UK
1998

Dear Respondent,

Contemporary research on Strategy and Human Resource Management (HRM) emphasise high performance over a long period of time in competitive markets. This questionnaire is about examining the role of people, both managers and employees, in achieving high performance in the commercial banking sector in Bahrain.

I am administering this questionnaire as part of my Ph.D. research on Human Resource Management at City University Business School. The success of the examination depends on your frank, valuable opinion. The questionnaire will be distributed by the Personnel/or Human Resource Management department to people working in the Bank.

As part of research ethics, I assure you that your opinions will be dealt with "strict confidentiality". To ensure confidentiality, please put the questionnaire, after completion, into the attached envelope and seal it with any sign (if you do not prefer to use your signature).The questionnaire will be analysed by the "researcher only".

In case of any inquiry, please do not hesitate to contact me on telephone 700943 or 9469055.

Your cooperation and contribution are highly appreciated.

Yours sincerely,

Mohammed H. Dirbas

Questionnaire Instructions:

Please read the instructions carefully before completing the questionnaire:

1. General information.

2. There are 47 statements on organisation and human resource attributes measured by two scales.

A. Statements (1-26) are designed to tap your attitudes (opinions) toward the bank and your job. These statements are measured by a 5-point scale. Please circle the number beside each statement that best describes your attitudes about your job and the bank. The scale is as follows:

opinion	the number
strongly disagree	1
disagree	2
uncertain	3
agree	4
strongly agree	5

B. On the lines below each of the statements (27-47), please place (✓) at the point which, **in your experience**, describes your organisation. Treat each statement as a continuous variable from the extreme at one end to that at the other.

Example:

extent to which superiors display supportive behaviour toward others

display supportive behaviour virtually none.	no or	display supportive behaviour in condescending manner and situation only.	display supportive behaviour quit generally.	display supportive behaviour fully and in all situation.
			✓	

Try to be as accurate as possible.

General information

Name of the bank.....Department/Unit.....

Current job.....Years of experience.....

Previous job..... Years of experience

Age

Nationality: a. Bahraini () b. Non-Bahraini (specify)

Specify your last academic qualification and specialisation:

a. Secondary ()

b. Bachelor (BA/BSc)..... ()

c. Master ()

d. Other (specify)..... ()

Specialisation.....

First: The role of human resource management

	strongly disagree	disagree	uncertain	agree	strongly agree
1. The training and development provided by the bank is very effective in getting successful job performance.	1	2	3	4	5
2. The bank recruiting and selection process is very effective in securing people who perform successfully on the job.	1	2	3	4	5
3. The remuneration system of the bank has a significant impact upon the way people do their jobs.	1	2	3	4	5
4. Internal placement (i.e., promotion from within the department to higher positions) is very important for successful job performance.	1	2	3	4	5

Second: Your job commitment

- | | | | | | |
|---|---|---|---|---|---|
| 5. I am willing to put in a great deal of effort beyond that normally expected to help this organisation be successful. | 1 | 2 | 3 | 4 | 5 |
| 6. This organisation really inspires the very best in me in the way of job performance. | 1 | 2 | 3 | 4 | 5 |
| 7. I am very satisfied with my job. | 1 | 2 | 3 | 4 | 5 |

Third: The ability of employees to do their job well

- | | | | | | |
|--|---|---|---|---|---|
| 8. People in the department are good at what they do. | 1 | 2 | 3 | 4 | 5 |
| 9. People in the department are capable of making decisions on their own. | 1 | 2 | 3 | 4 | 5 |
| 10. People in the department have the skills and abilities they need to do their jobs effectively. | 1 | 2 | 3 | 4 | 5 |
| 11. People in the department have the adaptability skill they need to do their jobs effectively. | 1 | 2 | 3 | 4 | 5 |

Fourth: The contribution of people to the department's success

- | | | | | | |
|--|---|---|---|---|---|
| 12. Many people in the department possess unique and valuable skills. | 1 | 2 | 3 | 4 | 5 |
| 13. The skills and attributes of people in the department would be difficult to replace from outside of the bank | 1 | 2 | 3 | 4 | 5 |
| 14. Because in many ways our department is | 1 | 2 | 3 | 4 | 5 |

unique, it would be difficult for other banks to copy the contribution that our people make to the department's success.

- | | | | | | |
|---|---|---|---|---|---|
| 15. Because in many ways our department is unique, staff leaving the department for a competitor are likely to have difficulty in being as effective. | 1 | 2 | 3 | 4 | 5 |
| 16. The effectiveness of people recruited from competitors depends on their ability to cope with our work culture. | 1 | 2 | 3 | 4 | 5 |
| 17. The success of many profitable customer services products is largely a result of people's skills and commitment. | 1 | 2 | 3 | 4 | 5 |
| 18. People are critical for the department's success. | 1 | 2 | 3 | 4 | 5 |

Fifth: The design of your job

- | | | | | | |
|--|---|---|---|---|---|
| 19. This job provides me with a considerable variety of work. | 1 | 2 | 3 | 4 | 5 |
| 20. This job is arranged so that I have the chance to do a job from the beginning to the end (i.e., a chance to do the whole job). | 1 | 2 | 3 | 4 | 5 |
| 21. This job is one where a lot of other people can be affected by how well the work gets done. | 1 | 2 | 3 | 4 | 5 |
| 22. This job gives me considerable opportunity for independence and freedom in how I do the work. | 1 | 2 | 3 | 4 | 5 |
| 23. This job provides me with the feeling that I know whether I am performing well or poorly. | 1 | 2 | 3 | 4 | 5 |

Sixth: Formal organisation

24. For many decisions, the rules and regulations are developed as we go along. 1 2 3 4 5
25. It is not always necessary to go through channels to deal with important matters. 1 2 3 4 5
26. People from different departments are often put together in task forces to solve important problems. 1 2 3 4 5

Seventh: Nature of the bank's structure

27. Extent to which an effective structure exists enabling one part of the organisation to exert influence upon other parts

Highly effective structure exists enabling exercise of influence in all directions.	Moderately effective structure exists; influence exerted largely via vertical lines.	Limited capacity exists; influence exerted largely via vertical lines and primarily downward.	Effective structure virtually not present.
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28. Flexibility of structure

Highly flexible structure, with extensive use of project teams in response to the organisation's needs.	Moderately flexible structure, with some use of project teams and group working for special issues.	Largely inflexible structure, with only occasional use of project teams.	Highly rigid structure, no use of project teams.
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Eighth: Typical style of management in the bank

29. Extent to which superiors display supportive behaviour toward others

Display no supportive behaviour or virtually none.	Display supportive behaviour in condescending manner and situation only.	Display supportive behaviour quit generally.	Display supportive behaviour fully and in all situations.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

30. Amount of actual influence which superiors can exercise over the goals, activities, and methods of their units and departments

Believed to be substantial but actually moderate unless capacity severe punishment is present.	Moderate to somewhat more than moderate specially for higher levels in organisation.	Moderate to substantial, specially for higher levels in organisation.	Substantial but often, as for example, by superior building effective interaction-influence system.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

31. Extent to which superiors behave so that subordinates feel free to discuss important things about their jobs with their immediate superior

Subordinates feel completely free to discuss things about the job with their superior.	Subordinates feel rather free to discuss things about the job with their superior.	Subordinates feel very free to discuss things about the job with their superior.	Subordinates do not feel at all free to discuss things about the job with their superior.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

32. Extent to which immediate superior in solving job problems generally tries to get subordinates' ideas and opinions and makes constructive use of them

Always gets ideas and opinions and always tries to make constructive use of them.	Usually gets ideas and opinions and usually tries to make constructive use of them.	Sometimes gets ideas and opinions of subordinates in solving job problems.	Seldom gets ideas and opinion of subordinates in solving job problems.

