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Research Paper

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Full Length Research Paper

Surface acting and distress tolerance as predictors of workplace deviance among Nigerian commercial bank workers

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This study examined surface acting and distress tolerance as predictors of workplace deviance. Three hundred and thirty-two (332) workers (176 males and 156 females) drawn from selected banks in Nsukka, Enugu State, Nigeria participated in the study. The participants responded to validated measures of surface acting and distress tolerance. The result of regression analyses indicated that surface acting significantly predicted workplace deviance. The result also revealed that distress tolerance was significantly related to workplace deviance. The standardized regression coefficients showed that surface acting was a stronger predictor of workplace deviance than distress tolerance. It was suggested that positive behaviours that are consistent with the organizational work ethics should be adequately reinforced to alleviate the negative emotions felt as a result of surface acting. It was also concluded that Nigeria bank employees who persist in the face of emotional distress may be less likely to engage in workplace deviant behaviours.

Key words: Surfacing acting, distress tolerance, workplace deviance and Nigerian bank workers.

INTRODUCTION

For most individuals, work is a context in which they derive a central measure of their identities. It is no surprise, then, that the workplace is a forum for the expression of various behaviours that are of consequences to individuals, organizations, and society (Hulin, 2002). On the other hand, the main goal of every organization is to attain the highest level of productivity. Hence organizations set some rules and norms that guide organizational behaviours. So, behaviours that do not conform to social organizational norms are said to be deviant behaviours (Sarwar et al., 2010). Such behaviours violate

organizational norms and threaten the organization (Robinson and Benett, 1995). As a result, some organizational behaviour is viewed as improper or outside normal conventions of acceptable behaviours. These behaviours have been investigated under various labels including workplace deviance (Benneth and Robinson, 2003); counterproductive behaviours (Mangione and Quinn, 1975), and anti–social behaviours (Giacolone and Greenberg, 1997).

Deviance in the workplace has been defined broadly as acts committed by organizational members that have, or

are intended to have, the effect of damaging coworkers, managers, or the organization itself (Vardi and Weitz, 2004). According to Bennett (2000), workplace deviant behaviours are voluntary acts that break significant organizational rules and, in so doing, threaten the welfare of the organization or its employees, or both.

Research has distinguished two types of workplace deviant behaviours namely: positive and negative workplace deviant behaviours. Positive deviance is seen as intentional behaviours that depart from the norms of a referent group in honorable ways (Spreitzer and Sonenshein, 2003). Thus, positive deviant behaviours may include behaviours such as innovative behaviours, non compliance with dysfunctional directives and criticizing incompetent supervisors (Galperin, 2002). On the other hand, negative deviant behavior is the violation of significant organizational norms which include employee delinquencies such as not following the manager's instructions, intentionally slowing down the work cycle, arriving late, committing petty theft as well as not treating co-workers with respect and/or acting to co-workers (Galperin, 2002). The present study, however, concerned itself with the later aspect of workplace deviant behaviours.

Workplace deviance has attracted an overwhelming interest due to its negative impacts on organizations and people inside the organization. Workplace deviant though viewed as detrimental to the organization is common in the workplace. For example, Harper (1990) found that 33 to 75% of workers have engaged in behaviours such as vandalism, sabotage, unwarranted absenteeism, and theft. Robinson and Bennett (1995) found that up to 75% of employees have engaged in one form or another of the following deviant behaviours: theft, computer fraud, embezzlement, vandalism, sabotage or absenteeism.

Henle et al. (2005) found that victims of later personal workplace deviance are more likely to suffer stress – related problems and show a relatively decreased productivity, lost work time and a relatively high turnover rate. Other negative impacts of workplace deviance behaviours include organization's increased spending on unnecessary cost and time wasted (Coco, 1998), workplace communication problem (Anderson and Pearson, 1999), absenteeism, decreased dedication at work, high turnover rate, thwarted organization objectives (Pearson et al., 2000), multiple murders and other violence committed by employees in the workplace, and expensive sexual harassment verdicts (Fox and Spector, 2005).

A number of factors have been related to workplace deviance namely; personality traits and work situation (Peterson, 2002), unfair treatment, organizational culture and climate as well as supervisory behavior (Caruana et al., 2001). However, very few studies have been conducted to understand the relationship between surface acting, distress tolerance and workplace deviance (Chang et al., 2009). Hence, the present study examines the relationship between surface acting, distress tolerance and workplace deviance among Nigerian commercial bank workers.

Nigerian world of work has been witnessing constant change as a result of different challenges originating from the political, legal as well as the technological environments of business (Oginni, 2011). These changes in the business environment in Nigerian economy in the last decades, especially in the banking sector, have made the work setting somewhat unconducive (Oginni et al., 2013) and very challenging. As a result there have been changes in the management of banks, new competitive repositioning and unstable monetary policy. These changes and the consequent introduction of stricter organizational rules also rub off on the workers.

Nigerian banking institutions as service organizations have some work ethics that are aimed at winning and maintaining customers. With a view to creating excellent delivery and customer satisfaction, the banks impose rules on how their staff relate to customers. Thus, bank employees' attitudes, mannerisms, behaviours and expression when performing their job tasks are important determinants of quality of service delivery (Barsky and Nash, 2002). In this situation, display rules serve a function of a regulation to limit bank staff from expressing out certain negative emotions when they are performing their task whereby they are obligated to show positive emotional expressions (Steinberg and Figart, 1999).

The expression of positive emotions by service staff might potentially improve the quality of service delivery and eventually lead to customers' satisfaction and customers' intention for using particular service (Bolton, 2005; Zeithaml et al., 2006). According to Markus et al. (2009), these sets of employees must express out precisely the emotions that are stated in display rule although their actual feeling of emotions differ from emotion expression at that particular time. This emotional expression control process as compliance to display rule is called "emotional labour" (Hochschild, 1983). Emotional labour involves two methods which are known as "surface acting" and "deep acting" (Diefendorff et al., 2005, p.339). The present study looked at surfacing acting and its impact on workplace deviance.

Diefendorff et al. (2005) defined surface acting as faking positive emotions and sometimes suppressing negative felt emotions, so that positive display would follow. In other words, surface acting is hiding one's inner feelings and forging emotional expressions in response to display rules. For example, when a worker smiles at a customer even when he/she does not feel like, he or she is surface acting. Ashforth and Humphrey (1993) stated that surface acting is when unfelt emotion is disguised by the worker and was completed through "careful presentation of verbal and non-verbal cues such as facial expression, gestures, and voice tone". Thus, surface acting is an employee's displayed emotion which is not the authentic feeling.

Research has shown that positive affective display in

service interactions, such as smiling and conveying friendliness, are positively associated with important customer outcomes, such as intention to return, intention to recommend a business outfit to others, and perception of overall service quality (Grandey, 2003). Previous research has demonstrated that employees in wide variety of service jobs engage in acting to produce their affective displays that conform to the service role (Ashforth and Tomiuk, 2000). In addition, Studies (Anderson and Peterson, 1999; Ambrose et al., 2002) have shown that when workers engage in surface acting, they are likely to engage in work place deviant behaviours such as slowing down the work cycle, arriving late, sabotaging, etc. and aggressive behavior that are harmful to the organization.

Since workplace deviant behaviours have been suggested to be precipitated by some organizational interactions such as unfair treatment, organizational culture and climate as well as supervisor behaviour (Caruana et al., 2001) that may result in frustration and stress related problems. It is reasonable to think that individual differences as reflected in distress tolerance may mitigate or aggravate employees' involvement in workplace deviant behaviours.

Distress tolerance is defined as an individual's behavioural persistence in the face of emotional and/or physical depression (Daughters et al., 2005). It is further described as the ability to experience and endure negative psychological states (Simons and Gaher, 2005). According to Simons and Gaher (2005), individuals with low distress tolerance may be unable to mitigate negative emotions and they are likely to report distress as being insufferable (Simons and Gaher, 2005). Thus, when employees who are low in distress tolerance experience distress as a result of unfair treatment, they may likely choose workplace deviant behaviours as retaliatory measure against the organization, because they were not good at regulating their emotions or using substance (alcohol) to alleviate emotional responses (Simons and Gaher, 2005). On the other hand, when employees with high distress tolerance encountered unreasonable treatment; they could internalize distress as a result of unjust treatment. In other words, employees with high distress tolerance would engage in less workplace deviant behaviours than employees with low distress tolerance (Wang et al., 2009).

The impetus for the growing interest in workplace deviant behaviour is the increasing prevalence of this type of behaviour in the workplace and the enormous costs associated with such behavior (Peterson, 2002). Further, the incidence of workplace deviant behaviours are now soaring out of control and are most likely to suffer the employee and the organization. Majority of the bank organizations in Nigeria are now experiencing harmful and disastrous behaviours from the employees and organization at large. These behaviours led to the failing of these banks and subsequent reforms in the Nigerian banking sector. However, very little is known about the relationship between surface acting, distress tolerance and workplace deviance. More so, the few studies have been done with Western samples. Thus, it is imperative to conduct this study with Nigerian samples to verify the few findings in this area of research. The present study specifically soughed answers to the following questions: Will surface acting significantly predict workplace deviance among Nigerian bank workers? Will distress tolerance significantly predict workplace deviance among Nigerian bank workers? It is hypothesized that: Surface acting will significantly predict workplace deviance among Nigerian bank workers; distress tolerance will significantly predict workplace deviance among Nigerian bank workers.

METHOD

Participants and procedure

Three hundred and thirty-two commercial bank workers (176 males and 156 females) participated in the study. The participants were selected using convenient sampling technique. They were drawn from four commercial banks (viz: United Bank of Africa, Eco Bank Limited, Fidelity Bank PLC and Access Bank PLC) in Nsukka, Southeastern Nigeria. The rational for using the banking sector is related to the work ethics that require bank workers to display positive affective behaviours at their customers which is also in line with the display rules guiding work behaviours in the bank organizations. The spread of the participants was as follows: United Bank of Africa 96, Eco Bank PLC 76, Fidelity Bank PLC 83, and Access Bank PLC 77. The respondents' ages ranged from 25 to 46 years with a mean age of 35.5 years. Their educational quailfications ranged from Ordinary National Diploma (OND) to Masters' degree (M.Sc). The head of operations in each of the banks gave the approval for the distribution of the questionnaires to the bank workers and the questionnaires were administered and collected during work hours. The participants were not giving any time limit as they usually have tight schedules. However, the participants responded to the questionnaires and returned to their operation managers within 48 h. Each of the questionnaires had specific instructions on how to respond to the items. The items of the questionnaires were presented in English and no interpretation was given since all the participants were literate enough to clearly understand the items in the questionnaires. The participants did not receive any reward for participating in the study. All the participants volunteered to participate in the study. They were ensured of the confidentiality of their responses and were requested to be honest in rating the questionnaires. In all, three hundred and fifty (350) copies of the questionnaire were distributed. Out of this number 332 were completed and returned representing a return rate of 94.86 per cent.

Instruments

Surface acting scale

Surface acting scale developed by Diefendorff et al. (2005) was used to measure surface acting. It is a 7 item scale that measures the affective behaviours displayed in the workplaces. The authors validated the scale using Western sample and obtained a reliability coefficient (Cronbach alpha) of .92. The scale is designed in six-point Likert response format ranging from strongly disagree (1) to strongly agree (6). The scoring pattern is the higher the score the

Table 1. The correlation matrix of the predictor variables (surface acting and distress tolerance) on the criterion variable (workplace variance).

	Mean	SD	1	2	3
1.Workplace	14.82	4.98	-		
2. Surface acting	15.81	4.18	.29*	-	
3. Distress tolerance	34.51	5.06	.21*	.19*	-

Note: *$p < .001$. A total of *332* employees completed the questionnaires. Surface acting (1= high, 2=low; Distress tolerance (1= high, 2= low).

Table 2. Regression analysis results.

Model	Model 1	Model 2
Surface acting	.29	.27
Distress tolerance	.09	.16
R^2	.09	0.11
R^2 change		0.02
F	F(2,330)=31.32**	F(1,331)= 20.50**
F change	F(2,330)=31.32**	F(2,329)=8.94***

Dependent Variable: Workplace Deviance. Notes: ***$p<.01$, $p<.001$.

higher the surface acting. Sample items include: "I put an act in order to deal with customers in an appropriate way" and "I fake a good mood when interacting with customers." The scale was revalidated with Nigerian sample because no evidence showed that the scale has been validated with Nigerian sample. To validate the scale the authors sampled 57 workers of two commercial banks (Diamond Bank PLC and First Monument Bank PLC) in Nsukka. These banks were different from the ones used in the main study. The responses from the validation study were subjected to item analysis which yielded an internal consistency of Cronbach alpha .73.

Distress Tolerance Scale

Simons and Gaher's (2005) Distress Tolerance Scale was used to measure participants' distress tolerance level. It is a 15- item scale that was designed in Likert six-point response formats ranging from strongly disagree (1) to strongly agree (6). The scoring pattern is the higher the score the higher the distress tolerance. Simons and Gaher (2005) validated the scale and obtained a reliability coefficient (Cronbach alpha) of .83. Sample items include: "Feeling distressed or upset is unbearable to me" and "when I feel distress or upset, all I can think about is how bad I feel." This scale was also revalidated with Nigeria sample because there was no evidence showing that the instrument has been validated with Nigerian sample. To validate the scale the authors sampled 57 workers of two commercial banks (Diamond Bank PLC and First Monument Bank PLC) in Nsukka. These banks were different from the ones used in the main study. The responses from the validation study were subjected to item analysis which yielded an internal consistency of Cronbach alpha .85.

Workplace deviance scale

Workplace Deviant Behavior Scale developed by Bennett and Robinson (2000) was used to measure workplace deviance. It

contains eight items, using self report Likert response format ranging from strongly disagree (1) to strongly agree (6). The scoring pattern is the higher the score the higher the workplace deviant behaviours. Bennett and Robinson (2000) obtained a reliability coefficient (Cronbach alpha) of .88. Sample items include: "Made fun of someone at work" and "Taken property from work without permission." This scale was revalidated with Nigerian sample because there was no evidence showing that the instrument has been validated with Nigerian sample. The item analysis yielded an internal consistency (Cronbach alpha) of .86.

Statistical analysis

The study was a cross sectional survey design and a hierarchical regression analysis was used to analyze the data. In the analysis, surface acting was first regressed on workplace deviance. Distress tolerance was thereafter entered in the regression equation. R^2 change was used to determine the predictive value of the independent variables on deviant behavior.

RESULTS

The result of the correlation analysis (Table 1) showed that surface acting had a significant positive relationship with workplace deviance (*r*= 0.29, *p* <.01). Distress tolerance was also related to workplace deviance (*r* = 0.21, *p* <.0.001). Surface acting was positively related to distress tolerance (*r* = 0.19, *p* <.001). The F change showed that the two variables were statistically significant in their effect on workplace deviance. The results of the hierarchical regression analysis (Table 2) revealed that surface acting explained a significant 8.7 per cent of the variance in the workplace deviant behaviour, F change (*1, 331) = 31.32, p<.001*. In the regression equation, surface acting positively predicted the criterion variable (*β= 0.27, p<.001*) which is consistent with the first hypothesis that surface acting will positively and significantly predict workplace deviance. The standardized regression coefficients showed that surface acting was a stronger predictor of the workplace deviance than distress tolerance. Distress tolerance explained 11.1 per cent of the variance in the criterion variable, F change (*2, 329) = 8.94, p<.01*. In the regression equation, distress tolerance positively predicted workplace deviance (*β=0.16, p<.01*).

DISCUSSION

The result of this study supported the expectation that surface acting will significantly predict workplace deviance. This implies that the more employees engage in surface acting while performing their duties the more likely they are to engage in workplace deviance. This finding is consistent with some previous studies (Anderson and Pearson, 1999; Hochschild, 1983; Seabright and Schminke, 2002). According to Hochschild (1983), when employees exert efforts to express unfelt emotions in order to comply with organization's demand, they seem more likely to engage in workplace deviant

behaviours in order to retaliate against the organization, and by so doing try to alleviate their negative emotions. In line with Wharton (1993), this finding is explained from the point that owing to the dissonance and resource drain experienced by acting as part of one's work that bank employees experience tension and as a result try to vent the tension by engaging in some workplace deviant behaviours. While surface acting, an individual experiences emotional dissonance owing to the discrepancy between expressions and inner feelings and this situation could lead to emotional exhaustion (Brotheridge and Grandey, 2002) and possibly to workplace deviance.

The result also revealed that distress tolerance significantly predicted workplace deviance ($\beta=.16$, $P<.01$); thus, the second hypothesis that distress tolerance will predict workplace deviance is supported. This finding is consistent with some earlier findings (Daughters et al., 2005; Simon and Gaher, 2005). Distress tolerance refers to an individual's behavioural persistence in the face of emotional and/or physical depression (Daughters et al., 2005) and ability to experience and endure negative psychological states (Simon and Gaher, 2005). Since workplace deviance is in some cases precipitated by distress and depression arising from some unfelt emotions expressed by employees in their efforts to comply with the organizational rules, employees require high level of distress tolerance to be able to manage these unfelt emotions that are inconsistent with their inner feelings and which could lead to workplace deviant behaviours. Consistent with Simon and Gaher (2005), the findings of the present study suggest that employees who are low in distress tolerance are more likely to engage in workplace deviance. According to Simon and Gaher, individuals with low distress tolerance are unable to mitigate negative emotions, may be more likely to report distress as being insufferable and they may not also be able to manipulate being distress or upset. Thus, when employees who are low in distress tolerance experience distress as a result of surface acting and other harsh treatments, they may likely choose workplace deviant behaviours as retaliation against the organization because they were not good at regulating their emotions.

There are several implications of the findings of the present study. First, this study indicates that surface acting is a strong predictor of workplace deviance. The results of the study suggest that as employees display surface acting within an organization, they are more likely to engage in workplace deviance. Research has shown that workers who involve in such positive affective display as surface acting do not always feel positive about their behaviours, rather they experience emotional dissonance as a result of the discrepancy between expressions and inner feelings that may lead to emotional exhaustion (Grandey, 2003; Brotheridge and Grandey, 2002). This suggests that much as surface acting may ensure good staff-customer relationships, it has some negative effects on the bank staff which may result in workplace deviant behaviours.

However, good reward processes may mitigate these negative feelings. In line with Sarwar et al's (2010) suggestion, rewards, incentives, motivation and appreciation may be used to reduce deviant behaviours in organizations. It is possible that when positive behaviours that are consistent with the organizational work ethics are reinforced, it may go a long way to alleviate the negative emotions felt as a result of surface acting. When the reverse is the case, they may be more likely to engage in workplace deviant behaviours in order to retaliate against the organization.

In addition, shaping, discussion, communication and participation strategies are used to encourage employees to show positive behaviours. Assertive behavior is also encouraged among employees. Employees should always be able to politely express their feelings to supervisors, employers or even customers without breaking the organizational rules. In other words, active communication between employees and their supervisor is very important. These could be achieved through an improved supervisor-subordinate relationship which may create positive feelings among bank employees and perhaps make them more committed to their organization and less likely to engage in workplace deviant behaviours.