33. Manner in which goals are usually established

Except in emergencies, goals are usually established by means of group participation.	Goals are set or orders issued after discussion with subordinates on problems and" planned action.	Orders issued, opportunities to comment may or may not exist.	Orders issued.

Ninth: Extent of commitment to the goals of the bank

34. People's attitudes towards the organisation and its goals

Attitudes are strongly favourable and provide powerful simulation to behaviour implementing organisation's goals.	Attitudes usually are favourable and supportive behaviour implementing organisation's goals.	Attitudes are sometimes hostile and counter to organisation's goals and are sometimes favourable and supportive of the behaviour necessary to achieve them.	Attitudes usually are hostile and counter to organisation's goals.

35. Amount of responsibility felt by each member of the organisation for achieving the organisation's goals

Personnel at all levels feel real responsibility for organisation's goals and behave in ways to implement them.	Substantial proportion of personnel specially at higher levels, feel responsibility and generally behave in ways to achieve the organisation's goals	Managerial personnel usually feel responsibility; rank and file usually feel relatively little responsibility for achieving organisation's goals.	High levels of management feel responsibility, lower levels feel less; rank and file feel little and often welcome opportunity to behave in ways to defeat organisation goals.

36. Extent to which there is an informal organisation present supporting or opposing goals of the formal organisation

Informal organisation present and opposing goals of formal organisation.	Informal organisation usually present and partially resisting goals.	Informal organisation maybe present and may either support or partially resist goals of formal organisation.	Informal and formal organisation are one and the same; hence all social forces support efforts to achieve organisation's goals.

Tenth: Extent of cooperation between people in the bank

37. Attitudes towards other members of the organisation

Favourable, cooperative attitudes throughout the organisation with mutual trust and confidence.	Cooperative, reasonably favourable attitudes toward others in organisation, maybe some competition between peers with resulting hostility and some condescension toward subordinates.	Subservient attitudes towards superiors; competition for status resulting in hostility towards peers; condescension towards subordinates.	Subservient attitudes towards superiors coupled with hostility; towards peers and contempt for subordinates, distrust is widespread.

38. Amount and characteristics of interaction

Extensive, friendly interaction with high degree of confidence and trust	Moderate interaction, often with fair amount of confidence and trust.	Little interaction and usually with some condescension by superiors; fear and caution by subordinates.	Little interaction and always with fear and distrust.

39. Amount of cooperative teamwork present

Very substantial amount throughout the organisation	A moderate amount	Relatively little.	None

Eleventh: Nature of communication in the bank

40. Amount of interaction and communication aimed at achieving organisation's objectives

Very little.	Little	Quite a bit.	Much with both individuals and groups

41. Direction of information flow

Downward	Mostly downward	Down and up	Down, up, and with peers

42. Extent to which superiors willingly share information with subordinates

Provide minimum of information.	Gives subordinates only information superior feels they need.	Gives information needed and answers most questions.	Seeks to give subordinates all relevant information and all information they want.

43. Subordinates' feeling of responsibility for initiating accurate upward communication

None at all.	Relatively little, usually communicates "filtered" information and only when requested.	Some moderate degree of responsibility to initiate accurate upward communication.	Considerable responsibility felt and much initiative; group communicates all relevant information,

44. Sideways (lateral) communication, its adequacy and accuracy

Usually poor because of competition between peers, corresponding hostility.	Fairly poor because of competition between peers.	Fairly good.	Good to excellent.

Twelfth: Nature of decision making in the bank

45. At what level in the organisation are decisions formally made?

Bulk of decisions at top of organisation.	Policy at top, many decisions within prescribed framework made at lower levels but usually checked with to before actions.	Broad policy decisions at top, more specific at lower levels.	Decision making widely done throughout organisation linking process provided by overlapping groups.

46. Decisions are made at the point in the organisation of the most adequate and accurate information

Overlapping groups and group decision processes tend to push decisions to point where information is most adequate or to exists pass the relevant information to the decision-making point.	Some tendency for decisions to be made appreciably higher than level where most adequate and accurate information exists.	Decisions often made at levels appreciably higher than level where most adequate and accurate information exists.	Decisions usually made at levels appreciably higher than levels where most adequate information exists.

47. To what extent are subordinates involved in decisions related to their work?

Not at all	Never involved in decisions, occasionally consulted.	Usually are consulted but ordinarily not involved in the decision making.	Are involved fully in all decisions related to their work.

Appendix – B:
Summary of the Empirical
Operationalisation

Appendix - B: Summary of the Empirical Operationalisation

No.	Constructs	Adapted/replication from	How measured
1	<p>Human Resource Attributes</p> <ol style="list-style-type: none"> 1. HR as unique: <ol style="list-style-type: none"> a. Many people in the bank departments possess unique skills. 2. HR as valuable: <ol style="list-style-type: none"> a. The success of many profitable customer services and products is largely the results of people's skills and commitment. 3. HR as scarce: <ol style="list-style-type: none"> a. The skills and attributes needed by employees for high performance are scarce in the external labour market. 4. HR as imperfectly imitable: <ol style="list-style-type: none"> a. Our competitors would find it difficult to duplicate the skills of our people. 5. HR as imperfectly substitutable: <ol style="list-style-type: none"> a. It would be difficult to design work in order to reduce our staff level (i.e., number). b. It would be difficult to substitute our staff skills with new technology. 6. HR as imperfectly mobile: <ol style="list-style-type: none"> a. The skills and experiences of the people in our bank departments are of little utility to our competitors because they are difficult to transfer. 	By the author	Likert 5-point scale
2	Differentiation Strategy	Segev (1987, 1989),	A continuum scale ranging

	<p>1. Our bank offers a narrow range of products (reverse scored).</p> <p>2. Our bank establishes and maintains stable product-market posture.</p> <p>3. Our bank is at the forefront of innovation and development.</p> <p>4. The characteristics of our products differ a great deal from one another.</p> <p>5. Our bank has a variety of customers.</p> <p>6. The needs of our customers are very similar to one another (reverse scored).</p> <p>7. Our bank offers many different services to customers.</p> <p>8. Our business procedures have changed several times in the past (8) years.</p> <p>9. The characteristics of our products are modified frequently.</p>	<p>Delery and Doty (1994), Snell (1992), Wright et al. (1998), Miller (1988), Snow and Hrebiniak (1980), Porter (1980, 1985), and Miles and Snow (1978).</p>	<p>from 1-5” on which low values represent narrow, stable strategic postures and high values represent broad, varied strategic postures</p>
3	<p>Employee Competence</p> <p>1. Effectiveness</p> <p>a. People in the department are good at what they do.</p> <p>2. Ability of decision making</p> <p>a. People in the department are capable of making decisions on their own.</p> <p>3. HR skills and ability</p> <p>a. People in the department have the skills and abilities they need to do their job effectively.</p> <p>4. Adaptability</p> <p>a. People in the department have the adaptability skills they need to do their job effectively.</p>	<p>By the author</p>	<p>Likert 5-point scale</p>
4	<p>HR Practices</p>	<p>By the author</p>	<p>Likert 5-point scale</p>