Similarly, distress tolerance was also shown to be positively related to workplace deviance. This suggests that the level of distress tolerance is linked to an employee's likelihood to engage in workplace deviant behaviours. Bank employees who persist in the face of emotional depression may be less likely to engage in workplace deviance. In other words, when an employee is low in distress tolerance he/she is likely to report distress and may likely take to workplace deviant behaviour as a retaliatory response to the source of the distress.

This study does have its limitations. One limitation of this study relates to the sample size. Three hundred and thirty two participants might have been small for proper generalization of findings. Another limitation of this research relates to the negative effect of self-report measures, which could also limit the generalizability of the findings. Finally, the inability of the researchers to include demographic variables like age, gender, socio-economic status etc, which may be related to workplace deviance may limit the scope of the study. It is thus suggested that further studies should examine the relationships between these demographic variables and workplace deviant behaviours. This may provide additional information to the knowledge of workplace deviance.

Conclusion

The findings of the present study indicate that surface acting is a strong predictor of workplace deviant behaviors. The findings provided support for the prediction that surface acting will predict workplace deviance. In line

with previous studies, the present finding suggests that Nigerian bank workers are more likely to engage in workplace deviance as a result of the discrepancy between their expressed feelings and inner feelings. Thus, it was suggested that positive behaviours that are consistent with the organizational work ethics should be adequately reinforced. This way the negative emotions felt as a result of surface acting could be alleviated. The study further supported the prediction that distress tolerance will predict workplace deviance. This finding suggests that Nigeria bank employees who persist in the face of emotional distress may be less likely to engage in workplace deviant behaviours. It is therefore, hoped that this research findings will be useful for human resource management in Nigerian banking industries to improve their service delivery while enabling their staff to have control over the emotional dissonance which they seem to experience during acting.

Conflict of interest

The author has not declared any conflict of interest.

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Full Length Research Paper

Competitive advantage in the Brazilian telecommunications market: An analysis founded upon the resource-based view in the post-privatization period

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This paper examines which resources were responsible for the superior performance, between 1999 and 2008, of companies in the Brazilian telecommunications sector after privatization. The study methodology was founded on the Resource-Based View (RBV) and used data envelopment analysis (DEA) to investigate companies' performance. Using the performance ratings generated by the DEA model, we performed a multiple regression in which the independent variables were tangible and intangible organizational resources, to investigate the relevance of such resources to business performance. As tangible assets, we evaluated the relevance of the customer base in telephone access and revenue generating units (RGUs), and the product portfolio offered by the organization. As intangible factors, we analyzed Tobin's Q, trademarks and the origin of the capital that privatized each organization. All tangible resources and origin of capital evaluated were relevant to determine a company's performance. Therefore, network effects and a strategy based on diversification of a converging portfolio are factors that influence organizational performance in this market. Companies managed by national groups presented better performance, suggesting that part of the performance can be attributed to prior knowledge of the country where the company operates. The results reinforce the pillars of RBV, which has evolved since the criticisms of Priem and Butler with empirical tests on resources that have influence on organizational performance.

Key words: Telecommunications, privatization, competition, performance, market.

INTRODUCTION

Despite competitive (and, therefore, strategic) lines of thought emerged in the second half of the nineteenth century with the emergence of large corporations (Ghemawat, 2002), competition in the Brazilian tele-communications industry only began shortly before the beginning of the twenty-first century in 1998. Previously

Table 1. Growth of telecommunications services.

Period	Before privatization		After privatization	
Ratio	1988/1993	1993/1998	1998/2003	2003/2008
LL density (accesses/100 inhabitants)	26.7%	63.2%	79.0%	- 3.6%
MP density (accesses/100 inhabitants)	-	-	482.2%	198.1%
BI density (accesses/100 households)	-	-	-	609.4%
PTV (accesses/100 households)	-	-	22.6%	53.9%

Source: TELECO (2010) and ANATEL (2010).

dominated by state enterprises, this sector was privatized, allowing companies to compete with each other, increasing their scope of action, both geographically and in terms of products.

The privatization of the Brazilian telecommunications industry has since generated multiple research interests, such as regulation (Passos, 2008), value creation (Pretola, 2008), innovation (Adamo, 2007; Krauspenhar, 2007) and competition (Gomes, 2003; Filho, 2004; Guimarães, 2005).

The privatization of the industry also led to the founding of many new companies, creating a competitive environ-ment that did not exist when the government was responsible for providing access to telephone services. In this new scenario, the government became the industry regulator and created the National Telecommunications Agency (ANATEL). Post-privatization growth has been remarkable, as shown in Table 1, which outlines growth rates of the sector's main services, such as landlines (LL), mobile phones (MP), Broadband Internet (BI) and Pay TV (PTV).The last three services were virtually nonexistent before privatization of the sector.

In total, twelve companies were privatized, including fixed-line, mobile, long-distance and data-communication carriers. At the beginning of market regulation, the com-panies' operational scope was restricted to the franchise product (landlines, mobile phones or long-distance calls). However, as indicated by Santos (2006) and Oliveira (2006), several mergers and technological reconfiguration of the market have led to services convergence and an oligopoly structure. All these factors (that is, formation of large groups of companies, expansion of indicators, falling prices and technological convergence) show a change in the competitive environment of this market.

According to Ghemawat (2002), with the appearance of large companies, studies of strategy and competitiveness focused on understanding the reasons behind the superior performance of some companies. One school of thought that analyzes this phenomenon is known as the Resource-Based View (RBV) and the study conducted by Wernerfelt (1984) is one of the pioneers in this field. For RBV, the exploitation of rare and imperfectly mobile resources is what allows greater gains.

Thus, this paper asks the following research question:

From the perspective of a RBV, what are the reasons for

superior performance in the post-privatization period of the Brazilian telecommunications market (provision of access to telephone, Internet and pay-TV services)?

Therefore, the main purpose of this paper is to examine which resources explain the companies' superior performance. According to RBV, resources that lead to superior performance may be tangible or intangible, so it is necessary to evaluate both. The aims of this study will be met by developing a performance ranking of the firms privatized, using Data Envelopment Analysis (DEA) combined with multiple regression, where the independent variables are the organizational resources used to generate performance in the organization. Using the Brazilian market as the study object, the paper provides a better understanding of how companies in an emerging economy can outperform competitors in this market. So, the outcomes of this research can help managers who face similar situations to make better investment and competitive decisions.

THEORETICAL FRAMEWORK

For Barney (2002), the central question to be answered in studies on strategy is: Why do some companies perform better than others? The first important definition when one tries to answer this question is related to performance. Due to the number of stakeholders involved with the organization, according to the author there is no standard (or even method) of measuring performance that cannot be called into question.

Organizational performance

Carton and Hofer (2006) verified that, between 1996 and 2001, 133 of a total of 138 papers published in some of the major management journals had different constructs for measuring organizational performance. This finding demonstrates the difficulty in adopting a single standard for measuring organizational performance.

In strategy, the expression "superior performance" is usually linked to competitive advantage. According to Brito and Vasconcelos (2005), the ROA (return on assets) ratio is traditionally used in strategy research while Carton

and Hofer (2006) also posit that it is the most widely used. Besanko et al. (2007) define competitive advantage as the situation in which a company has a profit rate higher than its sector average. Therefore, the ROA ratio is applicable to the concept of Besanko et al. (2007).This definition is similar to Peteraf and Barney's (2003), 'competitive advantage is the ability to create more economic value than the marginal competitor in a market'.

Resource-based view and strategy

For Wernerfelt (1984), one of the pioneers of RBV, the possession and use of rare resources lead to high yields, as this can create barriers to competition. However, the definition of resources is quite broad, so it is quite difficult to identify exactly which resource is responsible for superior performance. Barney (2002, p.155) defines resources as any "assets, capabilities, competencies, organizational processes, firm attributes, information, knowledge and also outputs that are controlled by a firm and enable the firm to conceive of and implement strategies."Therefore, any tangible or intangible factor present in the organization can be seen as a potential generator of greater earnings, if it is properly used by the organizational strategy. The study of Rumelt (1991) is often cited as one of the pillars of RBV, since the author attributes the difference in profitability of different organizations to factors specific to each organization. Later, Peteraf and Barney (2003) defined RBV as a theory of rents as well as a theory of competitive advantage.

RBV assumes that firms are heterogeneous, that is, they have a different set of resources. This means that they envisage different opportunities to generate revenue in a given situation, since the combination of current resources with the future resource will be different for each organization in the market (Wernerfelt, 1984). Dierickx and Cool (1989) also say that, besides being unique, the resources that enable superior gains are imperfectly mobile, that is, they cannot be freely acquired in the market. In addition to being imperfectly mobile, the resources have to be inimitable. Peteraf (1993) also contributes to the analysis, stating that, in order to generate high revenues, the resources must impose ex-post limitations to competition and have ex-ante limits to competition.

It is important to highlight that RBV is not the only theoretical school that attempts to explain the difference between firms' performances. For Ghemawat (2002), numerous schools of thought have emerged, of which it is worth highlighting the classical economic school (where high yields would result from effects such as the learning curve or economies of scale) and the theories of Porter (1980), where high profitability of some companies would be explained by the competitive forces of the industry in

which they operate. For Sheehan and Foss (2007), the value-chain approaches of Porter (1985) and RBV supplement each other, since the analysis of the value chain - and its drivers of costs or uniqueness - may help identify which resources can be exploited to implement a strategy that will allow the company to increase its gains. As delineated by Barney et al. (2011), RBV has undergone an evolution similar to product life cycle: introduction, growth, and maturity. In the maturity stage (from 2001 till date), RBV became an important theory to contribute to other fields of management science, like human resources management, property rights theory and entrepreneurship. Then, contributions to resource-based theory must provide a better understanding of how valuable resources can be developed.

Which resources are valuable?

Since the definition of resources varies widely, it is necessary to define which resources will be assessed in any study on RBV. The examples in the literature are extensive. Barney and Clark (2007) dedicated a book to the subject, in which they mention four basic resources as sources of superior performance: organizational culture, trust, human resources and capability to manage information technology (IT); considering that trust refers to the contractual structure the company has with its customers and suppliers. The competitive advantage may result from this resource depending on the transaction costs involved in managing such contracts (incentives and penalties). Culture, human resources and IT management skills are all intangible assets, with strong causal ambiguity, so it is difficult to evaluate them empirically.

There are other resources mentioned in the literature on RBV. In simple terms, the resources that create a competitive advantage impose barriers on competition, being imperfectly mobile or inimitable. For Besanko et al. (2007), the effects of pioneering and impediments to imitation form these barriers. With respect to pioneering, gains are generated by the size of a firm (economies of scale and experience curve) or the know-how of some specific activity. Impediments to imitation arise when there is better access to customers or inputs, high switching costs or patents to protect the organization's products.

Due to the difficulty encountered by managers to identify and utilize the valuable resources of an organization, some authors, such as Priem and Butler (2001) criticize RBV. Therefore, RBV has evolved by exploiting resources which can be exploited to obtain a sustainable competitive advantage.

Ahuja and Katila (2004) demonstrate that creation of resources depends on specific situations (problems or opportunities) encountered by organizations. Therefore, development of resources is linked to their past. This

dependence on the past has been empirically tested with the age of the company being one of the variables that influences an organization's performance. Kapelko (2009) and Delios and Beamish (2001) are just some of the authors that have used this variable in their studies and obtained similar results in their analyses, which showed that this variable was not relevant.

Kapelko (2009) used Tobin's Q ratio - defined as the ratio between a company's market value and the replacement value of its physical assets (Famá and Barros, 2000) - as a measure of intangibility to evaluate its effect on organizational performance, confirming the hypothesis that intangibility is positively related to organizational performance. The use of Tobin's Q for calculating intangibility is based on the finding that the market equilibrium price of a company should be equal to the replacement price of its assets, causing the value of Tobin's Q to be close to 1 (one). Higher prices are interpreted as non-measurable sources of value, which are attributed to intangible assets. Delio and Beamish (2001) also found the relationship between intangibles and performance to be a relevant factor, identifying that the presence of intangible assets also affects the performance of subsidiaries.

Control structure was also assessed by some studies, on the assumption that firms with lower agency driven costs are more efficient (Durand and Vargas, 2003). In addition, the authors also found evidence that the performance of leaner organizational structures is better. Holcomb et al. (2009) investigated the influence of human resources on the creation of value, supporting the hypothesis that managerial ability affects the productivity of the resources. In addition, the authors found evidence that the quality of the human resources moderates the effect of managerial ability, demonstrating the importance of human resources as a source of value creation.

Therefore, it is noted that RBV's explanation of what resources justify superior performance has evolved. However, there has been a lot of variation in the studies with respect to which resources of interest to the researcher's study are chosen for analysis. No model exists to evaluate what resources should be targeted by the researcher.

METHODOLOGY

For Rouse and Daellenbach (1999), studies that seek to understand the sources of competitive advantage should use smaller samples, preferably from a specific industry. This is because companies in the same industry share strategic market factors and also because of the influence of the industry's characteristics on strategic decisions. So the first step for a study with this objective is to define which firms (object of the analysis) should be part of the study. We selected the twelve holding companies privatized in 1998 (Embratel, Telesp, Tele Centro Sul, Tele Norte Leste, Tele Norte Celular, Telesp Celular, Tele Sudeste Celular, Tele Centro Oeste Celular, Tele Leste Celular, Telemig Celular, Tele Celular Sul, Tele Nordeste Celular).

The period of analysis corresponds to the post-privatization period, which began in 1998.1999 is the first year in which information about the companies is available. The companies were analyzed up to 2008, therefore totaling ten years' analysis, with the study being characterized as a longitudinal study.

As can be observed, the sample includes companies that, although considered operators within the telecommunications industry, compete with different products. This is the case with the companies providing Mobile Phone (MP) access in relation to the Land Line (LL) access providers. However, according to the definition of Besanko et al. (2007), in which companies compete with each other, if any marketing decision made by an organization affects the production level of another, it is possible to classify these companies under the same competitive scope. Filho (2004), Oliveira (2006) and Santos (2006) found that one of the factors forcing changes to the strategies of companies in the telecommunications industry is the increasing replacement of landlines by mobile phones, intensifying the competition among firms. This occurs because of the technological development associated with the industry, which moves quickly towards convergent offers, where more than one product is blended to meet the customers' needs. This evidence justifies the grouping of companies for analysis even though there are technological differences among them. Another point that confirms the competitive convergence among companies with differing main products is the scenario of consolidation in the industry, which already has a significant number of companies capable of providing both services (LL and MP).The other main products in the market, Pay-TV (PTV) and Broadband Internet (BI) access are also provided by more than one of the companies analyzed. It will be interesting to assess to what extent the presence of a company's main industry products may or may not be responsible for the superior performance of that company.

Rouse and Daellenbach (1999) also affirm that, in order to highlight the influence of resources, it is necessary to establish a ranking of companies' performance to enable evaluation of the influence of resources on performance. After the work of Majumdar (1998) was published, the Data Envelopment Analysis (DEA) method started to be used to evaluate the influence of resources on performance. The DEA is a method that uses some input variables to explain output variables, creating an efficiency ranking based on linear programming. Thus, the decision-making units (DMUs), which may be firms, industrial plants or organizational units, are classified according to their efficiency when using inputs to generate outputs.

By combining DEA modeling with multiple regression, it is possible to filter the effect of non-discretionary variables (Ramanathan, 2003).With the efficiencies obtained in the model, we perform a multiple regression in which the independent variable is the non-discretionary variable. Thus, the methodological construct of this research can be observed in Figure 1.

DEA modeling

For Charnes et al. (1978), the DEA technique enables measurement of DMU efficiency when using available resources to generate outputs. A DMU can be an organization, industrial plants, offices, government agencies and even individuals (Ramanathan, 2003). In a DEA model, the DMUs are evaluated against the most efficient DMU, on a scale of 0 to 1.Thus, the efficiency rating of the most efficient DMU is equal to 1 (100%) and the others are ranked according to their distance from the most efficient DMU.

Two DEA models are used with more frequency: CRS (constant returns to scale) and VRS (variable returns to scale).The difference between the models lies in the fact that, in the VRS model, there is the possibility of variation in the level of efficiency according to the level of input used in the generation of outputs. That is, the VRS model assumes that there may be economies in the use of inputs, generating outputs that are proportionately larger (Ramanathan,
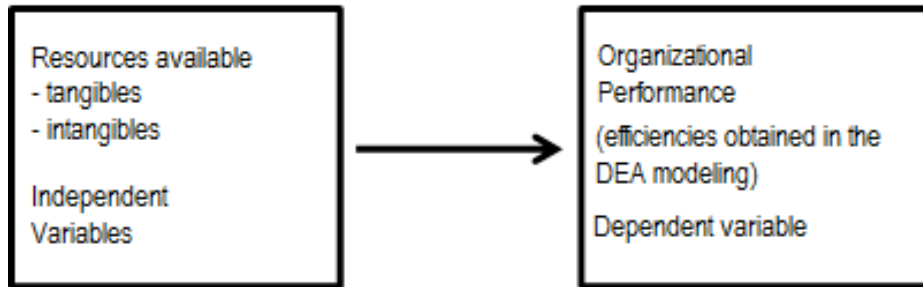
Figure 1. Methodological research construct.

Figure 2. BCC models. Source: Périco et al. (2008).

2003).

The model adopted in this study – the VRS - is the one traditionally adopted in RBV studies, such as the studies of Kapelko (2009), Souza et al. (2010) and Majumdar and Venkataraman (1998). The mathematical formulation of the VRS modeling is shown in Figure 2.

The output used in the modeling was the ROA ratio. The inputs used were ratios that represent the employment of value to generate output. Direct Margin, Sales Turnover, Ratio of Equity to Total Capital and Ratio of Non-Permanent Assets to Total Assets were the inputs chosen. All data were collected on companies' financial reports. Thus, the model generates a ranking where companies are listed according to their efficiency in leveraging their assets, sales, margin and equity in the generation of the output (ROA).

Evaluation of resources in the organizational performance

Since the definition of resources varies widely (Barney, 2002), it is necessary to determine which resources would be evaluated in this study. Separating the resources into tangibles and intangibles was the first step. Thus, this research will evaluate the influence of both on organizational performance.

As tangible resources, we evaluated the representativeness of

the customer base, the portfolio of products offered compared to competitors and the representativeness of the customer base of the revenue generating units (RGUs).The RGUs are the sum of the base of the sector's main products (LL, MP, BL and PTV).

As intangible assets, we evaluated Tobin's Q, the origin of the capital used to privatize the companies and the trademarks registered in the period. Table 5 describes the variables and the reasons for choosing each one.

Except for the amount of registered trademarks, collected on National Institute of Industrial Property, data were gathered on companies' annual reports.

RESULTS

The results of the study will be divided into two parts: performance evaluation (according to the DEA model) and analysis of resources that influence performance.

Organizational performance with the DEA modeling

A necessary condition for application of a DEA model is

Table 2. Descriptive statistics of the DEA modeling variables for the period of analysis.

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Efficiency Ratio	106	0.6578	1.0000	0.9004	0.0977
ROA Corrected*	106	0.0001	0.3367	0.1915	0.0588
Non-Permanent Assets / Total Assets	106	0.1959	0.7203	0.4411	0.1289
Direct Margin	106	0.2572	0.5881	0.4355	0.0732
Sales Turnover	106	0.2966	1.1448	0.5758	0.1393
Equity / Total Capital	106	0.1362	0.7715	0.4667	0.1408

Note. ROA corrected is the value of the ROA ratio plus a k constant, in order for all the ratios to be positive. Without this constant, it is not possible to use the DEA due to the requirement that inputs and outputs be positive. This adjustment is based on the recommendation of Cook and Zhu (2007).

Table 3. Correlations between performance and independent variables.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Performance – Efficiency (1)	1.00	-0.01	-0.34**	0.45**	0.18	0.19*	0.23*
Tobin's Q (2)	-	1.00	0.06	0.28**	-0.00	-0.00	0.21*
Origin of Capital (3)	-	-	1.00	0.29**	-0.42**	-0.42**	-0.14
Product Portfolio (4)	-	-	-	1.00	0.36**	0.38**	0.35**
Customer Base (5)	-	-	-	-	1.00	0.99**	0.26**
Customer Base in RGUs (6)	-	-	-	-	-	1.00	0.27**
Trademarks (7)	-	-	-	-	-	-	1.00

Note.*significant values $p< .05$; **highly significant values $p < .01$.

the existence of a positive correlation between the input and output variables. This condition was met, with the values of all inputs showing significance greater than 95%. Direct Margin, Sales Turnover and Equity Representativeness were such inputs, showing significance above 99%.

The descriptive statistics of the variables used in the modeling, as well as the efficiency indices of the DEA modeling, are shown in Table 2.

Table 2 shows that the least efficient company over the period was given a rating of 0.6578 (Tele Sudeste Celular, in 2005). Because the DEA model used is the VRS, more than one company was given the maximum efficiency rating, namely; Tele Centro Sul (in 2000, 2001 and 2006), Telesp (1999, 2000, 2001, 2004, 2005, 2006), Tele Norte Leste (1999, 2001, 2002, 2007, 2008), Tele Centro Oeste Celular (2002, 2003 and 2004).

Resources exercising influence on organizational performance

To study the influence of resources on the performance of the companies analyzed in this study, we performed a multiple regression, the dependent variable of which was the efficiency ratio obtained in the DEA modeling. The independent variables were the tangible and intangible resources described in section 3.2.Table 3 shows the

correlations between performance and the resources analyzed (independent variables).

The performance (variable 1) showed that there was, respectively, a low correlation (0.23) and (-0.34) with trademarks (variable 7) and origin of capital (variable 3).There was also very low correlation (0.19) with the customer base in RGUs (variable 6). It is worth highlighting the moderate correlation (0.45) found between performance and the product portfolio (variable 4).Tobin's Q (variable 2) showed low correlation (0.28) with the product portfolio and trademarks. The origin of the capital correlated moderately (0.42) with the customer base (variable 5) and the customer base in RGUs. It also showed low correlation (0.29) with the product portfolio.

The portfolio showed low correlation with all variables, except performance, with which the correlation was moderate. The customer base correlated very strongly (0.99) with the customer base in RGUs. The correlation found with the customer base was low (with the variables "trademarks" and "product portfolio") or moderate (with the variable "origin of capital").The customer base in RGUs showed low correlation with the trademarks.

The Tobin's Q ratio was used in this study as an indicator of intangibility, as in the study undertaken by Kapelko (2009). However, the result was different from that found by that author, where the intangibility linked to Tobin's Q was relevant.

Through application of a multiple regression with the

Table 4. Organizations performance regression.

Variables	Coefficient	Deviation	*T*	*p*
Constant	0.92539	0.03646	25.38	0.000
Tobin's Q	-0.02984	0.02526	-1.18	0.240
Origin of Capital	-0.06807	0.02586	-2.63	0.010
Customer base	-6.216	2.386	-2.61	0.011
Customer Base in RGUs	6.441	2.527	2.55	0.012
Trademarks	0.5952	0.6830	0.87	0.386
Portfolio	0.10987	0.03405	3.23	0.002
r^2		32.7%		
Adjusted r^2		28.6%		

Table 5. Independent variables: resources evaluated in the study.

Resource	Unit of Measurement	Reason
Customer base	Market share in total phone accesses	Possibility of network effects, since the contribution margin is greater for voice and data traffic within the same network.
Portfolio	Number of products available in the portfolio, compared to the competitor with the largest portfolio in the period [involving LL, MP, BL, PTV and long distance (LD)].	Companies that are capable of offering more than one product in the telecommunications market are able to increase their average revenue per user (ARPU), increasing their profitability.
Customer Base in RGUs	Market share in the total of products (PTV, BL, MP and LL accesses).	Companies that are capable of offering more than one product can increase their average revenue per user in a proportion greater than the cost incurred for this.
Tobin's Q	Q = (VMA + D) / AT	Tobin's Q values greater than 1 (one) indicate that the company has a portion of value attributed to intangible factors.
Origin of Capital	0 (zero) for national capital; 1 (one) for foreign capital.	As competition in this sector did not exist in Brazil, companies that were acquired by international telecommunications groups were likely to outperform other companies.
Trademarks	Percentage of the total of applications for trademarks (or still in the process of being approved) compared to other companies.	As stated by Porter (1985), brands can assign value to the products and services of a company. A large number of trademarks may increase the value of a company, due to the high intangibility that can be attributed to certain brands.

Note. VMA is the company's market value, D is the market value of the organization's debts (calculated as the sum of current liabilities, stocks and long-term debts; less the value of the current assets) and AT is the value of the firm's total assets. This calculation formula is the one proposed by Chung and Pruitt (1994).

Independent variables, we obtained the coefficients shown in Table 4.

As shown in Table 4, some variables were not significant, so p< 0.05 was adopted as a parameter. The non-significant variables were Tobin's Q and the trademarks. Both variables are indicators that the companies' performance is supported by intangible factors, high social complexity and laden with causal ambiguity.

The other variables were shown to be significant. The origin of the capital proved to be a variable of negative correlation with performance measured by the DEA ranking. As the value of the "origin of capital" variable was zero for domestic capital and one (1) for foreign capital, the performance of enterprises with domestic capital only was shown to be better. The only companies run by shareholders comprised solely Brazilian groups were Tele Norte Leste and Tele Centro Oeste Celular (until it was merged into Telesp Celularto form Vivo).The results of these two companies proved to be superior to the others and is why this variable is considered significant in the model. It is worth highlighting that after the Tele Centro Oeste Celular management was replaced, this company's performance dropped. The holding companies privatized in 1998 were acquired, mainly, with the participation of foreign groups already operating in the telecommunications market. As noted, the experience of these groups in other countries did not help improve the performance of such companies.

Two variables that can be jointly analyzed are the customer bases (telephone accesses and RGUs). Both were quite significant, but with a positive coefficient for one (RGUs) and negative coefficient for the base in accesses. Although they are highly correlated, exclusion of any of the variables decreases the model's r², highlighting the complementarity between them. That is, in addition to the networking effect being important in the industry (due to cost reduction brought about by the increase in customer base in accesses), there is also the potential increase in performance linked to possession of more products by the telephone access subscriber base. The effect of the remaining variable, portfolio, confirms the importance of the customer base combined with the increase in the RGU base. The "portfolio" variable showed the highest correlation with performance, in addition to proving the most significant among all the variables analyzed. From the manner in which it was processed in the analysis (the company's product portfolio compared to the market), it is possible to observe a positive effect on performance through addition of more than one product offered by the company. This effect can be understood as the effect of technological convergence in the industry, since it was observed that companies with a converging portfolio outperform those lacking such a portfolio. This result can be compared with the work of Terziovski (2010), which found similar effect on company's performance using as one of the independent variables innovation strategy. So, innovation can be seen as a precursor of increasing an organization portfolio. So, we confirm this relationship.

The r² obtained in the model of this study (28.6%) is close to the value obtained in other studies, such as the work of Durand and Vargas (2003), which obtained 23.6%, and the work of Delmas et al. (2007), which obtained 27%. In these studies, other organizational resources were evaluated, such as the control structure, agency and the length of time that the companies had been operating in the market.

DISCUSSION AND CONCLUSION

This study attempted to identify which resources best explain performance in the post-privatization Brazilian telecommunications market (period between 1999 and 2008). It was observed that the market grew rapidly after privatization, as observed by Dinkelmann (2005).Those companies privatized in 1998 still account for a large portion of the main products on the Brazilian market (LL, MP,BI and PTV).

Twelve companies were privatized in 1998 and this number that had been reduced to eight by 2008. In 2009, the operations of Tele Norte Celular, Telemig and Tele Centro Sul were absorbed by other companies, reducing the number of companies privatized in 1998 to less than half. This sectorial landscape with so few competitors is the result of technological reconfiguration in which merged companies obtain a more favorable position in the industry, as pointed out by Oliveira (2006) and Santos (2006). In addition to the technological reconfiguration, privatized companies were restricted to specific areas of operation. Expansion of the operating scope, granted after meeting targets imposed by ANATEL, often proves costly, due to necessary investment in infrastructure. Companies may expand the geographic market where they operate by absorbing or purchasing other companies.

The study conducted in this research has served to expose some valuable resources in the market analyzed, the stand out ones; the importance of the customer base in accesses and RGUs, factors that point to gains resulting from network effects and also from the diversification of product portfolios of companies in the sector. The importance of having a product portfolio that is bigger than that of competitors also appears to be relevant, highlighting the business opportunities created by the technological convergence of the sector.

It is possible to conclude that a significant part (r² of 28.6%) of the organizations' performance in the market analyzed is linked to tangible and intangible resources analyzed in this study. These resources are clients (accesses and RGUs) and the portfolio of products offered. However, intangible factors also prove important, due to the significance of the variable "origin of capital".

Those companies privatized through solely domestic capital were more efficient. This factor is apt for future research, considering the importance of the companies' global operation. To better understand this effect, the work of Wei et al. (2014) can be useful. The authors explored the relationship between adhocracy and clan culture on market responsiveness and companies' performance. So, given the importance of country values on culture (Hofstede, 2001), results presented in this research suggest that companies privatized with domestic capital can have a research advantage. Did the groups of foreign investors that helped privatize the sector meet their expected profit targets in the privatization process? To what extent may the culture of the country recipient of investment deter purchase of a company by a foreign group? These are just some questions providing starting points for future studies.

The results are consistent to Wernerfelt's (2011) that existing stock of resources generate asymmetries in competition for new resources. So, if an organization succeeds to reach a significant customer base (a valuable resource), it gets easier to obtain new resources, such as new products.

Barney (2002) posits a broad definition of resources, covering both tangible and intangible factors. This research was able to assign a portion of the performance to tangible resources, but further studies would be required to analyze the influence of intangible factors on the market analyzed.

Although the customer base is considered to be a tangible resource, some intangible potential is tied to a loyal customer base. As pointed out in this research, a customer base is essential to increase the share in RGUs. And that can only be done with a portfolio of products compatible with the customers' needs. In other words, companies with a bigger product portfolio have privileged access to their customers and may expand their customer base in RGUs.

Oliveira (2006) and Santos (2006) point out that companies in the Brazilian telecommunications sector are still in strategic positions relevant to best product or client solutions, but there is no system with complementary items that causes the client disregard other market options. This study found that companies offering more solutions than others have a competitive advantage. With the movements of consolidation in the industry, the firms are expected to have equivalent portfolios, at least regarding number of products offered. Another area for future research is that of the competitive dynamics of this new phase of the sector, that is, so few competing companies. The role of intangible resources may be even more relevant in the future.

Some of the resources evaluated in this research (customer base, customer base in RGUs and portfolio) demonstrated VRIO model adequacy (value, rareness, imitability and organization), because they are valuable, rare and costly to imitate (Barney, 2002).These three variables are related, since the increase in the base in RGUs depends on the company having a solid customer base, as well as a consistent product portfolio. Increasing the customer base whether in accesses or in RGUs requires investment in sales and network infrastructure. In turn, the "portfolio" variable requires investment not only to develop the company's internal infrastructure in order to provide the product, but also an initial capital expenditure to purchase the operating license. In December 2007, for example, ANATEL raised R$ 5.3 billion by selling 3G operating licenses allowing MP carriers to operate. This acquisition cost is an entry barrier to the provision of some types of services and, in addition to the cost, a license may only be purchased when ANATEL opens tenders. So if a company chooses not to obtain a license and diversify its portfolio, this organization will be at a disadvantage compared to its competitors, at least until the next auction. This market dynamic creates ex-ante and ex-post competition limits, which are key criteria for a sustainable advantage (Peteraf, 1993).

The increase in the companies' portfolio suggests that some of them have changed their status in the industry and are starting to compete with all competitors. This is the case of Oi (Tele Norte Leste), for example. This company, result of the privatization of the LL service, also entered the MP market, offering product seen as a substitute for land-line telephony. Application of the Peteraf and Bergen (2003) model, which involves identification of competitors based on resources, shows that bothlatent substitutes and differentiators as well as vertical substitutes have become direct competitors in the market. This has happened to MP companies (latent substitutes) and PTV companies (vertical substitutes), which have diversified their portfolio to compete in the BI and LL market. This change in the market's competitive dynamics is another opportunity for research. The privatized companies are known for their greater knowledge of the telephony market, but the current network can have a sunk cost effect (Besanko et al., 2007), inhibiting investments in innovation. A study similar to the one conducted in this research, but with inclusion of latent and vertical substitutes, can address this question. The consolidation of companies may facilitate the work of researchers interested in this topic.

Rouse and Daellenbach (1999) recommend that researchers look for intangible resources within the organizations. Intangible factors such as culture, structure of contracts, resources and IT, cited by Barney and Clark (2007) as sources of competitive advantage, have high causal ambiguity, because they are socially complex. Exploratory qualitative studies can also be used to identify the importance of these resources in organizations. The importance of the VRIO model attribute "Organization" can be measured with this type of research (exploratory), or through studies focused more on the incentives given by the organization for companies to encourage use of resources, according to the Makadok (2003) model.

By looking at the data generated by this research, we can conclude that of itself, the customer base (accesses) does not guarantee superior performance, making more sophisticated strategies a requirement for increasing the market share. Portfolio diversification was one of the factors that emerged as a determinant of better performance.

The role of the intangibles (measured in this study with the variables "trademarks", "Tobin's Q" and "origin of capital") was shown to be important relevant to the origin of capital only. However, it should be emphasized that some brands registered by the companies reinforce elements considered by this research to be significant for organizational performance. Brands that reinforce relevant resources such as network effects and a complete portfolio of products stand out.

LIMITATION

As limitations, some resources were not included in the research design, such as management skills, routines and capabilities. This kind of resources, as outlined by Barney et al. (2011), can help companies to choose and implement strategies. Then, another restriction is that, although some resources were evaluated as valuable ones, the research does not explore how the resources

measured are related with consumer surplus. So, we assess competitive advantage and not value creation (Peteraf and Barney, 2003).

The relationship between resources and value creation make an interesting research opportunity for future studies. And, considering that in emerging economies competition appears to be less sophisticated (Kotler and Keller, 2011), research comparing value creation in the same industry but in different economic contexts can provide some appealing conclusions about which resources are more valuable in each context.

Conflict of interest

The authors has not declared any conflict of interest.

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Full Length Research Paper

Assessing the performance appraisal concept of the Local Government Service in Ghana

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This study seeks to investigate the assertion that staff performance appraisal was not being effectively implemented in the Local Government Service of Ghana. The East Mamprusi District Assembly was used for the case study. The rationale was to ascertain the truth or otherwise of this assertion and to make appropriate recommendations where necessary since it is believed that there is some correlation between staff performance appraisal and productivity. The data for the investigation were collected using questionnaire and interviews. Two sets of questionnaire were used, one for the appraisers and the other for the appraisees. The data obtained from the questionnaire were analyzed using percentages because it lends itself to easy interpretation and also because figures can easily be presented either graphically or in percentiles. The study found out that generally, staff performance appraisal was not done regularly and systematically as should be the case at the Assembly. This was because while some members of staff were appraised in a particular year, others were not. According to the findings, only the members of staff, especially the senior staff, who were due for promotion interviews, were those who initiated appraisal for the purpose of the promotion interviews. Purposes such as target setting, performance review, training and rewards were all virtually ignored. The study recommends that management of district assemblies, organizations, decentralized departments and institutions should effectively administer and appraise employees regularly.

Key words: Performance appraisal system (PAS), appraisers, appraisees, productivity.

INTRODUCTION

People differ in their abilities and aptitudes. There is always some difference between the quality and quantity of the same work on the same job being done by two different people. Therefore, performance appraisal is necessary to understand each employee's abilities, competencies and relative merit and worth for the organization. Performance appraisal rates the employees in terms of their performance.

One of the basic and major needs in any organization is to evaluate its employees' performance continuously to find out whether they improve or not and know their situation in organization. In the same vein, employees want to know how well they perform on their jobs. A simple statement, almost axiomatic in any organization,

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yet it has probably caused more controversy, applied research and practical advice than any other assertion in the history of management writing and thinking (Kavanagh, 1997).

The efforts of employees can determine the success and survival of an organization (Drucker, 1994; Barney, 1995), and appraisal is potentially one way in which those efforts can be aligned with the aims of an organization, employees can be motivated and their performance managed (Orpen, 1997; Martin and Bartol, 1998; Cook and Crossman, 2004). Performance appraisal is among the most important human resource (HR) practices (Boswell and Boudreau, 2001) and one of the more heavily researched topics in work psychology (Fletcher, 2002), a subject of research for over 70 years (Landy and Farr, 1980).

Still, many organizations express dissatisfaction with their appraisal schemes and others do not even appraise their employees (Fletcher, 1997). According to Fletcher (2001), this may signal a lack of success of performance appraisal as a mechanism for developing and motivating people. There is general consensus among performance appraisal researchers and practitioners that assessment of appraisal reactions is important (Keeping and Levy, 2000). For instance, it is frequently argued that in order for performance appraisal to positively influence employee behaviour and future development, employees must experience positive appraisal reactions. If not, any appraisal system will be doomed to failure (Cardy and Dobbins, 1994; Murphy and Cleveland, 1995). Performance appraisal satisfaction is the most frequently measured appraisal reaction (Giles and Mossholder, 1990; Keeping and Levy, 2000).

Organisations use different tools and have a number of goals for performance appraisals, often resulting in some confusion as to the true purpose of performance appraisal systems. However, at its core, the performance appraisal process allows an organisation to measure and evaluate an individual employee's behaviour and accomplishments over a specific period of time (Wiese and Buckley, 1998). Performance appraisal is a vital component of a broader set of human resource practices; it is the mechanism for evaluating the extent to which each employee's day-to-day performance is linked to the goals established by the organisation (Coutts and Schneider, 2004).

Performance appraisal is a vital element of the human resource management system. Aside from the distribution of rewards, developmental guidance given to the employees is based usually on the performance appraisal and employees can express their perceptions and standpoint regarding their respective jobs, departments, managers and supervisors and of their organization in general (Erdogan, 2002).

According to Angelo and Pritchard (2006), "Performance appraisal" is a discrete, formal, organizationally sanctioned event, usually not occurring more frequently than once or twice a year, which has clearly stated performance dimensions and/or criteria that are used in the evaluation process. Furthermore, it is an evaluation process, in that quantitative scores are often assigned based on the judged level of the employee's job performance on the dimensions or criteria used, and the scores are shared with the employee being evaluated.