	<p>1. Training and development</p> <p>a. The training and development provided by the bank is very effective in getting successful job performance.</p> <p>2. Recruitment and selection</p> <p>a. The bank recruitment and selection process is very effective in securing people who perform successfully on the job.</p> <p>3. Remuneration</p> <p>a. The remuneration system of the bank has a significant impact upon the way people do their jobs.</p> <p>4. Internal placement</p> <p>a. Internal placement (i.e., promotion from within the department to higher positions) is very important for successful job performance.</p>		
5	<p>Style of Management</p> <p>1. Manager's support to employees</p> <p>a. Extent to which superiors display supportive behaviour.</p> <p>2. Employees' involvement</p> <p>a. Extent to which superiors behave so that subordinates feel free to discuss important things about their jobs with their immediate superior.</p> <p>3. Employees' utilization</p> <p>a. Extent to which immediate superior in solving problems generally tries to get subordinates' ideas and opinions and makes constructive</p>	Rensis Likert (1967), Delery and Doty (1996), Oldham and Cummings (1996), Snell (1992),	Likert 5-point scale

	<p>use of them.</p> <p>4. Goal participation a. Manner in which goals are usually established.</p> <p>5. Decision participation a. To what extent are subordinates involved in decisions related to their work?</p>		
6	<p>Organisational Climate</p> <p>1. Job satisfaction a. I am very satisfied with my job.</p> <p>2. Organisation motivation a. I am willing to put in a great deal of effort beyond what is normally expected in order to help this organisation be successful. b. This organisation really inspires the very best in me in the way of job performance.</p> <p>3. Organisational commitment a. People's attitudes towards the organisation and its goal. b. Amount of responsibility felt by each member of the organisation for achieving the organisation's goals.</p> <p>4. Employees cooperation a. Attitudes towards other members of the organisation. b. Amount and characteristics of interaction. c. Amount of cooperative teamwork present.</p>	Rensis Likert (1967), Delery and Doty (1996)	Management systems (1-4) continuum scale, Likert - point scale.

	<p>5. Informal organisation</p> <p>a. Extent to which there is an informal organisation presents supporting or opposing goals of the formal organisation.</p>		
7	<p>Organisation</p> <p>1. Formalization</p> <p>a. For many decisions, the rules and regulations are developed as we go along.</p> <p>2. Teamworking</p> <p>a. People from different departments are often put together in task forces to solve important problems.</p> <p>3. Flexible structure</p> <p>a. Extent to which an effective structure exists enabling one part of organisation to exert influence upon other parts.</p> <p>b. Flexibility of structure.</p> <p>4. Autonomy</p> <p>a. Amount of actual influence which superiors can exercise over the goals, activities, and methods of their units and departments.</p> <p>5. Communication</p> <p>a. Amount of interaction and communication aimed at achieving the organisation's goals.</p> <p>b. Direction of information flow</p> <p>c. Extent to which superiors willingly share information with subordinates.</p> <p>d. Subordinates' feeling of responsibility for initiating accurate upward</p>	<p>Rensis Likert (1967), Griffin (1980), Delery and Doty (1996), Campion and Thayer (1985), Pierce <i>et al</i>, (1979), Oldham and Hackman (1976).</p>	<p>Management systems (1-4) continuum scale, Likert 5-point scale.</p>

	<p>communication.</p> <p>e. Sideways (lateral) communication, its adequacy and accuracy.</p> <p>6. Centralisation</p> <p>a. At what level in the organisation are decisions formally made?</p> <p>7. Job Enrichment</p> <p>a. This job provides me with a considerable variety of work.</p> <p>b. This job is arranged so that I have the chance to do a job from the beginning to the end (i.e., a chance to do the whole job).</p> <p>c. This job is one where a lot of other people can be affected by how well the work gets done.</p> <p>d. This job gives me considerable opportunity for independent and freedom in how I do the work.</p> <p>e. This job provides me with the feeling that I know whether I am performing well or poorly.</p>		
8	<p>Competitive Environment</p> <ol style="list-style-type: none"> 1. The use of technological innovation in ways of delivering services. 2. Offering a wide variety of services (to satisfy a very diverse customer group). 3. Innovativeness in terms of the number of new services offered. 4. Innovativeness in terms of the novelty of new services offered. 5. Offering high quality services in comparison to the competition. 6. Giving customers more facilities (benefits) for their money than competitors. 7. Allots a large amount of resources to customers' services/products. 8. Ability to raise a large amount of financial resources for long-term 	Segev (1989) and Delery and Doty (1996)	Likert 5-point scale

	<p>investments.</p> <p>9. Bank has abundant supply of material resources.</p> <p>10. Heavy investment in production equipment and facilities.</p> <p>11. Ability to systematically assess organisational performance, focusing on internal trends and developments.</p> <p>12. Ability to systematically track the opportunities and threats in the environment in order to design long-term strategies.</p> <p>13. Willingness to make commitment which involves many resources and risky projects.</p> <p>14. Attempts to shape the business environment, as opposed to merely reacting to trends.</p>		
9	Dependent variables		
	Sustained competitive advantage	Porter (1985)	Above-industry average performance and below-industry average performance over four years
	Measures of Profitability: 1. Return on equity (ROE) 2. Return on Assets (ROA)	Beard and Dess (1981), Delery and Doty (1996), Short (1979); Bourke (1989); Molyneux and Thornton (1992), Rose (1993).	ROE Ratio: is net income (i.e., net profit) before and after tax as a ratio of total capital including all reserves over four years ROA Ratio: is net income after taxes as a ratio to total Assets
	Measures of efficiency and HR productivity 1. Operating efficiency 2. Employee's productivity	Kaplan and Norton (1996), Rose (1993).	Operating efficiency ratio: total operating expenses to total operating income over four years.

			Employee productivity ratio: net operating income to number of full-time-equivalent employees over four years.
	Measures of Profit margin 1. Net operating margin (NOM) 2. Net profit margin (NPM)	Rose (1993)	NBOM Ratio: is measured by total operating income minus total operating expenses to total Assets. NPM Ratio: is net income margin as a ratio to total operating income.
	Measures of Market share 1. Market-share loans (LNMKSH) 2. Market-share deposits (DPMKSH)	Short (1979); Bourke (1989); Molyneux and Thornton (1992), Rose (1993).	Market-share loans: bank loans as a ratio to the total loans of the industry over four years. Market-share deposits: bank customers deposits as a ratio to the total customers deposits of the industry over four years.