The ideal purpose of the appraisal is to present employees with worthwhile feedback that the latter can instantaneously use to improve respective performance. This may involve encouragement to carry on with their good performances and positive behaviours and suggestions on what aspects need to be changed. Managers can demonstrate to their subordinates the value of improving their performance and of development of skills for possible promotion, added responsibilities, and increase in monetary compensation and benefits (Walsh and Fisher, 2005).

Performance appraisal could thus be seen as an objective method of judging the relative worth or ability of an individual employee in performing his or her task. If objectively done, the appraisal can help distinguish between a hard worker and a lazy one. A better performance appraisal system therefore should focus on the individual and his or her development as to make him or her achieve the desired performance or output. Authors define concepts according to their perception and therefore tend to lay emphasis on what they deem to be crucial and worth considering.

Performance appraisal system is ideally an organiza-tion`s designed programme involving both the organization and the personnel to improve the capabilities of both. It therefore involves determining and communicating to an employee how he or she is performing the job and establishing a plan for improvement. The information provided by the appraisal system is useful in three major areas namely, compensation, placement and training and development. Appraisal helps to improve upon employee's performance by identifying their strengths and weaknesses. It also helps to identify those with potentials for greater responsibilities and assists in deciding on an equitable compensation system.

There are several methods of appraising employee; however, the commonly used in the public sector of Ghana are the close and opened ended appraisal systems. In the close ended appraisal system, a confidential report is usually submitted on the performance of an employee. It is only where an adverse assessment is made against an employee that the concerned individual is informed. In the open system, the performance of the individual is normally discussed with him or her before ranking or grading. It is quite disappointing to note that, despite the numerous advantages associated with the performance appraisal system in organizations, it is not effectively carried out in the local government service of Ghana though the service provides the scope for periodic and timely appraisals. Normally, appraisals in the Local Government Service are to be conducted annually as per

the existing practice.

The responsibility of the civil service in the newly emerging nations like Ghana grew colossally after the attainment of independence. The challenge was exacting and obviously overwhelmed a number of the staff, several of whom lacked the requisite knowledge and skills. Furthermore, the volume of work had increased tremendously because of the emerging responsibilities arising from the fast growing demand for service and rapidly enlarging clientele.

Recognizing the need to preserve and sustain the effectiveness of the role of the civil service in the governance of nations, many developing countries including Ghana have established regular programmes to institutionalize the periodic review and updating of their civil services to ensure their continuing competence. Although measures adopted by government to develop and sustain an efficient and competent civil service have been making encouraging impact, there has also been emerging noticeable evidence of widespread concern about the declining efficiency and effectiveness of the civil service.

This situation should therefore be considered as a challenge to be addressed by all concerned including even future generations of the public policy makers, researchers, consultants and opinion leaders among civil society. As administrators, there is concrete evidence of administrative lapses which can be described as grossly unprofessional. For instance, certain clerical errors and basic administrative blunders are being noted as petty and usually glossed over. Despite the numerous advantages of the performance appraisal system, the local government service of Ghana has lagged behind in satisfying public demand. This is a major concern and a serious challenge to the service that requires immediate attention.

Staff performance appraisal is undoubtedly linked to all the managerial and administrative functions of planning, organizing, coordinating, staffing and controlling. It is therefore a critical tool in the management of human resource for the achievement of organizations` objectives if properly administered.

Statement of the problem

Staff performance appraisal policy is a critical tool in the management of human resource for the achievement of an organization`s goals and objectives if properly and adequately administered. The focus of this research is to find out why the staff performance policy of the East Mamprusi District Assembly is not being carried out with the due importance and seriousness it deserves though the system provides a scope for periodic and timely appraisals. Normally, appraisals are to be carried out once a year as per the existing practice.

The performance appraisal system designed for the Local Government Service of Ghana has not been

seriously and adequately implemented in the East Mamprusi District Assembly since its inception. Available records indicate that only the senior staff due for promotion are hurriedly appraised to enable them attend their interviews. In other words, appraisals are usually done just for the purpose of promotions.

For the junior staff of the Assembly, the least said about the concept the better. There are virtually none existing records to indicate that any of them have ever been appraised. This is indicative of the fact that both the appraisers and appraisees do not appreciate the real value of the performance to the organization (Assembly).

There is also the perception, especially by the junior staff of the Assembly that performance appraisal is only used to punish members of staff by way of demotion, denial of promotion and sometimes dismissal (firing). Others have the opinion that some senior officers are not conversant with the appraisal system hence their inability to do it correctly as expected.

The study generally seeks to promote the appropriate and effective use of the performance appraisal system in the East Mamprusi District Assembly placing much emphasis on achieving remarkable improvement in staff efficiency and high productivity. It specifically seeks to examine the effective use of performance appraisal system, the extent to which appraisees are involved in appraisal system at the Assembly, find out whether appraisees receive feedback on their performance appraisal conducted and enquire whether the appraisees are content (satisfy) with the appraisal system at the Assembly.

REVIEW OF LITERATURE

The concept of performance appraisal

Performance appraisal has many definitions. "Performance appraisal" is a process within the overall performance management process (Dowling et al., 1999), and is defined as "the evaluation of an individual's work performance in order to arrive at objective personnel decisions" (Robbins et al., 2000).

Performance appraisal has been defined as the process of identifying, evaluating and developing the work performance of employees in the organization, so that the organizational goals and objectives are more effectively achieved, while at the same time benefiting employees in terms of recognition, receiving feedback, catering for work needs and offering career guidance (Lansbury, 1988).

Carrol and Scheider (1982) described performance appraisal as "the process of identifying, observing, measuring, and developing human performance in organization" This definition is very important, because it comprises all important components needed for the well-performed appraisal process. Identification criteria orientate the appraisal process to the determination of

what has to be examined – performance related criteria and not so much performance irrelevant characteristics.

Denhardt (1991) defines performance appraisal as a specific evaluation with respect to an individual's progress in completing specified tasks. Devries et al. (1981) define performance appraisal as a process by which an organization measures and evaluates an individual employee's behavior and accomplishments for a finite period. Moulder (2001) states that performance appraisals are valued for defining expectations and measuring the extent to which expectations are met. She goes on to state that appraisals can make clear to employees where they are having success and where they need to improve performance. Moulder indicates that appraisals are useful in setting goals and in fostering improved communications among work groups and between employees and supervisors.

Performance appraisal process is part of the performance management system. The term "performance management" was first used in the 1970s, but it did not become a recognized process until the latter half of the 1980. The most appropriate definition in the context of the research is that, performance management represents a strategic and integrated approach to delivering organizational success by improving the performance capabilities of both individuals and teams (Armstrong and Baron, 1998).

Purpose of performance appraisal

Performance appraisals are one of the most important requirements for successful business and human resource policy (Kressler, 2003). Rewarding and promoting effective performance in organizations, as well as identifying ineffective performers for developmental programmes or other personnel actions are essential to effective human resource management (Pulakos, 2003). The ability to conduct performance appraisals relies on the ability to assess an employee's performance in a fair and accurate manner. Evaluating employee performance is a difficult task. Once the supervisor understands the nature of the job and the sources of information, the information needs to be collected in a systematic way, provided as feedback, and integrated into the organization's performance management process for use in making compensation, job placement, and training decisions and assignments (London, 2003).

Evaluation of agencies and programmes help in determining levels of efficiency, effectiveness and appropriateness and facilitate future planning to enhance the ability to meet client needs. Similarly, appraisals of individuals can also provide such vital information and opportunities for improvement. Indeed there is an inalienable link between the two. Dickenson (1991) argues that "to ignore individuals in the review process is to ignore a major input into the achievement of organisational out-

comes" (p109).

It is often said that organisations that perform well are a reflection of the efforts and successes of their staff. Recognising these efforts and appropriately praising or redirecting them is imperative for organisational success. This is the basic purpose of performance appraisals. George and Cole (1992.) describe it as, "to discuss performance and plan for the future" (p389). Wanna et al. (1992) define the objective of staff appraisals as "to improve planning and service delivery at the general level, but also to provide feedback to individual officers" (p162).

To underpin these discussions, there must be a reliable and accurate method by which to determine current levels of performance and compare them with predetermined levels of acceptability. There is therefore an inference of a need for quantifiable standards linked to job descriptions and expected performance (Wanna et al 1992). Wood (1989) argues that this leads to two types of appraisal mechanisms, based on either accountabilities or core competencies.

The challenge is to "find ways to discuss openly what has previously been left unsaid" (Cherry, 1993, p. 106).

Covey (1991), in discussing the work of Demming, makes the point that as managers we must be less concerned with supervising and concentrate on being leaders. He finds that, "sustainable cultural change can take place within an organisation only when the individuals within the organisation first change themselves from the inside out" (p265).

Cherry (1993) highlights the viewpoint of Demming (1982) that appraisal processes can be counterproductive to organizational success as they are odds with processes which encourage some degree of risk taking to meet client needs or develop new methodologies through trial. Also of this view is Mintzberg (1987) who considers a fundamental dilemma of strategy making is the need to reconcile the forces for stability and for change – to focus efforts and gain operational efficiencies on the one hand, yet adapt and maintain currency with a changing external environment on the other hand (p71). Cherry (1993, p. 103) however sees the appraisal process as fundamental to the success of organizational change initiatives citing the work of Dunphy and Hackman (1988) and the "powerful formative effects (of performance management) on the organisational power structure, on the workforce skill profiles and on corporate culture" (p23).

Dickenson (1993) espouses the common viewpoint of contemporary readings. The focus in its current application is to link performance review of individuals to overall corporate or strategic planning so that the outcomes of individuals' performance is related to organizational outcomes (p109).

Performance appraisal system: different methods

Decenzo and Robbins (1998) point out that there are

three existent approaches for measuring performance appraisal. These are absolute standards, relative standards and objectives.

Absolute standards

One category of appraisal methods is the use absolute standards. This means that employees are compared to a standard, and their evaluation is independent of any other employee in a week group (Dessler, 2000). Included in this category are the following methods: the essay appraisal, the critical incident appraisal, the checklist, the graphic rating scale, forced choice and behaviourally anchored rating scales.

The essay appraisal: It is the simplest evaluating method in which evaluator writes an explanation about employee's strength and weakness points, previous performance, positional and suggestion for his/her improvement at the end of evaluation term. This kind of evaluation usually includes some parts of other systems to cause their flexibility. This method often combines with other methods. In essay appraisal, we attempt to focus on behaviours (Mondy, 2008).

The critical incident appraisal: It focuses on key factors which make difference in performing a job efficiently. This method is more credible because it is more related to job and based on individual's performance than characteristic. The necessity of this system is to try to measure individuals' performance in terms of incidents and special episodes which take place in job performance. These incidents are known as critical incidents. In this method, the manager writes down the positive and negative performance of the individuals' behaviour in the evaluation term (Mondy, 2008).

The checklist: In this method, the evaluator has a list of situations and statements and compares it with employees. The checklist is a presentation of employee's characteristics and performance. The results can be quantitative and give weight to characteristics. Answers of checklist are often "Yes" or "No" (Decenzo and Robbins, 2002).

The graphic rating scale: According to Mondy (2008), this is the most commonly used method of performance appraisal because they are less time-consuming to develop and administer and allow for quantitative analysis and comparison. It is a scale that lists some characteristics and range of performance of each individual. Therefore, employees are ranked by determining a score which shows their performance level.

The utility of this technique can be enhanced by using it in conjunction with the essay appraisal technique.

Forced choice: Mondy (2008) contends that this method

evolved after a great deal of research conducted for the military services during World War II. It is a method in which the evaluator should rank individual work behaviour between two or more states. Each state may be favourable or unfavourable. The activity of evaluator is to determine which state has an explanation of employee most.

Behaviorally anchored rating scale (BARS): According to Wiese, (1998) this method replaces traditional numerical anchors tools with behavioural prototypes of real work behaviours. BARS enable the evaluator to rank employee based on observable behavioural dimension. The elements of this method are the results of a combination of major elements of critical incident and adjective rating scale appraisal methods. According to Decenzo and Robbins (2002), BARS has five stages. These are the generation critical incidents, developing performance dimensions, relocating incidents, rating of level of performance for each incident and development of the final instrument.

Relative standards

In this second general category of appraisal methods, individuals are compared against other individuals. These methods are relative standards rather than absolute measuring devices. The most popular of the relative method are group order ranking, individual ranking and paired comparison.

Group order ranking: In this method, employees are placed into a particular classification, such as "top one-fifth". For example, if a rater has 20 employees, only 4 can be in the top fifth and 4 must be relegated to the bottom fifth (Decenzo and Robbins,2002).

Individual ranking: Dessler (2000) maintains that in this type of appraisal, individuals are ranked from highest to lowest. It is assumed that the difference between the first and second employee is equal to difference between 21st and 22nd employee. In this method, the manager compares each person with others than work standards.

Paired comparison: Mondy (2008), in his study found out that in this method, employees are compared with all others in pairs. The number of comparison is followed as $N \cdot (N-1)$ in which, N shows the number of employees. After doing all comparisons, the best person is determined for each characteristic.

Objectives

The third approach to appraisal makes use of objectives. Employees are evaluated on how well they accomplished a specific set of objectives that have been determined to

be critical in the successful completion of their job. This approach is frequently referred to as Management by Objectives (MBO). Management by objectives is a process that converts organizational objectives into individual objectives. According to Ingham (1995), MBO consists of four steps: goal setting, action planning, self-control and periodic reviews.

360 degree feedback appraisal

360 degree evaluations are the latest approach to evaluating performance. It is a popular performance appraisal method that involves evaluating input from multiple levels within the firm as well as external sources. There are numerous authors who propose definitions of the 360 degree feedback process. "Feedback from multiple sources or '360 degree feedback' is a performance ap-praisal approach that relies on the input of an employee's superiors, colleagues, subordinates, sometimes customers, suppliers and/or spouses" (Yukl and Lepsinger, 1995). In a special edition of Human Resource Management on 360 degree feedback, Tornow (1993) observes that in 360 degree feedback programmes, feedback about a target individual is solicited from significant others using a standardized instrument. Jones and Bearley (1996) refer to 360 degree feedback as the practice of gathering and processing multi-rater assessments on individuals and feeding back the results to the recipients. Hoffman (1995) explains that 360 degree feedback is an approach that gathers behavioural observations from many layers within the organization and includes self-assessment.

The 360-degree evaluation can help one person be rated from different sides, different people which can give the wider prospective of the employee's competencies (Shrestha, 2007). It has been used for human resource development, appraisal and pay decisions (Armstrong, 1998; Stone, 2002).

The link of performance appraisal to rewards

Researchers (Bannister and Balkan, 1990) have reported that appraisee seems to have greater acceptance of the appraisal process, and feel more satisfied with it, when the process is directly linked to rewards. Such findings are a serious challenge to those who feel that appraisal results and reward outcomes must be strictly isolated from each other.

There is also a group who argues that the evaluation of employees for reward purposes, and frank communication with them about their performance, are part of the basic responsibilities of management. The practice of not discussing reward issues while appraising performance is, say critics, based on inconsistent and muddled ideas of motivation.

In many organizations, this inconsistency is aggravated by the practice of having separate wage and salary reviews, in which merit rises and bonuses are decided arbitrarily, and often secretly, by supervisors and managers. In the early part of the second century, performance appraisal was used in larger organization mostly for administrative purposes such as making promotions and determining salaries and bonuses.

Benefits of performance appraisal

Where performance appraisal allows the employees to get monetary and non-monetary rewards from management, it gives the most significant benefit for employees. In such a situation, it gives management and employees the chance to schedule time for one to one discussion on the performance over the period of time. This discussion between employee and supervisor allows them to discuss the main issues that impeded the performance and work. In the same vein, they will find measures of addressing the concerns raised. It can be observed from all over the world that organizations that provide constant feedback on performance appraisal to their employees, creates a strong bond between direct reports and supervisors only if the appraisal is conducted properly and fairly. This process also gives the opportunity to employees to review their performances and discuss the issues and difficulties they are facing in the work and also it gives the path to gain the aims and objectives in the future time. This interaction of direct reports and supervisors give the opportunity to help the future goals. Therefore, it enhances the productivity. So, this process gives the best time to employees to have chat with the supervisors without any hindrance and instruction (Orpen, 1997).

The importance of performance appraisal should not be misconstrued as if it is the integral part of the performance appraisal system. The appraisal system allows the supervisors and employees to discuss the future targets, training, rotation need, orientation and development, if needed. In this discussion, the supervisors and the direct reports discuss the various challenges about the present as well as the absent working skills, career development and what is to be done in the future (Dyck, 1997). Here, supervisor highlights the key skills of the direct report and makes or arranges for the future career inspirations. This discussion can be useful to measure the productivity of the organization, for the recruitment and orientation process. For example, the feedback can provide information about how employees are performing, their training need, futures aspirations and non-performing employees.

Appraisal data can also provide information on how well the recruiting strategies are working, what developmental process is good enough and what the effectiveness of employees is. Performance appraisal process could be a data sheet highlighting the overall performance of all employees; telling how well productivity has

improved, remains same or fall (Thompson and Dalta, 1970).

Challenges in performance appraisal

In order to make a performance appraisal system effective and successful, an organization comes across various challenges and problems. Raters' evaluations are often subjectively biased by their cognitive and motivational states (DeNisi and Williams, 1988; Longenecker et al., 1987), and supervisors often apply different standards with different employees which results in inconsistent, unreliable and invalid evaluations (Folger et al., 1992). In order to create better systems, researchers have traditionally focused on validity and reliability (Bretz et al., 1992) by designing newer "forms" of performance appraisals (e.g., behavioural-based systems that better define specific essential job functions of employees or 360-degree feedback mechanisms that allow for cross-validation via multiple raters). However, despite these recent advances in evaluation design, critics continue to argue that performance appraisal systems are not consistently effective (Atkins and Wood, 2002; DeNisi and Kluger, 2000).

Thomas and Bretz (1994) argue that evaluations are often perceived by employees and supervisors with "fear and loathing." Two possible explanations for the fear and loathing are the absence of a "sense of ownership" and an absence of rewards for properly completing the process. Cardy (1998) describes the appraisal process as "a difficult and error-ridden task." However, Cardy also points out that it is an important task that affects both the individual and the organization. As suggested by Drenth (1984), evaluation is a sensitive matter, often eliciting negative psychological responses such as resistance, denial, aggression, or discouragement, particularly if the assessment is negative. Thus high perceptions of evaluative performance appraisal use may result in negative feelings about the appraisal.

The employees' reactions to appraisals can be an important condition to improve the employee's performance. Recently, scholars have begun to argue that employees' emotions and perceptions are important in determining the efficacy of performance appraisal systems.

In fact, appraisal reactions such as satisfaction, acceptability and motivation to use feedback, are cited as an important trend in the appraisal research during the past ten years in a recent review of that literature (Levy and Williams, 2004).

SCOPE OF STUDY AND RESEARCH METHODOLOGY

The present study adopted qualitative research design. According to Patton (1985) in Merriam (1998), "qualitative research is an effort to understand situations in their uniqueness as part of a particular context and the interactions there". This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting-what it means for participants to be in that setting, what their lives are like, what is going on for them, what their meanings are, what the world looks like in that particular setting- and in the analysis to be able to communicate that faithfully to others who are interested in that setting. The analysis strives for depth of understanding".