Appendix – C:
The Constructed Variables Based on
Questionnaire Respondents

Table 6.1.a: Human Resource Attributes (Line and HR Managers' Perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
Many people in the bank departments possess unique skills.	3.82	(1.1)		HR as unique
The success of many profitable custom services and products is largely the results of people skills and commitment.	4.28	(0.8)		HR as valuable
The skills and attributes needed by employees for high performance are scarce in the external labour market.	3.10	(1.12)		HR as scarce
Our competitors would find it difficult to duplicate the skills of our people.	3.0	(0.97)		HR as imperfectly imitable
It would be difficult to design work in order to reduce our staff level (i.e., number).	2.5	(0.9)	2.78 (0.81)	HR as imperfectly substitutable
It would be difficult to substitute our staff skills with new technology.	3.05	(1.07)		
The skills and experiences of the people in our bank departments are of little utility to our competitors because they are difficult to transfer.	2.69	(1.03)		HR as imperfectly mobile

¹ N = 39 Line and HR Managers

Table 6.1.b: Human Resource Attributes (Employees' Perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
Many people in the bank's departments possess unique skills.	3.22	(0.92)		HR as unique
The success of many profitable customer services and products is largely a result of the people's skills and commitment.	4.2	(0.74)		HR as valuable
The skills and attributes of the people in the department would be difficult to replace from outside the bank.	3.0	(1.08)		HR as imperfectly substitutable
Because in many ways our department is unique, it would be difficult for other banks to copy the contribution that our people make to the department's success.	3.2	(1.03)		HR as imperfectly imitable
Because in many ways our department is unique, staff leaving the department for a competitor are likely to have difficulty in being effective.	2.7	(1.1)		HR as imperfectly mobile

¹ N = 148 Employees

Table 6.2: Differentiation Strategy (CEOs and Line and HR Managers' Perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
Our bank offers a narrow range of products (reverse scored).	2.52	(1.31)		Bank's Offering Range
Our bank establishes and maintains stable product-market posture.	3.93	(1.10)		Bank's product-market posture
Our bank is at the forefront of innovation and development.	3.86	(1.14)		Bank at forefront of innovation
The characteristics of our products differ a great deal from one another.	3.57	(1.08)		Products' characteristics
Our bank has a variety of customers.	4.22	(0.80)		Bank's variety of customers
The needs of our customers are very similar to one another (reverse scored).	3.02	(1.12)		Needs of customers
Our bank offers many different services to customers.	4.30	(0.82)		Bank's offering different services
Our business procedures have changed several times in the past (8) years.	4.13	(1.01)		Change of procedure
The characteristics of our products are modified frequently.	4.06	(0.78)		Frequent product modifications

¹ N = 45 CEOs and Line and HR Managers

Table 6.3: Employee Competence (Employees' Perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
People in the department are good at what they do.	3.68	(0.90)		Proficiency
People in the department are capable of making decisions on their own.	3.19	(1.05)		Ability of decision making
People in the department have the skills and abilities they need to do their jobs effectively.	3.61	(0.97)		HR skills and ability
People in the department have the adaptability skills they need to do their jobs effectively.	3.66	(0.93)		Adaptability

¹ N = 148 Employees

Table 6.4: HR Practices (Employees' Perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
The training and development provided by the bank is very effective in getting successful job performance.	4.46	(0.79)		Training and development
The bank recruitment and selection process is very effective in securing people who perform successfully on the job.	4.40	(0.92)		Recruitment and selection
The remuneration system of the bank has a significant impact upon the way people do their jobs.	3.95	(0.91)		Remuneration
Internal placement (i.e., promotion from within the department to higher positions) is very important for successful job performance.	4.30	(0.84)		Internal placement

¹ N = 148 Employees

Table 6.5: Style of Management (Employees' Perceptions)¹: The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
Extent to which superiors display supportive behaviour.	3.05	(0.86)		Manager's support to employees
Extent to which superiors behave so that subordinates feel free to discuss important things about their jobs with their immediate superior.	3.38	(0.86)		Employees' involvement
Extent to which immediate superior in solving problems generally tries to get subordinates' ideas and opinions and makes constructive use of them.	2.89	(0.99)		Employees' utilization
Manner in which goals are usually established.	2.86	(0.99)		Goal participation
To what extent are subordinates involved in decisions related to their work?	3.13	(0.85)		Decision participation

¹ N = 148 Employees

Table 6.6: Organisational Climate (Employees' perceptions)¹ : The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
I am very satisfied with my job.	3.61	(0.83)		Job satisfaction
I am willing to put in a great deal of effort beyond what is normally expected in order to help this organisation be successful.	4.43	(0.83)	4.20 (0.89)	Organisation motivation
This organisation really inspires the very best in me in the way of job performance.	3.96	(0.94)		
People's attitudes towards the organisation and its goal.	3.22	(0.91)	3.29 (0.93)	Organisational commitment
Amount of responsibility felt by each member of the organisation for achieving the organisation's goals.	3.36	(0.96)		
Attitudes towards other members of the organisation.	3.52	(0.90)	3.49 (0.83)	Employees cooperation
Amount and characteristics of interaction.	3.47	(0.80)		
Amount of cooperative teamwork present.	3.47	(0.78)		
Extent to which there is an informal organisation presents supporting or opposing goals of the formal organisation.	3.32	(0.98)		Informal organisation

¹ N = 148 Employees

Table 6.7: Organisation (Employees' Perceptions)¹: The constructed variables based on the questionnaire statements

Items of the questionnaire	Mean	SD	Average mean and SD	Constructed variable used in the analysis
For many decisions, the rules and regulations are developed as we go along.	3.68	(1.06)		Formalization
People from different departments are often put together in task forces to solve important problems.	3.34	(1.21)		Teamworking
Extent to which an effective structure exists enabling one part of an organisation to exert influence upon other parts.	3.21	(0.87)	3.21 (0.87)	Flexible structure
Flexibility of structure.	3.24	(0.90)		
Amount of actual influence which superiors can exercise over the goals, activities, and methods of their units and departments.	2.92	(0.90)		Autonomy
Amount of interaction and communication aimed at achieving the organisation's goals.	3.63	(0.72)	3.38 (0.80)	Communication
Direction of information flow.	3.32	(0.87)		
Extent to which superiors willingly share information with subordinates.	3.03	(0.88)		
Subordinates' feeling of responsibility for initiating accurate upward communication.	3.47	(0.80)		
Sideways (lateral) communication, its adequacy and accuracy.	3.48	(0.76)		
This job provides me with a considerable variety of work.	3.80	(0.93)	3.69 (1.02)	Job Enrichment
This job is arranged so that I have the chance to do a job from the beginning to the end (i.e., a chance to do the whole job).	3.51	(1.20)		
This job is one where a lot of other people can be affected by how well the work gets done.	3.76	(0.92)		
This job gives me considerable opportunity for independent and freedom in how I do the work.	3.57	(1.05)		
This job provides me with the feeling that I know whether I am performing well or poorly.	3.82	(1.03)		

¹ N = 148 Employees

Table 6.8: The Dependent Variables - Performance Measures: Means & SD¹

Category	Profitability		Net Profit		Efficiency		Market Share	
Variable	Mean	SD						
ROA 94	1.52	0.62						
ROA 95	1.68	1.28						
ROA 96	1.74	1.41						
ROA 97	1.54	0.84						
ROE 94	19.26	11.47						
ROE 95	17.94	13.30						
ROE 96	19.79	13.75						
ROE 97	25.08	20.10						
			Mean	SD				
NBOM 94			1.58	0.65				
NBOM 95			1.57	0.74				
NBOM 96			1.73	0.87				
NBOM 97			1.70	0.83				
NPM 94			33.88	13.79				
NPM 95			29.01	14.96				
NPM 96			29.22	14.81				
NPM 97			32.79	19.38				
					Mean	SD		
OPEF 94					64.61	14.71		
OPEF 95					63.60	17.76		
OPEF 96					64.23	16.00		
OPEF 97					63.74	17.87		
EMPRD 94					12.10	5.43		
EMPRD 95					11.13	5.76		
EMPRD 96					12.03	6.72		
EMPRD 97					16.22	8.59		
							Mean	SD
LNMKSH 94							6.84	3.82
LNMKSH 95							6.89	3.48
LNMKSH 96							6.56	3.36
LNMKSH 97							6.46	3.13
DPMKSH 94							5.25	2.38
DPMKSH 95							5.78	2.36
DPMKSH 96							5.96	2.62
DPMKSH 97							6.25	2.87

¹ N = 7 Commercial Banks

Appendix – D:
One-Way ANOVA Tables

Table (6.9.a): One-way ANOVA for Human Resource Attributes as Perceived by Line and HR Managers¹

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. HR as unique resource		4.4	1.5	3.4	2.5	3.28	3	3.54	3.239	0.01**
2. HR as valuable resource		4.4	2.5	4.6	4.5	4.57	4.33	4.09	2.79	0.027*
3. HR as scarce resource		3.2	3	2.2	3.33	3.42	2.33	3.36	1.03	0.422
4. HR as imperfectly imitable resource		3.6	3	2.6	2.5	3.42	2.33	3.09	1.244	0.31
5. HR as imperfectly substitutable resources		2.9	3.5	2.1	2.83	3.42	2.33	2.59	2.244	0.64
6. HR as imperfectly mobile resource		2.8	3	2.2	2.5	3.14	3	2.54	0.53	0.784

* significant at <.05 ** significant at < .01

1 N= 39

Table (6.9.b): One-way ANOVA for Human Resource Attributes as Perceived by Employees 1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. HR as unique resource		3.22	2.86	3.17	3.11	3.53	3.5	3.16	1.077	0.379
2. HR as valuable resource		3.86	3.6	4.41	4.16	4.26	4.12	4.28	3.09	0.00**
3. HR as scarce resource		2.77	3.26	3.11	2.94	3.3	2.75	2.92	0.792	0.577
4. HR as imperfectly imitable resource		3.04	3.13	3.21	2.94	3.19	3.62	3.2	0.455	0.84
5. HR as imperfectly mobile resource		2.72	3.73	2.52	2.83	3.07	3.25	2.44	1.21	0.305

* significant at <.05 ** significant at < .01

1 N=148

Table (6.10): One-way ANOVA for Differentiation Strategy as Perceived by CEOs and Line and HR Managers¹

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Our bank offers a narrow range of products.		4.33	5	3.33	3.42	2.37	2	4	4.879	0.001**
2. Our bank establishes and maintains stable product-market posture.		2.66	3.66	1.66	2.42	2	1.75	1.66	1.782	0.128
3. Our bank is at the forefront of innovation and development.		4.16	5	4	2.28	4.62	4.5	3.58	6.757	0.000**
4. The characteristics of our products differ a great deal from one another.		3.66	3.66	3.5	2.57	4	3.75	3.83	1.487	0.208
5. Our bank has a variety of customers.		3.5	4	4.33	4.14	4.75	4.75	4.08	3.049	0.015**
6. The needs of our customers are very similar to one another.		4	2.66	2.5	3.28	2.12	3.5	2.91	2.292	0.055
7. Our bank offers many different services and products.		3.66	5	4	3.71	4.87	4.75	4.33	3.504	0.007**
8. Our business procedures have changed several times in the past eight (8) years.		3.66	4	4.5	3.28	4.62	4.5	4.25	1.806	0.123
9. The characteristics of our products are modified frequently.		3.16	4.66	4.16	4	4.12	4.25	4	1.311	0.275

* significant at <.05 ** significant at < .01

¹ N=46

Table (6.11): One-way ANOVA for Employee Competence as Perceived by Employees1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Effectiveness		3.09	3.53	3.79	3.66	4.07	3.75	3.72	2.75	0.01**
2. Skills and Abilities		3.22	3.2	3.64	3.61	3.92	3.87	3.76	1.74	0.11
3. Decision making		3	2.8	3.14	3.5	3.42	2.75	3.32	1.25	0.28
4. Adaptability		3.45	3.4	3.58	3.61	4.19	3.5	3.64	1.95	0.07

* significant at <.05 ** significant at < .01

1 N=148

Table (6.12): One-way ANOVA for HR Practices as Perceived by Employees 1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Training and development		4.13	4.66	4.73	3.66	4.69	4.62	4.52	5.88	0.00**
2. Recruitment and selection		4.18	4.46	4.67	3.22	4.5	4.62	4.64	7.5	0.00**
3. Remuneration		3.63	4.26	4	3.72	3.96	4.25	4.04	1.14	0.33
4. Internal placement		4	4.46	4.14	4.22	4.5	4.37	4.52	1.34	0.24

* significant at <.05 ** significant at < .01

1 N=148

Table (6.13): One-way ANOVA for Style of Management Perceived by Employees 1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Manager's support to employees		2.86	3.16	2.88	3.5	3.23	2.62	3.02	1.8	0.1
2. Employees involvement		3.31	2.96	3.44	3.44	3.15	3.12	3.86	2.52	0.02*
3. Employees utilisation		3	2.5	2.79	2.88	2.76	2.5	3.42	2.05	0.06
4. Goal setting		2.95	2.63	2.97	3	2.57	2.75	3.02	0.76	0.6
5. Decision participation		3.09	2.63	3.17	3.33	3.11	3.25	3.22	1.13	0.35

* significant at <.05 ** significant at < .01

1 N=148

Table (6.14): One-way ANOVA for Organisational Climate Perceived by Employees 1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Job satisfaction		3.45	3.66	3.58	3.88	3.84	3.62	3.28	0.83	0.54
2. Willingness to exert great effort		4.09	4.33	4.47	4.38	4.57	4.87	4.44	1.18	0.32
3. Inspiration		4.09	4.06	4	3.77	4.07	4.12	3.68	0.69	0.65
4. Goal commitment		3.09	2.88	3.2	3.11	3.46	2.75	3.54	1.79	0.1
5. Responsibility towards goals		3.4	2.96	3.41	3.05	3.46	3.25	3.66	1.23	0.29
6. Attitudes towards employees		3.31	3.16	3.52	3.66	3.76	3	3.7	1.63	0.23
7. Amount of interaction		3.36	3.43	3.29	3.88	3.61	3.37	3.42	1.36	0.23
8. Cooperative teamwork		3.22	3.36	3.5	3.55	3.57	3.25	3.62	0.77	0.59
9. Informal organisation		3.18	3.9	3.52	3	3.5	3.12	3.58	1.74	0.11