Gambaga is the administrative capital of the East Mamprusi District in the Northern Region of Ghana. It is one of the oldest districts that have seen no or very little development. According to the 2000 population and housing census, Gambaga has a population of 180,877; of this figure 92,332 are females while 88,545 are males. This constitutes 51 and 49%, respectively. The average density of population is 59 persons per square kilometre.

The data were collected from staff of the East Mamprusi District Assembly. These included five heads of units within the Assembly and fifty other staff. The main methods employed in gathering data were questionnaires, observations and interviews. Two types of questionnaires were designed for the study; one for the appraisers and the other for the appraisees. These instruments were used to collect the primary data from the Assembly. The appraiser's questionnaires comprise fifteen (15) items, some with multiple choice responses on the issues. The appraiser's questionnaires were administered to the five (5) heads of the various units of the Assembly namely; the Central Administration, the District Planning Coordinating Unit (DPCU), the District Works Department (DWD), the District Finance Office (DFO) and The Internal Audit Unit (IAU). The appraisee's questionnaire which consisted of nineteen (19) items mainly of multiple choice responses were evenly distributed to the fifty (50) permanent staff of the Assembly to respond accordingly. The questionnaire was very simple to enable the respondents' answer them with maximum understanding and relative ease.

The researcher adopted and used observation on the permanent staff of the Assembly.

The researcher also employed methods such as individual interview, group interview as well as telephone interview especially for members of staff who were not literate such as the drivers, cleaners, watchmen and the labourers. The total staff strength of the East Mamprusi District Assembly as at the time of the research was sixty-seven (67), comprising fifty (50) permanent staff who are on the Controller and Accountant General's Payroll and seventeen (17) casual workers. The non-probability sampling techniques were adopted by the researcher. Under the non-probability techniques, both the purposive and convenience procedure were employed.

The study was designed to cover only the permanent staff of the East Mamprusi District Assembly hence only the 50 permanent staff were selected for the study because the casual workers were not regular at work and generally not accessible. It was also due to the fact that the appraisal concept basically involves the evaluation of the performance of permanent employees of an organisation who are referred to as the appraisees in this research.

Both the quantitative and qualitative methods of analysis were adopted. Percentages and frequency table, bar graphs and pie charts were used to capture changes in the variables. The qualitative approach described the data using appropriate expressions in percentiles with distinct and precise language. The qualitative method was particularly used for the analysis of the interviews. This was followed by a correlation analysis to find out the relationship between staff performance appraisal and output or productivity.

RESULTS AND DISCUSSIONS

Discussion of the data has multiple facets approaches, encompassing diverse techniques under a variety of
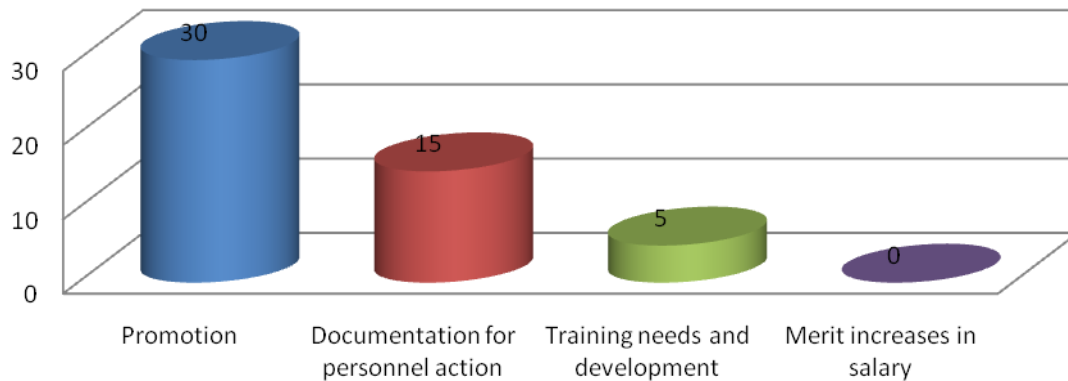
Figure 1. Rationale for conducting performance appraisal. Source: Field Survey 2013.

names, in different business, science and social science domains.

The research revealed that the graphic rating scale appraisal system was the one still invoke with only one type of appraisal form for both junior and senior staff as all 50 staff members indicated. According to Paterson (1922), he felt this method had several advantages over other methods of evaluation. First, the procedure is very simple. All the rater is required to do is place a check mark on a line indicating performance on a certain dimension. Secondly, the rater can make a precise judgment about a worker's performance. The rater is not restricted in his responses and is not forced to place the ratee in a category or class. Finally, the rater is freed from quantitative terms such as numbers to describe a worker's performance. Paterson felt that these quantitative terms influenced a rater's judgment. With this method, the rater can evaluate performance without numbers biasing his judgment.

The main rationale for conducting performance appraisal is for documentation for personnel action, training needs and development, merit increases in salaries (awarding hardworking employee) and promotions. Figure 1 provides response to reasons for performance appraisal systems.

From the figure above, thirty (30) appraisees, representing 60% indicated that performance appraisal was for promotion of employees, fifteen (15) representing 30% identified documentation for personnel action as the rationale for conducting performance appraisal, five (5) representing 10% mentioned that performance appraisal is used to identify the training needs and development of employees none responded for the determination of salaries. The appraisers, however, admitted that there are several challenges associated with the entire appraisal system such as the non-commitment of management to use the appraisal data for their intended purposes and variations from different raters. They also asserted that the information requested for on the appraisal form does not give a true reflection of the

performance of the appraisees. This supports Smith and Kendall (1963) who noted that the raters would be judging behaviours that are complex in nature. This raises a potential problem if one rater attributes a behaviour to one cause while a second rater attributes it to another. The idea that different raters all rate similarly, also called interrater agreement, is vital to a performance appraisal system. A lack of interrater agreement means that the results of the appraisals cannot be generalized across different raters. Employees rated by one rater may have received different scores on their appraisals had they been rated by a different rater. This issue is important when comparing employees with different supervisors, or raters, for the purposes of advancement or termination.

It was noted that promotions at the District Assembly are usually not done by the District Coordinating Director (DCD) of the Assembly and so it is impossible for him/her to give feedback to the appraisees. In this situation, it is extremely difficult to determine whether the performance appraisals can have any influence on the appraisees. Research conducted by Bannister and Balkan (1990) has reported that appraisees seem to have greater acceptance of the appraisal process, and feel more satisfied with it, when the process is directly linked to rewards. Such findings are a serious challenge to those who feel that appraisal results and reward outcomes must be strictly isolated from each other. There is also a group who argues that the evaluation of employees for reward purposes, and frank communication with them about their performance, are part of the basic responsibilities of management. The practice of not discussing reward issues while appraising performance is, say critics, based on inconsistent and muddled ideas of motivation.

It is also an established fact that promotions are usually based on the length of service at the Assembly other than individual performance. Officers due for promotion must take cognizance of the time and make the necessary arrangements for the relevant interviews. Grote (2002) contends that the purposes of performance appraisal are providing feedback to employees about their performance,

facilitating decisions concerning pay increases, promotions and layoffs, encouraging performance improvement, setting and measuring goals, determining individual and organizational training and development needs, confirming that good hiring decisions are being made, provide legal support for personnel decisions and improving overall organizational performance (pp. 4-5). Despite these laudable reasons given the study disclosed that forty-five (45) out of the fifty (50) members of staff of the assembly interviewed said they were not usually given any quarterly or annual feedback on their performance. It is therefore crystally clear that lack of feedback to employees on their performance either quarterly or annually is a serious drawback to their performance or output in the Assembly.

Outcomes of the data collected revealed that senior civil servants usually take their professional training courses at the Ghana Institute of Management and Public Administration (GIMPA) while the junior officers take theirs at either the Institute of Local Government Studies or the Civil Service Training Centre, both in Accra. George and Cole (1992) disagree with this planning process and stated that, the basic purpose of performance appraisals is to participate in the appraisal, plan the training activities, discuss the performance and plan for the future" (p389). Wanna et al. (1992) define the objective of staff appraisals as "to improve planning and service delivery at the general level, but also to provide feedback to individual officers" (p162).

According to Mullins (1993), appraisal is basically used to determine an employee's sustainability for training. All the fifty (50), representing 100% appraisees responded that their training needs were never discussed with them. This goes to confirm the assertion earlier captured in the literature review that management of the Assembly does not see the need for staff performance appraisal. One can therefore conveniently conclude that any form of appraisal conducted at the Assembly is usually not put to its intended purpose.

Furthermore, the appraisers confessed that the forms only elicited more behaviour responses than what the appraisees can actually achieve over a period of time. It was also realized that many of the questions on the appraisal forms were subjective and therefore could not be very reliable. Borman (1979) concurs that raters may have difficulty detecting similarities between the ratee's observed performance and the behavioural anchors. Because the anchors are very specific, finding congruence between the anchors and the performance can involve a high amount of inference. And, as Cascio (1998) notes, the more inferences made by a rater, the more likely that errors will occur. As well, it is possible that the ratee could have acted in direct accordance with two of the specific behavioural anchors (Bernardin and Smith, 1981). The problem for the rater is then to decide which example is more correct. This, again, involves inferences that could lead to rating errors. There is even

some evidence that the nature of the behavioral anchors seems to increase rater error (Murphy and Constans, 1987). The specific nature of the behavioural incidents may trigger memories of individual incidents of behaviour that match the anchors rather than serve to facilitate a more general recall of behaviour. Also, given that many individuals will be rated after the rater has already seen the appraisal instrument, the specific nature of the behavioural anchors may serve to prime the rater to look more carefully for behaviours that match those on the rating scale (Murphy and Constans, 1987).

The study uncovered that appraisal systems were in no way related to the reward system or salary administration. Salary increment is the policy of government which does not essentially relate to performance. It was also revealed that appraisal of staff performance are usually conducted only when members of staff are due for promotion interviews. The research findings also indicated that salaries and other incentives are usually not determined by one`s performance measured through the appraisal process. This is not in consonance with what pertained in the USA in 1989 where salary administration was identified as the first on the list of the top ten uses of performance appraisal (Kreitner and Kinicki, 1989). The two hunters argue that when salaries and other incentives are directly linked to performance, employees are motivated to put in more efforts to increase productivity. This collaborates the assertion that performance appraisal in the East Mamprusi District Assembly is not seen as a key factor affecting staff performance or output. It is an undeniable fact that people usually work and achieves much when given adequate and objective feedback on their performance quarterly and annually.

As regards the relationship between promotions and performance, the analysis indicates that promotions at the East Mamprusi District Assembly depend more on performance at the promotion interview other than anything else. It also revealed that the length of service on a particular position is an important consideration for promotion to a higher grade. Winston and Creamer (1997), however, opined that performance appraisal should be linked to organizational productivity and rewards. Individual employees benefit from performance appraisal and should have a clear association to organizational achievement using a recognized reward system. Not having this clear link may result in negative consequences on employee morale and productivity.

With regards to the frequency of appraisal of staff at the assembly, the research revealed that all the employees who had their appraisals got them only when they were due for promotion interviews but not on annual basis or for the purpose of assessing their performance. According to Vroom's (1964) Expectancy Theory, an employee performs or is motivated to do so according to the expected result of the work done. Vroom concluded that people will be motivated to the extent that they can perceive links between effort, performance and rewards

available. He further argued that performance is a vital component of the expectancy theory. Specifically, he was concerned with the linkage between effort and performance. That employees need to know what to expect after a given task; however, it is critical for management to communicate what is expected of the employees. Furthermore, he argued that they must feel confident that if they exert an effort within their capabilities, it will result in a satisfactory performance as defined by the criteria by which they are being measured. However Vroom underestimated the fact that employees should feel confident in the process of evaluation in that, if they perform as they are being asked, they will achieve the rewards they value. The irregular conduct of performance appraisal stems from the fact that the appraisers themselves have not taken the issue of appraisal of staff at the Assembly seriously. The appraisal system therefore does not serve the purpose for which it is intended. This attitude according to the responses revealed that forty five (45) out of the fifty (50) respondents, representing 90% were not satisfied with the way performance appraisals were conducted at the Assembly making inference to the fact that the performance Appraisal system does not improve their conditions in anyway. According to a study conducted by McNerney (1995), many companies reported that they are not satisfied with their performance appraisal systems and procedures

Another significant finding was that all the five (5) appraisers interviewed disclosed that they never had any form of training in the performance appraisal system. This clearly testifies that the performance appraisal system in not considered as a key component of staff development and this deficiency seriously affects staff performance negatively at the Assembly. Since performance appraisal is a judgmental process, it puts the appraiser in a highly sensitive and emotionally charged situation that calls for extremely good interpersonal skills. This invariably calls for the need for appraiser training if the system at the Assembly has to be effective to achieve the purpose for which it was designed. In view of the immense role the performance appraisal system plays in management decisions, the absence of trained and qualified personnel for its implementation at the East Mamprusi District Assembly is a serious setback to staff development and performance. This finding contravenes Winston and Creamer (1997) study when they suggested that for performance appraisal to be most useful, it must be inherently joined to both supervision and staff development. They define performance appraisal as "an organizational system comprising deliberate processes for determining staff accomplishments for the purpose of improving their effectiveness" (p. 43). In their research, they found that in higher education performance appraisal is frequently either looked upon in a negative way because it criticizes peoples' efforts, or indifferently because it is merely a paper exercise that has little to do with other aspects of institutional life or work conditions.

The research further disclosed that the termination and retention of staff decisions were not directly based on the results of the performance appraisals conducted. All the five appraisers who responded to the questionnaire confirmed it. They all indicated that management of the Assembly has no authority over such decisions since that was the preserve of the Office of the Head of the Local Government Service. Management can only make recommendations for further action. Winston and Creamer (1997) consent that leadership should require from supervisors and recognize the importance of their contribution to the results of the appraisal process. Supervisors, who act as leaders of their departments and divisions and recognize that they do shape both individual and organizational behaviour, are more likely to be effective in carrying out their duties in the appraisal process than supervisors who perform their duties without thinking and interest. They argued that this can beef up management's strength by giving the power to take major decisions without any reservations.

When the appraisees were asked the last time or year they were appraised, six (6) said their last appraisal were in 2010, five (5) said in 2009, another five (5) said in 2008, fourteen (14) said they had never been appraised, while twenty (20) responded that they could not remember ever being appraised. As regards the appraisers, all the five (5) responded that their appraisal forms were only filled and endorsed when they were to attend promotion interviews. When asked whether they usually set targets for staff, all the five (5) appraisers responded in the negative. They further added that appraisals were purposely for promotions since appraisal data are usually requested only during promotion interviews. These findings are refuted by Coutts and Schneider (2004) when they noted that "police organisations that do not invest in performance appraisal training are sending a clear message, either wittingly or unwittingly, that they do not consider the performance appraisal system an important component of their HR practices". When the manager conducting any performance appraisal does not possess the skill or motivation to rate the subordinate's performance, problems are a foregone conclusion.

CONCLUSIONS AND RECOMMENDATIONS

Improving any performance appraisal system is a complex proposition that requires developing sound appraisal procedures and motivated as well as skilled raters. Appraisal training is important to the success of an appraisal system. There is no substitute for training, which can minimize the occurrence of rating errors and improve reliability and validity (French, 1990). The study revealed that, most of the respondents lacked the needed knowledge about performance appraisal. Information or data gathered confirmed that the system as it exists does not measure up to the required standards. Though the

appraisers at the Assembly stated clearly that the Assembly staff know their job description, their overall performance is still far below expectation

The staff performance appraisal system adopted and used in the East Mamprusi District Assembly is not done regularly and annually as it is supposed to be the case in every appraisal system. The research also revealed that there is neither target setting nor a clear-cut job description for senior management staff of the Assembly. The mode of assessment was also found to be a one-way process which does not provide feedback for timely management decisions.

Evidence from the research also indicates that there is a weak correlation between the performance appraisal and productivity as exists in the East Mamprusi District Assembly. Factors responsible for that include lack of; appreciation of the impact of appraisal on staff performance, training for appraisers themselves, regular and systematic training programmes for staff and confidence in the entire Appraisal System.

The evidence from this research confirms that the absence of an effective performance Appraisal System in the East Mamprusi District negatively affects performance and productivity at the Assembly. The system therefore confirms the assertion that an effective appraisal system would enhance productivity.

The low level of staff performance at the East Mamprusi District Assembly therefore calls for an urgent need to design a new and more objective format to be adopted and used at the Assembly instead of relying on the current one which does fall short of modern day appraisal demands.

Evidence from the research indicates that there is a weak correlation between the staff performance Appraisal and productivity at the East Mamprusi District Assembly.

Some of the factors responsible were identified as lack of; appreciation of the impact of appraisal on staff performance, adequate knowledge and skills in appraisal by the appraisers themselves, regular and systematic training programmes for staff and confidence in the appraisal system.

RECOMMENDATIONS

To improve upon the staff performance appraisal system at the East Mamprusi District Assembly and to derive its immense benefits for the Assembly, some recommendations for consideration by management include;

There is the need to properly train managers/supervisors to conduct effective appraisals to meet the ever-changing work environment. If performance is important to an organisation, so is the appraisal of that performance. If appraisal is important, then managers must be led to develop the skills that are critical for effective appraisal. Without these critical competencies, the organizational appraisal process cannot achieve its desired objectives.

No matter how well designed a performance appraisal system is, its effectiveness is largely determined by the understanding, commitment and skills of the managers who must actually implement the system. The performance appraisal system at the Assembly must address its intended purpose(s);

1. Appraisees must be seriously involved in the entire concept of the appraisal system of the Assembly;
2. Appraisees must be given adequate and objective feedback on their performance annually;
3. Appraisees must be familiar and content with the appraisal system of the Assembly;
4. There must exist a strong relationship between a good performance appraisal system and productivity or output of the Assembly and;
5. The performance appraisal system currently used at the East Mamprusi District Assembly must be seriously improved to enable the District Assembly drive the maximum benefits of the concept.

The existing appraisal system is more driven towards subjectivity other than objectivity. A more objective format should therefore be designed and adopted for use at the Assembly. It is therefore the fervent hope and belief of the researcher that these recommendations which are very essential ingredients of a good and effective appraisal system would be implemented to stimulate the performance of the staff of the East Mamprusi District Assembly to enhance productivity and output.

Conflict of Interests

The author have not declared any conflict of interests.

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Full Length Research Paper

An analysis of the relations among job characteristics, manager leadership behaviours, and employees' job satisfaction- The case of Taiwanese tax officials

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This study uses a structural equation model to explore the relations among job characteristics, manager leadership behaviours, and employees' job satisfaction with regard to Taiwanese tax officials. Data were collected using convenience sampling, and the results of analyzing 183 questionnaires are as follows: (1) there are positive correlations between the observed variables, and also between the latent variables correlations; (2) task variety and cooperation are highly related to job characteristics; (3) initiating structure leadership, consideration leadership, salary satisfaction, and satisfaction towards one's superior are highly related to manager leadership behaviours; and (4) promotion, salary, satisfaction towards one's superior, and satisfaction towards one's job are highly related to job satisfaction. Manager leadership behaviours have a mediating effect on the relations between job characteristics and job satisfaction.

Key words: Job characteristics, manager leadership behaviours, employee job satisfaction, structural equation model.