* significant at <.05 ** significant at <.01

1 N=148

Table (6.15): One-way ANOVA for Organisation as Perceived by Employees 1

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. Formalisation		3.36	3.53	3.76	3.66	3.84	4	3.64	0.63	0.7
2. Teamworking		3.31	2.66	3.5	3.27	3.53	3.5	3.36	1.02	0.41
3. Effective structure		3.27	3.36	3.11	3.05	3.26	2.62	3.42	1.11	0.35
4. Flexible structure		3.27	2.96	3.02	3.38	3.46	3.12	3.38	1.02	0.41
5. Autonomy		2.95	2.96	2.85	2.66	2.92	3	3.1	0.44	0.59
6. Communication		3.31	3.56	3.76	3.55	3.76	3.25	3.82	1.72	0.12
7. Information flow		3.13	3.03	3.2	3.55	3.38	3	3.66	1.65	0.13
8. Information sharing		2.9	2.63	3.14	3.27	3.07	2.75	3.06	1.06	0.39
9. Information initiation		3.18	3.23	3.35	3.61	3.96	3.12	3.54	3.07	0.00**
10. Lateral communication		3.09	3.43	3.5	3.27	3.88	3.12	3.66	3.2	0.00**
11. Variety of work		3.59	3.6	3.85	3.83	3.84	3.62	4	0.56	0.76
12. Identity		2.86	3.13	3.52	4.05	3.8	3.87	3.44	2.48	0.02*
13. Significance		3.45	3.4	3.85	3.94	4	3.75	3.72	1.29	0.26
14. Work autonomy		3.31	3.26	3.76	3.77	3.57	3.37	3.6	0.77	0.59
15. Feedback		3.27	3.4	4.08	3.94	3.84	3.75	4.12	2.37	0.03*
16. Centralisation		2.82	2.3	2.5	2.39	2.38	2.63	2.62	0.68	0.66

* significant at <.05 ** significant at <.01

1 N=148

Table (6.16): One-way ANOVA for Nature of Bahrain Commercial Banking Industry Environment as Perceived by CEOs and Line and HR Managers¹

Variable No.	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	ANOVA	
									F. Ratio	P. Value
1. The use of technological innovation in ways of delivering services.		4.5	4.66	4.33	4.28	4.87	3.75	4.33	1.679	0.152
2. Offering a wide variety of services (to satisfy a very diverse customers).		4.16	4	4.66	4.28	4.62	4.75	4	0.836	0.549
3. Innovativeness in terms of the number of new services offered.		4	4.33	4.33	4.57	4.62	4.5	3.91	1.418	0.232
4. Innovativeness in terms of the novelty of new services offered.		3.66	4.33	4	4.28	4.62	5	3.75	2.528	0.037*
5. Offering high quality services in comparison to the competition.		4	4.66	4.5	5	4.37	3.75	4.33	1.665	0.156
6. Giving the customers more facilities (benefits) for their money than competitors.		4	3	3.16	3.85	3.42	1.75	3.83	1.672	0.155
7. Allots a large amount of resources to customer's services/products.		3.5	3	3.5	4	2.87	2.75	3.91	1.555	0.186
8. Ability to raise a large amount of financial resources for long-term investment.		3	3.66	3.5	3.28	3.25	4.25	3.41	0.871	0.525
9. Bank has abundant supply of material resources.		2.83	4.33	3.83	3	3.85	4.5	3.5	2.249	0.059
10. Heavy investment in production equipment and facilities.		2.5	3.66	4.33	3.14	4.25	3.25	2.91	3.556	0.007**
11. Ability to systematically assess organisational performance, focusing on internal and external trends and development.		3.83	4	4.83	4.28	4.57	4.75	4.28	1.698	0.148
12. Ability to track the opportunities and threats in the environment in order to design long-term strategies.		3.66	4.66	4	4.71	4.14	3.75	4	1.18	0.338
13. Willingness to make commitment which involves many resources and risky projects.		2.66	2.33	2.83	2.85	3	2.25	2.91	0.219	0.968
14. Attempts to shape the business environment, as opposed to merely reacting to trends.		3.5	3.33	5	4.28	3.62	4.25	4	1.392	0.242

* significant at <.05 ** significant at <.01 1 N= 46

Table (6.17): One-way ANOVA for Banks' Performance Over 1994-1997 ¹

Performance Measure	Bank	Al-Ahli	Arab	BBME	Grindlays	Islamic	Melli	Standard	Industry Average	ANOVA	
										F. Ratio	P. Value
1. ROA		3.5	0.01	2.03	1.45	1.2	1.03	1.2	1.62	9.47	0.00**
2. ROE		14.76	0.4	41.59	11.85	11.45	6.92	30.49	15.22	16.04	0.00**
3. Net Bank Operating Margin		2.8	0.06	2.28	1.44	1.37	1.31	1.39	1.83	19.65	0.00**
4. Net Profit Margin		51.44	0.46	37.12	38.3	20.88	20	32.9	42.75	8.96	0.00**
5. Operating Efficiency		41.36	97.5	54.31	61.9	76.46	73.64	62.37	51.68	19.47	0.00**
6. Employees Productivity		23.42	0.18	13.17	11.15	13.66	7.41	12.95	19.65	8.61	0.00**
7. Market Share- Loans		11.02	1.72	5.49	3.66	10.59	0.75	7.5		131.88	0.00**
8. Market Share- Deposits		8.9	2	5.56	3.17	6.67	0.82	8.22		118.1	0.00**

* significant at <.05 ** significant at < .01

¹ N= 7

Appendix – E: Summary of the Research Hypotheses

Appendix - E: Summary of the Research Hypotheses

1. Relationships between the HRBV Attributes*, Performance and SCA**

H.1.1.1: “There will be a positive association between the value of a bank’s human resources and its performance*”.

H.1.1.2: “There will be a positive association between the uniqueness of a bank’s human resources and its performance*”.

H.1.1.3: “There will be a positive association between the immobility of a bank’s human resources and its performance*”.

H.1.1.4: “There will be a positive association between the inimitability of a bank’s human resources and its performance*”.

H.1.1.5: “There will be a positive association between the non-substitutability of a bank’s human resources and its performance*”.

H.1.2.1: “Banks whose human resources are more valuable are more likely to display sustained competitive advantage***”.

H.1.2.2: “Banks whose human resources are more unique are more likely to display sustained competitive advantage***”.

H.1.2.3: “Banks whose human resources are more immobile are more likely to display sustained competitive advantage***”.

H.1.2.4: “Banks whose human resources are more inimitable are more likely to display sustained competitive advantage***”.

H.1.2.5: “Banks whose human resources are more non-substitutable are more likely to display sustained competitive advantage***”.

2. Relationships between Strategy, Performance and SCA

H.2.1: “There will be a positive association between the extent of strategic differentiation displayed by a bank and its performance*”.

H.2.2: “Banks reporting a greater level of strategic differentiation are more likely to display sustained competitive advantage***”.

3. Relationships between Employees' Competence, Performance and SCA

H.3.1: "There will be a positive association between the level of employees' competence within a bank and its performance*".

H.3.2: "Banks whose employees are more competent are more likely to display sustained competitive advantage**".

4. Relationships between HR Practices and Performance

H.4.1: "There will be a positive association between the effectiveness of recruitment and selection practices within a bank and its performance*".

H.4.2: "There will be a positive association between the impact of remuneration practices within a bank and its performance*".

H.4.3: "There will be a positive association between the importance of internal placement practices within a bank and its performance*".

H.4.4: "There will be a positive association between the effectiveness of training and development practices within a bank and its performance*".

5. Relationship between Style of Management and Performance

H.5.1: "There will be a positive association between the extent of participative management in a bank and its performance*".

6. Relationships between Organisational Climate, Performance and SCA.

H.6.1: "Banks displaying a more positive organisational climate are more likely to display higher levels of performance*".

H.6.2: "Banks displaying a positive organisational climate are more likely to display sustained competitive advantage**".

7. Relationship between Work Organisation and Performance

H.7.1: "There will be a positive association between the use of human resource enhancing work systems and bank performance*".

8. HRBV attributes as moderators of the strategy-performance and SCA relationships

H.8.1: "The relationship between the extent of strategic differentiation of a bank and its performance* will be moderated by its HRBV attributes".

H.8.2: “The relationship between the extent of strategic differentiation of a bank and its sustained competitive advantage** will be moderated by its HRBV attributes”.

9. Strategy as a moderator of the HRBV attribute-performance and SCA relationships

H.9.1.1: “The relationship between the value of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.2: “The relationship between the uniqueness of a bank’s human resources and its performance will be moderated by the extent of strategic differentiation*”.

H.9.1.3: “The relationship between the immobility of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.4: “The relationship between the inimitability of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.1.5: “The relationship between the non-substitutability of a bank’s human resources and its performance* will be moderated by the extent of strategic differentiation”.

H.9.2.1: “The relationship between the value of a bank’s human resources and its sustained competitive advantage** will be moderated by the extent of strategic differentiation”.

H.9.2.2: “The relationship between the uniqueness of a bank’s human resources and its sustained competitive advantage** will be moderated by the extent of strategic differentiation”.

H.9.2.3: “The relationship between the immobility of a bank’s human resources and its sustained competitive advantage** will be moderated by the extent of strategic differentiation”.

H.9.2.4: “The relationship between the inimitability of a bank’s human resources and its sustained competitive advantage** will be moderated by the extent of strategic differentiation”.

H.9.2.5: “The relationship between the non-substitutability of a bank’s human resources and its sustained competitive advantage** will be moderated by the extent of strategic differentiation”.

10. Style of management as a moderator of the employees' competence-performance and SCA relationships

H.10.1: "The relationship between the level of competence of a bank's employees and its performance* will be moderated by the extent of participative management".

H.10.2: "The relationship between the level of competence of a bank's employees and its sustained competitive advantage** will be moderated by the extent of participative management".

11. HR Practices as moderators of the employees' competence-performance and SCA relationships

H.11.1.1: "The relationship between the level of competence of a bank's employees and its performance* will be moderated the effectiveness of the bank's recruitment and selection practices".

H.11.1.2: "The relationship between the level of competence of a bank's employees and its performance* will be moderated by the effectiveness of the bank's training and development practices".

H.11.1.3: "The relationship between the level of competence of a bank's employees and its performance* will be moderated by the importance of the bank's internal placement practices".

H.11.1.4: "The relationship between the level of competence of a bank's employees and its performance* will be moderated by the impact of the bank's remuneration practices".

H.11.2.1: "The relationship between the level of competence of a bank's employees and its sustained competitive advantage** will be moderated by the effectiveness of the bank's recruitment and selection practices".

H.11.2.2: "The relationship between the level of competence of a bank's employees and its sustained competitive advantage** will be moderated by the effectiveness of the bank's training and development practices".

H.11.2.3: "The relationship between the level of competence of a bank's employees and its sustained competitive advantage** will be moderated by the importance of the bank's internal placement practices".

H.11.2.4: "The relationship between the level of competence of a bank's employees and its sustained competitive advantage** will be moderated by the impact of the bank's remuneration practices".

*As measured by ROA, ROE, NPM, OBOM, OPEF, EMPROD, LNMKSH, DPMKSH.

** Defined as the above-industry average performance* over a four-year period.

*** As measured by the perceptions of both Line and HR Managers or employees.

Appendix – F: Hierarchical Regression Tables

Table (7.4.1): Hierarchical Regression Analysis of Human Resource Attribute of Imperfectly Mobile as Moderator for Differentiation Strategy (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
NBOM 95	I. mobile & a9	.832	.693	4.514	.094			
	I. mobile X a9	.936	.876	7.055	.071	.183	7.379	
NBOM 97	I. mobile & a9	.905	.820	9.084	.033			*
	I. mobile X a9	.984	.969	31.357	.009	.149	24.032	**
OPEF 95	I. mobile & a9	.913	.833	9.970	.028			*
	I. mobile X a9	.950	.902	9.252	.050	.069	3.520	*
OPEF 97	I. mobile & a9	.944	.890	16.229	.012			**
	I. mobile X a9	.970	.941	16.031	.024	.051	4.322	*
EMPRD 94	I. mobile & a9	.780	.608	3.099	.154			
	I. mobile X a9	.959	.920	11.472	.038	.312	19.500	*
EMPRD 95	I. mobile & a9	.885	.783	7.198	.047			*
	I. mobile X a9	.952	.907	9.749	.047	.124	6.666	*

¹ Interaction effect = $\{R^2_{Y_{123}}\} - \{R^2_{Y_{12}}\}$ **p* < .05. ***p* < .01.

² F_I. = F value of interaction effect 'F'.

Table (7.4.2): Hierarchical Regression Analysis of Human Resource Imperfectly Imitable as Moderator for Differentiation Strategy (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
ROA 95	I. imitable & a9	.889	.789	7.500	.044			*
	I. imitable X a9	.955	.912	10.381	.043	.123	6.988	*
ROA 96	I. imitable & a7	.946	.895	17.087	.011			**
	I. imitable X a7	.990	.980	49.455	.005	.085	21.250	**

¹ Interaction effect = $\{R^2_{Y_{123}}\} - \{R^2_{Y_{12}}\}$ **p* < .05. ***p* < .01.

² F_I. = F value of interaction effect 'F'.

Table (7.4.3): Hierarchical Regression Analysis of Human Resource Attribute of Imperfect Substitutability as Moderator for Differentiation Strategy (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	Cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
ROA 94	I. substitutable & a9	.851	.724	5.240	.076			
	I. substitutable X a9	.953	.908	9.849	.046	.184	10.000	*
ROA 95	I. substitutable & a9	.915	.837	10.237	.027			*
	I. substitutable X a9	.973	.947	17.771	.021	.11	10.377	*
OPEF 94	I. substitutable & a9	.932	.869	13.226	.017			*
	I. substitutable X a9	.985	.970	32.405	.009	.101	16.833	**
OPEF 96	I. substitutable & a9	.825	.680	4.246	.103			
	I. substitutable X a9	.901	.821	4.581	.122	.141	3.938	
EMPRD 94	I. substitutable & a9	.774	.553	2.477	.200			
	I. substitutable X a9	.944	.891	8.157	.057	.338	15.504	*
EMPRD 96	I. substitutable & a9	.898	.806	8.319	.038			*
	I. substitutable X a9	.944	.891	8.185	.055	.085	3.944	*

¹ Interaction effect = $\{R^2_{Y_{123}}\} - \{R^2_{Y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.4): Hierarchical Regression Analysis of Differentiation Strategy as Moderator for Human Resource Attribute of Value (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
NBOM 94	Valuable & a6	.922	.851	11.414	.022			*
	Valuable X a6	.968	.937	14.802	.027	.086	6.825	*
NBOM 97	Valuable & a5	.947	.897	17.324	.011			**
	Valuable X a5	.974	.948	18.335	.020	.051	4.903	*
OPEF 94	Valuable & a5	.901	.811	8.593	.036			*
	Valuable X a5	.954	.910	10.065	.045	.099	9.900	*
OPEF 94	Valuable & a6	.979	.958	45.430	.002			**
	Valuable X a6	.991	.982	53.190	.004	.024	6.666	**
OPEF 97	Valuable & a1	.965	.932	27.417	.005			**
	Valuable X a1	.987	.974	37.048	.007	.042	8.076	**
OPEF 97	Valuable & a7	.893	.797	7.871	.041			*
	Valuable X a7	.954	.911	10.202	.044	.114	6.404	*