INTRODUCTION

A country's finances support all government actions, and this money is generally raised through taxation, which accounts for about two-thirds of the total in Taiwan. However, in recent years, the tax authorities in Taiwan have seen falling staff numbers while having to deal with an increasing number of tax collection activities, leading to greater work-related pressure. Many previous studies have indicated that higher job satisfaction leads to better work performance, and thus enhances the job satisfaction of tax personnel which could increase the quality of tax collection services, and possibly improve the country's financial situation (Lee, 2000). The current work uses a

structural equation model to examine the job satisfaction of Taiwanese tax officials, in order to better understand its relationships with various demographic variables, job characteristics, and manager leadership behaviors. It is anticipated that the results of this study can serve as a reference to help improve managerial practices within tax offices.

There are many previous studies that consider the relationships among job characteristics, leadership behavior, job satisfaction, and resignation tendency. However, most of these works examine this issue by using descriptive statistics analysis, correlation analysis,
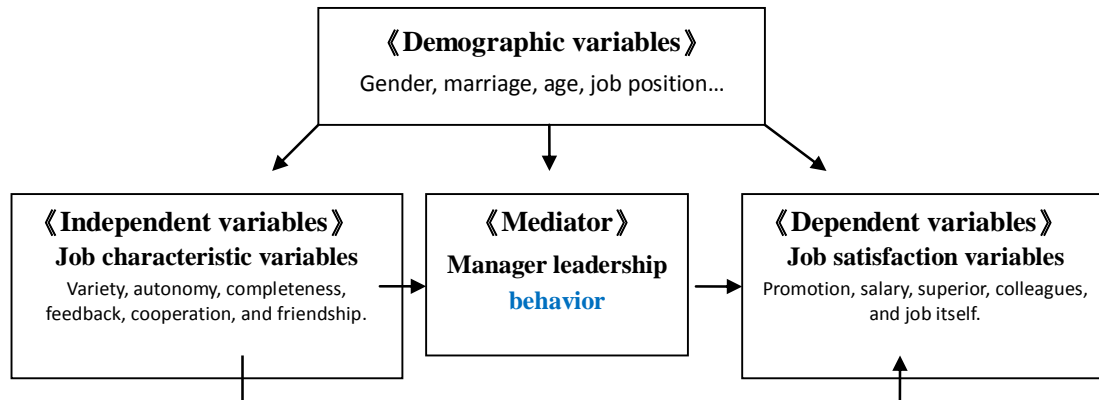
Figure 1. The relationship between demographic and research variables.

regression analysis, analysis of variance, and multiple comparisons analysis, all of which are traditional forms of analysis for observed variables. In contrast, this study conducts latent variable analysis and explores issues like measurement error and model prediction effects in empirical examples.

Earlier studies (Seashore and Taber, 1975) have proposed that job satisfaction is affected by both environmental variables (e.g., job characteristics, social status, career prospects, and manager leadership style) and individual variables (e.g., gender, education, and motivation). The current work examines two environmental variables, job characteristics and manager leadership style, and proposes that the latter has a mediating effect with regard to the relationship between job characteristics and job satisfaction. As shown in Figure 1, two paths are hypothesized: one is a direct path by which job characteristics directly influence job satisfaction; the other is an indirect path by which job characteristics influence manager leadership style, which then influences job satisfaction. This study examines these relationships based on a latent variable analysis.

LITERATURE REVIEW

Job characteristic variables

The job characteristics variables (JCV) not only include the specific characteristics of a job itself, but also extend to some related factors, such as the work-related environment, interpersonal interactions at work, and career prospects. The three major theoretical foundations of the current work are the theory of requisite task attributes (TRTA; Turner and Lawrence, 1965), theory of job characteristics (TJC; Hackman and Lawler, 1971), and the job characteristics model (JCM; Hackman and Oldham, 1975). TRTA proposes that there are required task attributes in relation to job characteristics: task variety, autonomy, required social interaction, optional

social interaction, knowledge and skill, and responsibility. Similarly, TJC considers the following six job characteristics: task variety, autonomy, task identity, feedback, cooperation, and friendship, with the first four being core factors and the later two interpersonal relationship ones. Finally, JCM has five job characteristics: skill variety, task identity, task significance, autonomy, and feedback.

The literature notes that the stronger the job characteristic attribute is (e.g., task variety, autonomy, identity, and feedback), the higher the employee satisfaction (Kalleberg, 1977). Job characteristics thus have a decisive influence on the motivation and satisfaction of employees, as well as how well staff interacts with each other. In the context of the current study, Lee (2000) indicates that taxation staff's job characteristics have a positive correlation with job satisfaction, and how such staff feel about their job characteristics is closely connected to attributes such as task variety, autonomy, identity, and cooperation, while friendship and feedback have weaker effects. Employees with different career orientations also have significant differently views with regard to resignation willingness, job characteristics, and job satisfaction (Lin and Hu, 2009; Wu, 2010). Based on these earlier works, it can be concluded that job characteristics are related to a number of objective attributes, including work environment, salary, welfare, security, promotion, interpersonal relationships, task variety, autonomy, and feedback, as well as subjective attributes and intrinsic rewards, such as a sense of honor, satisfaction and self-fulfillment.

The job characteristics scale used in this study is adopted from a revised translation of Hackman and Lawler's scale (Hackman and Lawler, 1971). The main for this is that many earlier works show that this scale is reliable and valid. Moreover, the focal issue examined in this work is based on six factors that these researchers have explored, namely variety, autonomy, identity, feedback, cooperation, and friendship. However, they only employed observed variables in their model analysis; the current study also includes latent variables in its

modeling, analysis and verification.

Manager leadership behaviors

The concept of manager leadership behaviors (MLB) can be used to examine how managers work to achieve the organization's goals while interacting with employees. There have been a range of different leadership theories, from early trait theory to behavioral pattern theory, the contingency model, and a number of more recent leadership theories. Trait theory aims to find out the personal characteristics of a successful leader, and assumes that good leaders are born, thus neglecting the possibility of learning new behaviors. Behavioral pattern theory emphasizes how a manager's work performance relates to their actual behaviors, and claims that a person can learn to be a good leaders, with a focus on a leader's overt behavior, such as, initiating structure leadership (ISL) and consideration leadership (CL) (Hemphill and Coons, 1957). ISL determines the degree a manager is able to encourage their subordinates to achieve their goals, considering issues such as whether employees finish their tasks on time, the quality of various work-related relationships, and if actual task performance meets the appropriate standards. CL refers to the extent to which a leader cares about their subordinates' feelings and respects their opinions, aiming to improve their welfare and job satisfaction.

Likert (1961) proposed the concepts of production-oriented leadership (POL) and employee-oriented leadership (EOL). POL stresses work skills, with the employees' professional abilities and skills seen as tools to achieve certain goals. In contrast, EOL considers the interactions that occur in the interpersonal relationships between leaders and subordinates, with the aim being that the needs of the latter are listened to when managers make their decisions. Fiedler (1967) proposed the contingency model that includes the three dimensions of leader-member relations, task structure, and leader's position power, which are used to define various situational factors that can affect job performance.

In the late 1980s, scholars began to see leadership as a process that aims to gather the efforts of staff to facilitate the achievement of organizational goals, with leadership being divided into the transactional and transformational styles. The first of these emphasizes work-related standards and goals, while the second focus on staff and leaders working together to achieve the organization's goal (Bass, 1985; Nanus, 1992; Roach and Behling, 1984). Managerial leadership styles have relationships with employee job satisfaction and the organization ability to innovate, with transformational leadership generally being more acceptable to employees, and having more positive effects on job satisfaction and innovation (Hsu and Yeh, 2010). In short, leadership refers to how a leader works to influence staff in order to achieve certain goals (Jacobs and Jaques, 1990). Job characteristics can affect leadership style and employee job satisfaction, and leadership style can also affect employee job satisfaction, with a positive correlation between these last two factors.

Because of the special characteristics of their work, tax officials not only need to be familiar with administrative law and taxation rules, but also need to have related accounting knowledge and the abilities to build good relationships with the public, their colleagues and managers. Official administrative practices in Taiwan mean that the interactions that occur between the managers and their subordinates in tax offices are related to both ISL and CL. They are related to ISL because the tasks that staff need to carry out are clearly defined, and thus the manager acts as a supervisor and monitors whether employees have achieved what they are supposed to.

They are also related to CL, as managers are encouraged to consider their subordinate' feelings and opinions, as well as the general quality of the work environment. This study uses a revised version of the manager leadership scale developed in Hemphill and Coons (1957), which is well-suited to the context of this work.

Job satisfaction variables

Job satisfaction variables (JSV) are subjective measures that describe the degree to which employees are satisfied about their work environment and the job itself. Job satisfaction refers to a personal mental reaction (an overall satisfaction tendency) based on job characteristics, working situation, and job related factors. Hoppock (1935) proposed the first job satisfaction scale, with Weiss et al. (1967) then developing the Minnesota Satisfaction Questionnaire (MSQ), which has both long and short forms. The long form has 100 questions about issues such as advancement prospects, salary, co-operation, supervision, and job security. The short form has only 20 questions, examining intrinsic satisfaction, extrinsic satisfaction, and general satisfaction. Intrinsic satisfaction measures an employee's satisfaction with the job itself, and is related to their responsibilities, social status, and position within the organization. Extrinsic satisfaction measures satisfaction in relation to job prospects, salary, and social relations with one's superior and colleagues.

Finally, general satisfaction is related to an employee's overall degree of satisfaction, and is based on both internal and external factors.

This research adopts the revised MSQ scale, as this can be used to assess satisfaction in relation to many different job categories (Chen et al., 2011; Wu, 2010), and thus it is well-suited to the context of the current work.

RESEARCH DESIGN

Research sample

The research sample is composed of staff who currently work at the National Tax Administration of Taiwan Province, Ministry of Finance. Data were collected using convenience sampling. A total of 300 questionnaires were sent out and 200 were received, with 183 valid responses, representing a 61% response rate. The questionnaires included four parts, with items on the demographic variables, JCV scale, MLB scale, and JSV scale.

Demographic variables

This study gathered data on the following six demographic variables: gender marital status (married and single), age (30 years or younger, 30~40, 40~50, 50~60 years old, and over 60 years old), educational background (senior high school, vocational college, university, graduate school or above), years of service (three years or less, four-10 years, 10-20 years, and over 20 years), job position (manager or non-manager).

JCV scale

This scale contains 15 items and measures six job-related factors. Each item is answered on a 5-point Likert-scale (1=strongly disagree; 2=disagree; 3= agree; 4=very agree; and 5=strongly agree), with higher scores indicating higher job-related characteristics. Items 1, 6, and 14 measure task variety; 9, 11, and 14 measure autonomy; 5, 7, and 13 measure identity; 4 and 10 measure feedback; 2 and 8 measure cooperation; and 3 and 12 measure friendship. Higher scores for the four factors of task variety, autonomy, identity, and feedback mean that the respondent's job is more meaningful. Higher scores for cooperation and friendship mean that job characteristics and interpersonal relationships have a greater influence within the organization.

MLB scale

This scale contains 10 items and measures the ISL and CL. Each item is answered on a 5-point Likert-scale. Items 1, 3, 6, 9, and 10 measure ISL, while the others measure CL. A higher score for the ISL items indicates that the respondent's manager particularly emphasizes the operations of the organization, and carries out task-oriented and performance evaluations. A higher score for the CL items means that the manager cares about their subordinates, has sympathy for them, respects their opinions, and looks after their welfare.

JSV scale

This scale contains 12 items and measures the five factors related to job satisfaction. Each item is answered on a 5-point Likert-scale. Items 6 and 10 measure promotion satisfaction; 5 and 8 measure salary satisfaction; 9 and 11 measure satisfaction towards one's superior; 3 and 7 measure satisfaction towards how colleagues get along with each other; and items 1, 2 ,4, and 12 measure satisfaction towards the job itself. A higher scores represent greater job satisfaction. For instance, a higher score with regard to promotion satisfaction indicates that the staff feel better about their opportunities for promotion within the organization.

The structural model

The structural model used in this work is as follows:

$$\eta_1 = \gamma_{11}\xi + \zeta_1 \text{ ,}$$
$$\eta_2 = \gamma_{21}\xi + \beta_{21}\eta_1 + \zeta_2 \text{ ,} \tag{1}$$

where η_1 and η_2 are the manager leadership behavior and job satisfaction variables, respectively; ξ is the job characteristics variable. γ_{11} is the coefficient parameter of η_1 on ξ. γ_{21} is the coefficient parameter of η_2 on ξ. β_{21} is the coefficient parameter of η_2 on η_1. ζ_1 and ζ_2 are structure errors for η_1 and η_2 respectively.

The measurement model for job characteristics is as follows:

$$x_q = \lambda_{q1}^x \xi + \delta_q \text{ , } q=1,2,\ldots,6 \text{ ,} \tag{2}$$

where x_1= task variety, x_2 = autonomy, x_3= identity, x_4 = feedback, x_5= cooperation, x_6= friendship; λ_{q1}^x is the loading of response variable x on the factor q; δ is the measurement error term.

The measurement model for manager leadership behaviors is as follows:

$$y_p = \lambda_{p1}^y \eta_1 + \varepsilon_p \text{ , } p=1,2 \text{ ,} \tag{3}$$

where y_1= initiating structure leadership, y_2 is consideration leadership; λ_{p1}^y is the loading of response variable y on the factor p; and ε_p is the measurement error term. Likewise, the measurement model for job satisfaction is as follows:

Table 1. Demographic analysis.

Demographic variable	Category	Total	Percentage
Gender	Male	48	26.23
	Female	135	73.77
Marriage	Married	122	66.67
	Unmarried	61	33.33
Age	Less than 30 years	31	16.94
	30-40 years	62	33.88
	40-50 years	58	31.69
	50-60 years	30	16.39
	Over 60 years	2	1.1
Education	Senior high school	21	11.48
	Vocational college	57	31.15
	University	90	49.18
	Graduate or above	15	8.19
Years of service	Less than 3 years	26	14.21
	3-10 years	51	27.87
	10-20 years	55	30.05
	Over 20 years	51	27.87
Position	Manager	31	16.94
	Non-manager	152	83.06

$$y_m = \lambda_{m2}^y \eta_2 + \varepsilon_m \text{ , } m = 3,4,\ldots,7 \text{ ,} \tag{4}$$

Where y_3 = promotion satisfaction, y_4 = salary satisfaction, y_5 = satisfaction towards superior, y_6 = how colleagues get along with each other, y_7 = satisfaction towards the job itself. λ_{m2}^y is the loading of response variable y on the factor m; and ε_m is the measurement error term.

Analysis

Demographic variables analysis

The results of the analysis of the demographic variables are shown in Table 1. There were 73.77% female respondents and 26.23% males; most (66.67%) of the respondents were married, and the largest group was aged between 30 - 40 years old (33.88%). Since only 1.1% of the respondents were over 60, this group was merger with the 50-60 group in the statistical analysis. The smallest group of people had worked in the tax office for less than three years (14.21%), with the three other groups being roughly the same size. With regard to job

position, 16.94% of the respondents were managers, and the rest held non-managerial positions.

Statistical analysis

As shown in Table 2, the factor averages of the items on the JCV scale are between 3.005 and 3.995, while the overall average is approximately 3.35. Cooperation has the highest average, at 3.61, and autonomy has the lowest, at 3.12. This is because the complex nature of the work that tax officials have to do means that staff often need to cooperate to achieve the tasks that they are given by their managers. The low score for autonomy is because there are clear rules with regard to authority and responsibility in the tax office, and thus relatively little autonomy with regard to how work is carried out. Turning to the difference analysis, and taking gender as an example, there is a significant difference between male and female respondents with regard to task variety (p=0.028), but not for any of the other factors.

Table 3 gives the results of the descriptive statistical analysis for MLB. The factor averages of the items on the MLB scale are between 3.193 and 3.806. The overall average of the MLB scale is approximately 3.5, showing that the average response is between agree and very

Table 2. Descriptive statistical analysis of JCV.

		Variety	Autonomy	Identity	Feedback	Cooperation	Friendship
Gender	Male	3.694(0.618)	3.055(0.425)	3.368(0.645)	3.291(0.659)	3.562(0.704)	3.218(0.757)
	Female	3.474(0.586)	3.145(0.486)	3.491(0.564)	3.248(0.607)	3.625(0.671)	3.107(0.697)
	p-value	0.028*	0.256	0.212	0.677	0.579	0.354
Marriage	Married	3.592(0.588)	3.172(0.407)	3.543(0.570)	3.364(0.589)	3.643(0.601)	3.143(0.728)
	Unmarried	3.409(0.612)	3.021(0.570)	3.289(0.588)	3.049(0.630)	3.540(0.812)	3.122(0.687)
	p-value	0.051	0.041*	0.005**	0.001**	0.337	0.855
Age	Less than 30 years	3.397(0.692)	3.102(0.386)	3.166(0.509)	3.153(0.674)	3.442(0.852)	3.019(0.699)
	30-40 years	3.477(0.611)	3.013(0.588)	3.450(0.557)	3.137(0.617)	3.627(0.786)	3.137(0.693)
	40-50 years	3.496(0.580)	3.121(0.490)	3.484(0.614)	3.163(0.601)	3.600(0.580)	3.118(0.745)
	Over 50 years	3.692(0.545)	3.241(0.320)	3.588(0.587)	3.539(0.537)	3.686(0.556)	3.215(0.715)
	p-value	0.015*	0.091	0.029*	0.004**	0.187	0.931
Education	Senior high school	3.380(0.762)	3.015(0.324)	3.238(0.538)	3.142(0.673)	3.357(0.868)	3.142(0.808)
	Vocational college	3.567(0.538)	3.005(0.572)	3.421(0.532)	3.307(0.686)	3.710(0.597)	3.087(0.762)
	University	3.474(0.609)	3.185(0.433)	3.485(0.565)	3.227(0.576)	3.566(0.683)	3.111(0.665)
	Graduate or above	3.955(0.305)	3.333(0.308)	3.755(0.849)	3.433(0.530)	3.833(0.556)	3.466(0.639)
	p-value	0.019*	0.026*	0.064	0.479	0.103	0.310
Years of service	Less than 3 years	3.397(0.692)	3.102(0.386)	3.166(0.509)	3.153(0.674)	3.442(0.852)	3.019(0.699)
	3-10 years	3.477(0.611)	3.013(0.588)	3.450(0.557)	3.137(0.617)	3.627(0.786)	3.137(0.693)
	10-20 years	3.496(0.580)	3.121(0.490)	3.484(0.614)	3.163(0.601)	3.600(0.580)	3.118(0.745)
	Over 20 years	3.692(0.545)	3.241(0.320)	3.588(0.587)	3.539(0.537)	3.686(0.556)	3.215(0.715)
	p-value	0.134	0.108	0.027*	0.001**	0.520	0.716
Position	Manager	3.709(0.528)	3.215(0.350)	3.397(0.553)	3.5(0.532)	3.822(0.540)	3.177(0.725)
	Non-manager	3.495(0.610)	3.103(0.491)	3.471(0.594)	3.210(0.626)	3.565(0.696)	3.128(0.712)
	p-value	0.070	0.229	0.526	0.017*	0.054	0.727

Note: Standard errors appear in the parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

agree from these items. Regarding the difference analysis, there are significant differences only for marital status and age.