¹ Interaction effect = $\{R^2_{Y_{123}}\} - \{R^2_{Y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.5): Hierarchical Regression Analysis of Differentiation Strategy as Moderator for Human Resource Attribute of Unique (Line and HR Managers' Perceptions) and Performance Relationships

DV		IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
NPM 94		Unique & a1	.875	.766	6.543	.055			*
		Unique X a1	.975	.950	18.923	.019	.184	18.4	**
NPM 96		Unique & a1	.819	.671	4.083	.108			
		Unique X a1	.945	.893	.8372	.057	.222	10.373	**
OPEF 94		Unique & a1	.885	.784	7.251	.047			*
		Unique X a1	.979	.959	23.524	.014	.175	21.341	**
OPEF 97		Unique & a1	.894	.799	7.958	.04			*
		Unique X a1	.948	.898	8.850	.05	.099	4.852	*
OPEF 94		Unique & a3	.902	.813	8.720	.035			*
		Unique X a3	.940	.884	7.612	.06	.071	3.060	*
OPEF 97		Unique & a3	.983	.965	55.763	.001			**
		Unique X a3	.991	.982	53.291	.004	.017	4.722	**
EMPRD 94		Unique & a5	.895	.800	8.013	.04			*
		Unique X a5	.988	.975	39.309	.007	.175	35	**
EMPRD 96		Unique & a5	.820	.672	4.105	.107			
		Unique X a5	.932	.868	6.593	.07	.196	7.424	*
EMPRD 97		Unique & a5	.879	.772	6.789	.05			*
		Unique X a5	.940	.884	7.602	.06	.112	4.827	*
DPMKSH 96		Unique & a5	.741	.741	5.727	.067			
		Unique X a5	.942	.888	7.906	.06	.147	6.565	*
DPMKSH 97		Unique & a5	.873	.762	6.407	.057			*
		Unique X a5	.959	.920	11.519	.037	.158	9.875	*

¹ Interaction effect = $\{R^2_{Y_{123}}\} - \{R^2_{Y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.6): Hierarchical Regression Analysis of Differentiation Strategy as Moderator for Human Resource Attribute of Imperfectly Mobile (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
ROE 94	I. mobile & a9	.777	.603	3.042	.157			
	I. mobile X a9	.959	.920	11.521	.037	.317	19.812	*
ROE 95	I. mobile & a9	.762	.581	2.774	.176			
	I. mobile X a9	.941	.886	7.765	.06	.305	13.377	*
ROE 94	I. mobile & a2	.953	.909	19.925	.008			**
	I. mobile X a2	.979	.957	22.517	.015	.047	5.465	**
ROE 94	I. mobile & a4	.895	.801	8.062	.04			*
	I. mobile X a4	.941	.886	7.785	.06	.085	3.728	*

¹ Interaction effect = $\{R^2_{y_{123}}\} - \{R^2_{y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.7): Hierarchical Regression Analysis of Differentiation Strategy as Moderator for Human Resource Attribute of Imperfectly Imitable (Line and HR Managers' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
LNMKSH 94	I. imitable & a9	.898	.806	8.314	.038			*
	I. imitable X a9	.967	.936	14.514	.027	.13	10.156	*
LNMKSH 96	I. imitable & a9	.893	.797	7.871	.041			*
	I. imitable X a9	.966	.923	13.871	.029	.136	10.149	*
DPMKSH 96	I. imitable & a3	.850	.732	5.472	.072			
	I. imitable X a3	.942	.888	7.907	.06	.156	6.964	*
DPMKSH 96	I. imitable & a5	.783	.612	3.161	.150			
	I. imitable X a5	.940	.884	7.644	.06	.272	11.724	*

¹ Interaction effect = $\{R^2_{y_{123}}\} - \{R^2_{y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.8): Hierarchical Regression Analysis of Style of Management as Moderator for Employee Competence (Employees' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F _I	Sig.
NPM 96	Adaptive & HR utilization	.809	.654	3.780	.120			
	Adaptive X HR utilization	.943	.889	8.018	.060	.235	10.585	*
NPM 97	Adaptive & HR utilization	.810	.657	3.829	.118			
	Adaptive X HR utilization	.959	.919	11.389	.038	.262	16.172	*
DPMKSH 96	Ability of decision making & HR utilization	.790	.624	3.324	.141			
	Ability of decision making X HR utilization	.963	.927	12.650	.033	.303	20.753	*
DPMKSH 97	Ability of decision making & HR utilization	.790	.624	3.323	.141			
	Ability of decision making X HR utilization	.967	.935	14.500	.027	.311	23.923	*
OPEF 96	Adaptive & Goal setting	.830	.688	4.413	.097			
	Adaptive X Goal setting	.944	.892	8.220	.056	.204	9.444	*
OPEF 97	Adaptive & Goal setting	.884	.782	7.174	.048			*
	Adaptive X Goal setting	.982	.965	27.552	.011	.183	26.142	**
OPEF 96	Skill & Goal setting	.882	.777	6.981	.050			*
	Skill X Goal setting	.967	.935	14.443	.027	.158	12.153	*
OPEF 97	Skill & Goal setting	.798	.636	3.496	.132			
	Skill X Goal setting	.959	.920	11.484	.038	.284	17.750	*

¹ Interaction effect = $\{R^2_{y_{123}}\} - \{R^2_{y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F_I. = F value of interaction effect 'F'.

Table (7.4.9): Hierarchical Regression Analysis of Reward System as Moderator for Employee Competence (Employees' Perceptions) and Performance Relationships

DV	IV added	R	cum R ²	F	Sig.	R ² change (I)	F ₁	Sig.
ROA 96	Ability of decision making & Remuneration	.921	.849	11.257	.023			*
	Ability of decision making X Remuneration	.984	.968	30.415	.010	.119	18.593	**
ROA 97	Ability of decision making & Remuneration	.836	.699	4.646	.091			
	Ability of decision making X Remuneration	.942	.887	7.860	.060	.188	8.318	*
EMPRD 96	Ability of decision making & Remuneration	.867	.753	6.082	.061			
	Ability of decision making X Remuneration	.958	.917	11.088	.039	.164	9.879	*
EMPRD 97	Ability of decision making & Remuneration	.779	.607	3.087	.155			
	Ability of decision making X Remuneration	.990	.980	49.828	.005	.373	93.250	**
EMPRD 96	Adaptive & Remuneration	.876	.767	6.568	.054			*
	Adaptive X Remuneration	.952	.907	9.750	.047	.14	8.433	*
EMPRD 97	Adaptive & Remuneration	.799	.639	3.540	.130			
	Adaptive X Remuneration	.951	.905	9.543	.048	.266	8.433	*
ROA 96	Skill & Internal placement	.879	.772	6.776	.052			*
	Skill X Internal placement	.981	.963	26.215	.012	.191	25.810	**
ROA 97	Skill & Internal placement	.828	.686	4.377	.098			
	Skill X Internal placement	.961	.923	12.054	.035	.237	15.389	*

¹ Interaction effect = $\{R^2_{y_{123}}\} - \{R^2_{y_{12}}\}$ * $p < .05$. ** $p < .01$.

² F₁. = F value of interaction effect 'F'.

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