Table 4 gives the results of the descriptive statistical analysis for JSV. The factor averages of the items on the JSV scale are between 2.733 and 3.828. The overall average of JSV scale is approximately 3.3. Notable, satisfaction with colleagues has the highest average, 3.55, reflecting the fact that the respondents often need to work together. Promotion satisfaction has the lowest average, at 2.986, which reflects the limited opportunities for promotion at the National Tax Administration. Regarding the difference analysis, and taking the respondents' age as an example, there are significant differences only with regard to satisfaction with one's superior and the job itself.

The results of factor analysis show that the six factors of the JCV explain 71.43% of the variance in the 15 original variables (Table 5). The eigenvalues of the six factors are 4.48, 1.67, 1.46, 1.22, 1.06, and 0.79, respectively. The Cronbach's α is 0.688 and the measure of sampling adequacy (MSA) is 0.789, both of which are slightly lower than the recommended values of 0.7 and 0.8, respectively.

Furthermore, the two factors of MLB explain 74.65% of the variance in the 10 original variables. The eigen values of the two factors are 6.58 and 0.87, respectively. The Cronbach's α is 0.94, indicating excellent reliability, while the MSA (0.938) is much higher than the critical value of 0.8, and thus it is very appropriate to conduct factor analysis.

Finally, the five factors of JSV explain 82.56% of the variance in the 12 original variables. The eigenvalues of the five factors are 6.77, 1.01, 0.87, 0.68, and 0.55, respectively. The Cronbach's α is 0.93, indicating excellent reliability, whereas the MSA (0.911) is significantly

Table 3. Descriptive statistical analysis of MLB.

		Initiating structure leadership	Consideration leadership
Gender	Male	3.516(0.686)	3.495(0.764)
	Female	3.481(0.739)	3.514(0.756)
	p-value	0.773	0.886
Marriage	Married	3.601(0.720)	3.6(0.768)
	Unmarried	3.268(0.685)	3.327(0.704)
	p-value	0.003**	0.021*
Age	Less than 30 years	3.193(0.641)	3.264(0.727)
	30-40 years	3.458(0.672)	3.458(0.699)
	40-50 years	3.558(0.763)	3.531(0.806)
	Over 50 years	3.718(0.753)	3.806(0.729)
	p-value	0.027*	0.035*
Education	Senior high school	3.752(0.850)	3.780(0.836)
	Vocational college	3.600(0.754)	3.582(0.827)
	University	3.366(0.681)	3.426(0.701)
	Graduate or above	3.453(0.547)	3.346(0.606)
	p-value	0.080	0.171
Years of service	Less than 3 years	3.323(0.790)	3.453(0.770)
	3-10 years	3.470(0.601)	3.423(0.765)
	10-20 years	3.400(0.683)	3.400(0.644)
	Over 20 years	3.694(0.816)	3.741(0.821)
	p-value	0.096	0.079
Position	Manager	3.587(0.574)	3.567(0.638)
	Non-manager	3.471(0.751)	3.497(0.779)
	p-value	0.417	0.638

Note: Standard errors appear in the parentheses. $^*p < 0.05$, $^{**}p < 0.01$.

higher than the critical value of 0.8, indicating that it is very appropriate to conduct factor analysis.

Correlation analysis

With regard to the relations among the latent variables (Table 6), the correlations $\hat{\rho}_{\xi\eta_1}$ (=0.350), $\hat{\rho}_{\xi\eta_2}$ (=0.381), and $\hat{\rho}_{\eta_1\eta_2}$ (=0.538) are all positive and significant. For the relationships between the latent and observed variables (Table 7), the correlations range from 0.037 to 0.538, with only $\hat{\rho}_{\eta_1x_6}$ (=0.06) and $\hat{\rho}_{\eta_1x_3}$ (=0.037) being non-significant, and the others all being positive and significant. With regard to the relations among the observed variables (Table 8), the correlations range from 0.255 to 0.883, and all of these are positive and significant. Notable, both initiating structure and consideration leadership have

exactly the same degree of correlation with the five factors of job satisfaction. The strongest correlation for both of these is for satisfaction with one's superior, followed by satisfaction with the job itself, then with one's colleagues, promotion prospects, and salary.

Estimation and model evaluation

The initial structural model

Since the sample size in this study was rather small, at only 183 people, it is not appropriate to use maximum likelihood estimation, and thus the generalized least square method is used instead to estimate the parameters using the LISREL software. Table 9 lists the parameters estimations of the initial model. The non-standardized loadings of λ^y are between 0.86 and 1.141.

Table 4. Descriptive statistical analysis of JSV.

		Promotion	Salary	Superior	Colleagues	Job Itself
Gender	Male	2.906(0.908)	2.989(0.936)	3.333(0.807)	3.510(0.687)	3.432(0.677)
	Female	3.014(0.779)	3.237(0.798)	3.370(0.782)	3.566(0.676)	3.396(0.692)
	p-value	0.429	0.080	0.780	0.623	0.756
Marriage	Married	3.049(0.821)	3.262(0.867)	3.409(0.787)	3.659(0.617)	3.526(0.667)
	Unmarried	2.860(0.791)	2.991(0.760)	3.262(0.783)	3.336(0.745)	3.163(0.665)
	p-value	0.140	0.040*	0.232	0.002**	0.000***
Age	Less than 30 years	2.983(0.769)	3.177(0.725)	3.209(0.834)	3.403(0.757)	3.217(0.618)
	30-40 years	2.983(0.824)	3.048(0.881)	3.250(0.750)	3.483(0.677)	3.322(0.753)
	40-50 years	2.913(0.767)	3.155(0.828)	3.370(0.758)	3.551(0.679)	3.405(0.629)
	Over 50 years	3.125(0.933)	3.437(0.868)	3.703(0.791)	3.828(0.532)	3.75(0.615)
	p-value	0.711	0.208	0.036*	0.058	0.009**
Education	Senior high school	3.095(0.784)	3.214(0.699)	3.595(0.784)	3.761(0.538)	3.547(0.682)
	Vocational college	3.105(0.895)	3.271(0.845)	3.491(0.831)	3.561(0.768)	3.434(0.765)
	University	2.927(0.736)	3.161(0.820)	3.266(0.731)	3.488(0.661)	3.366(0.650)
	Graduate or above	2.733(0.961)	2.8(1.082)	3.1(0.849)	3.6(0.573)	3.333(0.617)
	p-value	0.322	0.284	0.094	0.413	0.696
Years of service	Less than 3 years	3.211(0.776)	3.346(0.771)	3.403(0.812)	3.5(0.583)	3.384(0.718)
	3-10 years	2.872(0.786)	2.892(0.844)	3.166(0.746)	3.392(0.783)	3.230(0.712)
	10-20 years	2.9(0.760)	3.127(0.806)	3.354(0.691)	3.518(0.666)	3.377(0.643)
	Over 20 years	3.078(0.902)	3.411(0.840)	3.539(0.882)	3.774(0.577)	3.622(0.650)
	p-value	0.236	0.010*	0.120	0.033*	0.034*
Position	Manager	3.193(0.771)	3.435(0.834)	3.516(0.651)	3.532(0.618)	3.596(0.618)
	Non-manager	2.944(0.818)	3.118(0.835)	3.328(0.809)	3.555(0.691)	3.366(0.695)
	p-value	0.120	0.055	0.228	0.860	0.089

Note: Standard errors appear in the parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$ $^{***}p < 0.001$.

The non-standardized loadings of λ^x are between 0.208 both reach significant level, meaning that job characteristics affect both manager leadership behaviors and job satisfaction. These loadings from each measurement model reach a significant level, indicating that these models are suitable. However, as seen in Table 10, RMR=0.169, SRMR=0.270, GFI=0.839, AGFI=0.763, PGFI=0.571, NFI=0.409, NNFI=0.338, CFI=0.474, and RMSEA=0.294; thus overall the initial model has a less than optimal fit with the empirical data, which need to be modified.

The modification indices (MI), which model the needs improvement, recommend the addition of two paths; one and 0.881. Moreover, $\hat{\beta}_{21}$=0.598 (t =6.836) reaches a significant level, indicating that manager leadership behaviors can predict job satisfaction in an effective manner. $\hat{\gamma}_{11}$=0.441 (t =4.315) and $\hat{\gamma}_{21}$=0.156 (t =2.164)

path is y_4 (salary), which is not only affected by η_2, but also by η_1. The other path y_5 (superior) is also affected by η_1. The factor loading for λ^y_{41} is 9.12 and for λ^y_{51} is 21.75, which both exceed the critical value of 5; meaning that these two paths should be included in the revised model.

The final structural model

In order to avoid errors and to eliminate some parameters, which may cause over fitting, great care is to be taken in modifying the model. Some parameters are first added to enhance the model fit, and then some parameters removed until a parsimonious model is obtained. This research first adds two paths (see above) and then examines the effects of this on the model fit, with the

Table 5. Factor analysis.

	Eigenvalue	MSA	Cronbach's α
Scale of JCV (15 items)			
Factor 1	4.48		
Factor 2	1.67		
Factor 3	1.46	0.789	0.688
Factor 4	1.22		
Factor 5	1.06		
Factor 6	0.79		
Scale of MLB (10 items)			
Factor 1	6.58	0.938	0.94
Factor 2	0.87		
Scale of JSV (12 items)			
Factor 1	6.77		
Factor 2	1.01		
Factor 3	0.87	0.911	0.93
Factor 4	0.68		
Factor 5	0.55		

Note. JCV = Job Characteristic Variables. MLB= Manager Leadership Behaviors. JSV= Job Satisfaction Variables.

Table 6. The correlation between the latent variables.

	JCV	MLB	JSV
JCV	1		
MLS	0.350***	1	
JSV	0.381***	0.538***	1

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Table 7. The correlation between the latent and observed variables.

	MLB	JSV	Variety	Autonomy	Identity	Feedback	Cooperation	Friendship
MLB	1							
JSV	0.538***	1						
Variety	0.274**	0.283**	1					
Autonomy	0.182*	0.275**	0.075	1				
Identity	0.183*	0.037	0.269**	0.340***	1			
Feedback	0.362***	0.433***	0.374***	0.313***	0.274**	1		
Cooperation	0.234**	0.254**	0.574***	0.075	0.089	0.294***	1	
Friendship	0.060	0.174*	0.162*	0.342***	0.001	0.286***	0.249**	1

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

results indicating that the critical values do not improve much compared to the initial model. This study then removes three variables, x_2, x_3, and x_6, with low relia-bility, and the results show that while this leads to a slight improvement the fit is still not satisfactory. Finally, the two paths are added and the variables y_6, x_2, x_3, x_4, and

Table 8. The correlation between the observed variables.

	Initiating structure	Consideration	Promotion	Salary	Superior	Colleagues	Job itself
Initiating structure	1						
Consideration	0.883***	1					
Promotion	0.360***	0.310***	1				
Salary	0.324***	0.255**	0.717***	1			
Superior	0.688***	0.711***	0.573***	0.553***	1		
Colleagues	0.395***	0.358***	0.510***	0.552***	0.492***	1	
Job itself	0.496***	0.453***	0.653***	0.741***	0.603***	0.675***	1

$^{**}p<0.01, ^{***}p<0.001$

Table 9. Estimates of initial model and final model.

	Non-standardized solution		Completely Standardized solution
	Initial Model	Final Model	Final Model
λ_{11}^{x}	1.00	1.00	0.546
λ_{21}^{x}	0.208(0.101)	---	---
λ_{31}^{x}	0.359(0.103)	---	---
λ_{41}^{x}	0.650(0.110)	---	---
λ_{51}^{x}	0.881(0.124)	0.912(0.310)	0.501
λ_{61}^{x}	0.369(0.107)	---	---
λ_{11}^{y}	1.00	1.00	0.924
λ_{21}^{y}	0.866(0.059)	1.042(0.051)	0.962
λ_{32}^{y}	1.00	1.00	0.801
λ_{41}^{y}	---	-0.253(0.075)	-0.236
λ_{42}^{y}	1.058(0.093)	1.269(0.114)	1.016
λ_{51}^{y}	---	0.572(0.066)	0.519
λ_{52}^{y}	1.141(0.119)	0.579(0.076)	0.451
λ_{62}^{y}	0.860(0.108)	---	---
λ_{72}^{y}	1.081(0.103)	1.063(0.089)	0.843
β_{21}	0.598(0.087)	0.373(0.092)	0.434
γ_{11}	0.441(0.102)	0.842(0.296)	0.499
γ_{21}	0.156(0.072)	0.319(0.215)	0.220

are removed, and this results in the modified model. Compared with the initial model, the results of the modified one do not show any negative error variances or oversized standard errors. The modified one is fairly acceptable.

In terms of intrinsic fit indices, the parameter estimations of the modified model reach the significant level of 0.5, supporting the results with regard to intrinsic quality. Each variable's reliability in the modified model is greater than the initial model. With regard to the two newly added factor loadings, λ_{41}^{y} is negative, whereas λ_{51}^{y} is positive (Table 9). λ_{41}^{y} is negative (=-0.236), meaning that satisfaction with salary is negatively influenced by MLB, and

Table 10. The goodness of fit statistics of the initial model and final model.

		Critical value	Initial Model	Final Model
	Chi-square (*df*)		190.842 (62)	23.811 (15)
Global goodness of fit index	GFI	> 0.9	0.839	0.967
	AGFI		0.763	0.922
	RMR		0.169	0.039
	SRMR	< 0.05	0.270	0.041
	RMSEA		0.294	0.071
	NFI		0.409	0.863
Comparative fit index	NNFI	> 0.9	0.338	0.887
	CFI		0.474	0.940
	IFI		0.506	0.945
	IAIC		348.896	190.146
Parsimony goodness of fit index	MAIC	Smaller is better	1097.034	70.761
	SAIC		182.00	72.00

Note. GFI: goodness-of-fit; AGFI: adjusted GFI; PGFI: parsimonious GFI; NFI: Normed fit index; NNFI: Non-normed fit index; PNFI: parsimonious NFI;
CFI: Comparative fit index; RMSEA: root-mean-square error of approximation; IFI: incremental fit index; RFI: relative fit index; IAIC: Independence AIC;
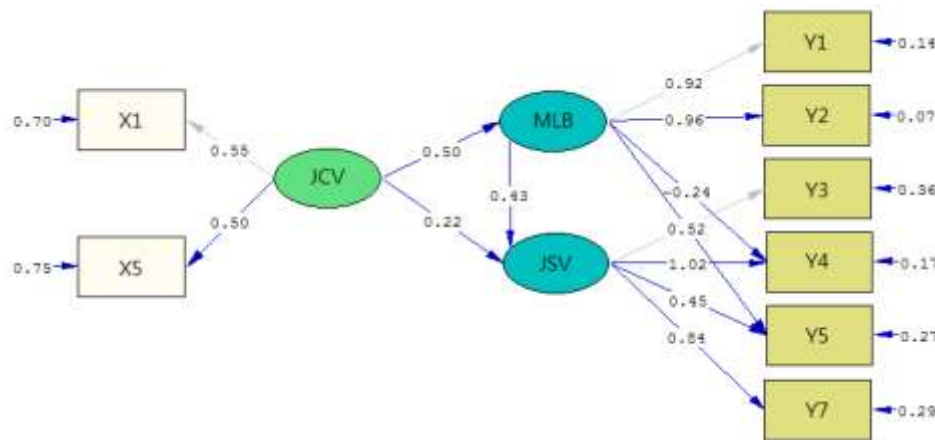MAIC: Model AIC; SAIC: Saturated AIC.

Figure 2. The plot of the final structural model.

thus higher scores of the MLB scale are associated with lower salary satisfaction. This is because managers at taxation offices need to monitor employees' performance, and this can make staff feel uncomfortable that their salary will be affected by their superior's subjective judgments. λ_{51}^{y} (=0.519) is positive, showing that satisfaction with one's superior can be positively affected by the MLB.

In terms of the model-fit indices, as shown in Table 10, the result for the modified model of χ^2 =23.811 (*p*= 0.0684) shows good support for the hypothesized model. GFI, AGFI, CFI, and IFI all exceed the critical value of 0.9. In summary, the results presented above indicate

that the modified model is better than the initial one. Since there are no items that need obvious improvement, the modified model is the final one (Figure 2).

This research further analyzes the direct or indirect influence of η on ξ, which can help clarify the linear relationships in the final model (Table 11). The three standardized direct effects are $\hat{\gamma}_{11} = 0.499$ (η_1 on ξ), $\hat{\gamma}_{21} = 0.22$ (η_2 on ξ), and $\hat{\beta}_{21}$=0.435 (η_2 on η_1). The standardized indirect effect of η_2 on ξ is obtained using the following multiplicative decomposition: $\hat{\gamma}_{11} \times \hat{\beta}_{21}$ =0.217. Consequently, the standardized total effect is 0.437 (=0.22+0.217).

Table 11. Model effect review.

	ξ vs. η_1		ξ vs. η_2		η_1 vs. η_2	
	Effect	Standardized	Effect	Standardized	Effect	Standardized
Direct	0.842	0.499	0.319	0.220	0.373	0.435
Indirect	--	--	0.314	0.217	--	--
Total	0.842	0.499	0.633	0.437	0.373	0.435

Since collecting taxes is a complex and varied job, a manager's performance orientation is required that can encourage staff to work together and to solve any problems that arise. These are closely related to managers' leadership styles. In addition, the various elements of job satisfaction have different effects on the job characteristics of task variety and cooperation, with the greatest impacts because task variety, 0.76, is followed by cooperation, 0.7. It can thus be concluded that the more employees are able to use a variety of skills to solve work-related problems and fully cooperate with each other, the greater job satisfaction they will have.

Conclusion

As discussed above, in the descriptive statistics the mean scores for every factor in the JCV are all between agree and very agree, but in the structural equation model analysis only two factors (task variety and cooperation) have significant explanatory power. The reason for this difference is that descriptive statistics is a form of individual analysis which aims at calculating the mean for each factor on its own, whereas structural equation modelling considers how all the variables and factors affect each other, and then obtains the most appropriate model, based on the modification indices.

With regard to the MLB descriptive statistics analysis, initiating structure leadership and consideration leadership have almost the same means, between agree and very agree. Likewise, in the structural equation model initiating structure leadership and consideration leadership has almost the same factor loadings. This indicates that managers at tax offices not only carry out initiating leadership, with regard to task assignment, achieving work-related goals and using their authority, but also show concern and sympathy for their subordinates, thus increasing the job performance of the latter.

As for JSV descriptive statistic analysis, the mean scores for every factor in the JSV are all between agree and very agree. However, in the structural equation modelling the factor of satisfaction with one's colleagues is deleted, because it has no explanatory power; while the influence that MLB has on satisfaction with one's salary and superior is increased. Satisfaction with one's salary and superior is thus affected by two latent variables of MLB and JSV at the same time.

Since the mean for JSV is between agree and very agree, it is suggested that managers should work to enhance employees' job satisfaction by carrying out a complete task analysis and review, in order to make the work more interesting, streamline operational processes, implement more frequent job rotations and avoid job fatigue. Managers should also consider raising employees' salaries via professional allowances and performance bonuses, in order to raise salary satisfaction.

Past studies of job satisfaction mainly examined the differences among various observed variables, such as whether any differences exist with regard to satisfaction with promotion prospects based on the gender of the participants. It is reasonable and straightforward to extend the observed variables to the latent variables. In order to deal with the latent variable models, this article demonstrated the feasibility of using SEM methods by employing the approaches mentioned previously. The contribution of this study lies in the expansion and application of SEM by proposing a new structural relationship among job characteristics, managers' leadership behaviors, and employees' job satisfaction with regard to Taiwanese tax officials. A key point is that promotion of satisfaction has the lowest mean, and thus managers should work on that to implement a more transparent promotion system based on merit. It will raise employees' morale and lower resignation rate.

In summary, the results obtained through 183 questionnaires show that (1) there are positive correlations between the observed variables, and also the latent variables correlations; (2) task variety and cooperation are highly related to job characteristics; (3) initiating structure leadership, consideration leadership, salary satisfaction, and satisfaction towards one's superior are highly related to managers' leadership behaviors; and (4) promotion, salary, satisfaction towards one's superior, and satisfaction towards one's job are highly related to job satisfaction. Managers' leadership behaviors have a mediating effect on the relations between job characteristics and job satisfaction. A structural equation model was supported based on the results of the empirical analysis.

Some limitations need to be noted. First, the examinees in this research are southern Tax Bureau, so there is a regional limitation. Second, although a stratified sampling plan had been conducted, there is lack of manpower and some taxation offices are located in remote location;

hence the random sampling progress could not be controlled. Therefore the search result on external validity aspect is withheld. Finally, the search office is taxation collection unit; hence the result of this research is not completely appropriate to make inference about other organizations.

In future works, more multi-group structural equation modelling can be carried out based on the model proposed in this study, and the means of the latent variables can also be obtained and compared based on different demographic factors (e.g., marital status). Future studies can also the test the observed variables based on the assessment of the measurement model using different samples, and could test the latent variables with different samples by using structural equation modelling.

Conflict of Interests

The authors have not declared any conflict of interests.

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APPENDIX

LISREL code for the initial model

```
TITLE AA
DA NI=13 NO=183
LA
*
Y1 Y2 Y3 Y4 Y5 Y6 Y7 X1 X2 X3 X4 X5 X6
KM
<Input correlation matrix>
MO NY=7 NE=2 NX=6 NK=1 PS=DI GA=FU,FI BE=FU,FI TD=SY,FI TE=SY,FI
FR BE(2,1) GA(1,1) GA(2,1) LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1) LY(2,1) LY(4,2) LY(5,2) LY(6,2) LY(7,2) TD(1,1)
TD(2,2) TD(3,3) TD(4,4) TD(5,5) TD(6,6)
FR TE(1,1) TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7)
VA 1 LY(1,1) LY(3,2) LX(1,1)
PD
OU GLS MI RS SC TV EF ND=3 AD=OFF
```

SIMPLIS code for the final model

```
Title: AA

Observed Variables: Y1 Y2 Y3 Y4 Y5 Y6 X1 X2
Correlation Matrix:
<Input correlation matrix>
Sample Size: 183
Latent Variables: Ksi Eta1 Eta2
Relationships:
X1=1*Ksi
X2=Ksi
Y1=1*Eta1
Y2 Y4 Y5=Eta1
Y3=1*Eta2
Y4-Y6=Eta2
Eta1=Ksi
Eta2=Eta1
Eta2=Ksi
Options: RS MI SC TV EF ND=3 AD=OFF ME=GLS
Path Diagram
End of Problem
```

Full Length Research Paper

The impact of human resource practices on employee perceived performance in pharmaceutical sector of Pakistan

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Human resource has various practices such as compensation, promotion and performance evaluation etc. This study is going to evaluate the impact of these three human resource practices on perceived employee performance. The data are collected through questionnaire from pharmaceutical companies located in Islamabad and Rawalpindi cities of Pakistan. To measure the impact of human resource practices on employee perceived performance, correlation and multiple regressions are used. The correlation result shows significant relationship between mentioned human practices and employee perceived performance. Multiple regressions present substantial variance in perceived employees' performance due to these human resource practices. Whereas, the individual results of regression analysis informs that compensation has premier role in explaining the employee perceived performance. It appears that the pharmaceutical companies may pay special attention to these three practices in order to ensure employees' performance.

Key words: Human resource, practices, compensation, promotion, performance evaluation, employee perceived performance.

INTRODUCTION

In Pakistan, there are more than 400 pharmaceutical companies operating and the sales office of almost each company is located in Rawalpindi and Islamabad. It is noted that there is a huge competition among pharmaceutical companies in order to achieve desired objectives. Organizational human resource practices and policies are important for determining employee's behaviour.

A study shows that human resource management (HRM) involves the process of dealing with employees and staff. The sales representatives of these companies are their main strength because the performance is totally depending upon them.

As EsraNemli (2010) noted that human resource practices are the most important source of any company to build a strong competitive advantage in the market. Furthermore organizations should continuously improve their HRM practices if they want to remain viable in this diverse environment.

Human resource management (HRM) system has a significant association with the employees' higher

presentation (Horgan and Mo'hlau, 2006). Organizations undertake their activity according to environment size and nature of the operation. However, employees can easily achieve the goals and objectives of the organization if the management makes soft decisions and positive behaviour for the betterment of employees. In today's world due to increasing competitive environment, organizations are continuously improving their employee's performances by improving their human resource practices. Caliskan (2010) stated that HR practices are one of the core sources that facilitate an organization to fabricate its strong competitive advantage. So many researchers proved that there is a significant and optimistic relationship between human resource practices and employee output (Qureshi et al., 2006; Tessema and Soeters, 2006). The human resource practices play an important role in the maximization of organizational profitability which is the primary objective of any company.

Datta et al. (2003) investigate with the intention that there is a well-built relationship between a company's efficiency and the effective use of human resource practices. Human resource practices have a nvital relationship with book keeping profits of banks (Delery and Doty, 1996). There are many factors that have significant impact on employee's performance but at hand study focuses on the association of three HR practices including compensation, performance and promotion with employees' perceived performance. Singh (2004) acknowledged that training and reward have constructive affiliation with organization and employees' output.

Cohen and Wheeler (1997) state the problems of human resource in developing countries are: low income level, insufficient valuable presentation standards, low incentives for good progress, poor employment scale which has not grabbed the interest of expert people, seniority based promotion, employees' real performance, planned promotion and lack of good compensation for hard work, poor management by supervisor and lack of motivation. So many researchers have found that there are several HR practices that significantly affect performances. This aspect shows the importance of performance appraisal and also an important factor in an organization's HR system. To collect the data for performance appraisal, there are basically three methods: objective production, personnel, and judgmental evaluation. Judgmental evaluations are the most commonly used with a large variety of evaluation methods. Developing countries now develop their human resource strategy and effectively consider it more important element than ever before (Praha, 2004). Employees become more motivated and work hard when they receive reward from organizations in terms of money and promotion (Caruth and Handlogten, 2001). The growth of those companies who focuses on their long term incentive plans is extremely high than those who ignore this plan (Leonard, 1990).

LITERATURE VIEW

Harel and Tzafrir (1999) examined the impact of human resource management practices on organization and market performance of firm level and expanded the pragmatic existing literature. For this purpose, they used the sample of public and private sectors organizations in Israel. They included 215 organizations from private and public sector and each of these organizations must have more than 200 workers. The questionnaires were distributed to these organizations; and 76 out of 215 organizations returned the questionnaires. The response rate was 35%. The overall results showed that there was a significant and direct relationship among these variables.

Bowra et al. (2012) investigate the nature of relationship between Human Resource (HR) practices and employees perceived performance in banking sector of Pakistan. They conducted a survey in 235 banks through personal administrative questionnaires in order to examine the impact of HR practices on employee's perceived performance. So, they applied two methods for getting appropriate results of multiple regression analysis and spearman's correlation matrix. The two HR practices performance evolution and promotion practices show their results are significant while compensation practices show insignificant results in regression analysis. Whereas, spearman's correlation result also shows a significant and positive relationship between HR practices and employee's perceived performance.

Ahmad and Shahzad (2011) observed the impact of HR practices on the perceived performance of Azad Jammu and Kashmir University teachers. They distributed 150 questionnaires among different university teachers, who worked in AJK universities. However, these teachers were selected randomly and 113 filled questionnaires were returned back, so the comeback rate was 75%. They used Pearson correlation and regression analysis to check the relationship between independent and dependent variables. The compensation practice of HR is positively and significantly correlated with the performance of universities teachers of AJK of Pakistan, while the other two HR practices performance evolution and promotion have no significant relationship with dependent variable.

Gyensare and Asare (2012) investigate the impact of HR practices (promotion, compensation and performance evolution) on employee's perceived performance of psychiatry nurses in the mental hospitals in Ghana. The purpose of this study was to improve the performance of psychiatry nurses in supporting decisions making in mental hospitals. The data were collected from two mental hospitals of Ghana (Ankaful and Accra). 145 questionnaires tested were distributed; ninety (90) questionnaires had a cover letter while the remaining fifty five (55) belonged to the administrative personnel. However, 130 questionnaires were received back, with

90% feedback. Pearson correlation and multiple regression analysis were used to check the impact between independent and dependent variables. Both techniques showed positive relationship between HR practices and employee's perceived performance.

Khan et al. (2011), in their study, established a link among different employee's for job satisfaction in private and public sectors banks in Islamabad and Rawalpindi of Pakistan. For this purpose, they developed a link between retention in mediating environment for employees and human resources internal service quality practices. They distributed 550 copies of questionnaires among different banks in selected areas and received back 400 copies with 73% feedback. Employees' training and growth, work plan, job description employees' rewards and compensation report were positive and significant to interior service quality in human resource management; these also have optimistic and significant impact on retention of employees.

Imran and Ahmad (2012) discussed the relationship between HR practices on the organizational loyalty of the service area for employees of Pakistan. They used different variables in HR practices like perceived organization support, communication training and development, compensation, organizational climate, work life policies, career development opportunities, empowerment. The adopted sampling technique was used and six hundred (600) questionnaires were distributed in selected service industry of Islamabad, Lahore and Rawalpindi and response rate was 85%. For conformation of the validity of data they conducted pilot study. The overall results show a positive and significant HR practices with effective organization commitment.

Ullah (2013) addresses the effect of HR practices on internal customers' satisfaction and organization effectiveness. The administrative questionnaires survey based were distributed among two hundred (290) banking personnel of Pakistan. The result of HR practices shows encouraging association between internal customers' satisfaction and organization effectiveness.

Horgan and Muhlau (2006) discussed this topic in two ways (theoretical and empirical). They took the data from two European countries like Ireland and Netherland. In the theoretical part, they discussed three different complementarities like compensation, reinforcement and flanking with five main areas of HR management performance such as, guidance, sharing arrangement, training, incentives system and selective recruitments.

They investigated the performance of five HR practices magnitude with the complementariness relationship among the employees' level. The result of complementary hypothesis was strongly supported by Irish data and not the Dutch data.

Aleem et al. (2012) explored the impact of HR practices on employee's perceived performance in the health sector of Pakistan. In their study, they used job security, compensation, performance appraisal, pension fund,

employee's participation and employee relations as HR practices. Whereas, satisfaction with HR practices was used as moderating variable between independent and dependent variables. They distributed 220 questionnaires among different employees of autonomous medical institution of (Punjab) Pakistan. The employees as respondents are in the low, middle and high level of hospitals. The results indicate that two HR practices performance appraisal and employees participation have insignificant impact on employees' perceived performance while other independent variables have a significant impact on dependent variable.

Research questions

1. Can human resource practices affect employee's perceived performance in pharmaceutical sector of Pakistan?
2. To what extent do HR practices impact on employees' perceived performance in pharmaceutical sector of Pakistan?

Research objectives

This study aims to achieve the following objectives.

To find out how HR practices affect employees' perceived performance in Pakistan.
To investigate what factors of HR practices have impacted the employees' perceived performance of Pakistan.
To analyze the extent at which HR practices affect the employee's perceived performance of Pakistan.

The theoretical framework of this work is seen in Figure 1.

Hypothesis

H1: There is a significant association between compensation and employee perceived performance.
H2: There is a significant association between performance evaluation and perceived performance of employee.
H3: There is a significant association between promotion practices and employees' perceived performance.

DATA AND METHODOLOGY

In our study, quantitative data were collected by using non-probability sampling technique (convenient sampling), with self-administered questionnaire consisting of 7-point likert scales. Final analysis was conducted with the help of statistical packages of the social sciences (SPSS). Correlation and multiple regression analysis were used as a technique for measuring the impact of HR practices on employees' perceived performance.
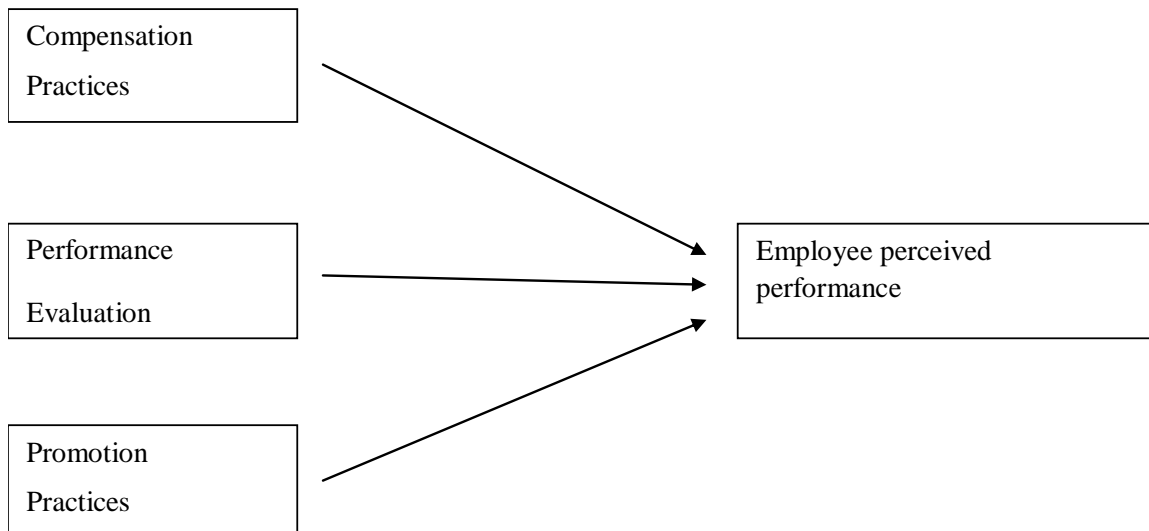
Figure 1. Theoretical framework.

Research design

Basically, research design is an overall roadmap of the research, which explains the direction and data collection methods whether from primary or secondary sources. Neuman (2006) stated that quantitative approach is more appropriate than qualitative technique. However, this technique is separated from theory and is emphasized with reliability. Quantitative approach is used to develop hypothesis based on variables to empirically investigate the statement through statistical technique. We used convenient sampling in order to select sample from target population of pharmaceutical companies in Islamabad and Rawalpindi. The sample size (n = 346), from 20-60 years, was used in this study for this purpose. 346 questionnaires were distributed among the employees. Sample of the study are medical representative such as, sales promotion officer, territory managers, senior territory manager and product expert of numerous pharmaceutical companies. Due to cost and time constraints, a convenient sampling was chosen and 346 questionnaires were distributed among medical representatives of the 15 pharmaceutical companies situated in Islamabad and Rawalpindi region. However, 169 questionnaires were returned and the response rate is 48.84 percent. However, the reliability test shows that the data are highly reliable. The researcher used both primary and secondary data in order to investigate the hypothesis. For this purpose, we distributed the questionnaires to our target sample among employees; on the other hand, secondary data were extracted from online sources like journals and research papers. We use 7 point Likert scales: 1= strongly disagree; 7=strongly agree.

Data analysis

The demographic characteristics of the respondents show there are 132 males (78.13%), while females are 37 (21.87%) (Table 1). The marital status shows that 22 males are married and 147 females are married. Education is a major factor in the development of any organization. However, in education, graduation qualification is on the top with 77.51%, while the remaining education qualification is very low (Table 1). Every organization preferred experienced staff than non-experienced staff. The employees who have experience

of 1-5 years are 77(45.56%) and 6-10 years experienced employees are 71 (42%); while 11-15 and 16-20 years experienced employees are respectively 18(10.65%) and 03(1.775%). The last row of the table is very important because the employees currently know how long they have worked with their companies. This will make them to understand their past history of experience in different companies. However, 142 employees have 1-5 years experience in current company, while 6-10, 11-15 and 15-20 years current experience are 23(13.6%), 4(2.36%) and 0.

The reliability test of each independent and dependent variables show that the data are reliable (Table 2).

Table 3 shows that the highest mean (5.23) was calculated from independent variable of performance evaluation, which shows that employees feel that the performance evaluation system of their company is very good. However, the mean of compensation and promotion is 4.95 and 4.84, respectively, which shows that employees are convinced with these factors.

Table 4 shows that there is significant relationship found between all independent variables and dependent variable. The value (r = 0.696) suggests that compensation is positively related with employees' perceived performance (r = 0.576). This shows that performance is also absolutely correlated with employee perceived performance and (r = 0.439) promotion practices is also optimastically interconnected with employees' perceived performance. So the results of all the independent and dependent variables show that there is a well-built correlation among these variables.

Table 5 suggests that R square, which is 53.4% of the variance in perceived employees' performance, can be accounted for through compensation practices, performance evaluation practices and promotion practices. Overall, our model is significant because the value of F-test (63.040) is significant at 0 .000 levels which verify that 53.4% of the variance in employees' perceived performance is find out by compensation practices, performance evaluation practices and promotion practices.

The result of compensation as HR practice shows utmost involvement in explaining that the employees' perceived performance is 0.539 and it positively affects the dependent variable (Table 6). Whereas, performance evolution and promotion practice (0.174) and (0.134) also show the positive and significant relationship in the model. This shows that all HR practices can affect positively the employees' perceived performance. From the

Table 1. Demographic characteristics of the respondents.

	Total	Male		Female	
Gender	169	132(78.13%)		37(21.87%)	
	Total	**Male**		**Female**	
Marital Status	169	22(13.02%)		147(86.98%)	
	Total	**S.S.C**	**H.S.S.C**	**Graduation**	**Above**
Education	169	2.958%	7.692%	77.51%	11.83%
	Year 1-5	**Year 6-10**	**Year 11-15**	**Year 16-20**	**Year 1-5**
Work experience	77(45.56%)	71(42%)	18(10.65%)	03(1.775%)	77(45.56%)
	Year 1-5	**Year 6-10**	**Year 11-15**	**Year 16-20**	**Year 1-5**
Experience With current company	142(84%)	23(13.6%)	4(2.36%)	0	142(84%)

Table 2. Reliability test.

	Employees' perceived performance	Compensation	Performance	Promotion practices
Cronbach's Alpha	0.890	0.925	0.918	0.505

Table 3. Descriptive statistics.

	Employees' perceived performance	Compensation	Performance	Promotion practices
N	169	169	169	169
Mean	5.06	4.95	5.23	4.84
Std. Deviation	1.120	1.257	1.100	0.662

Table 4. Correlation.

	Point A	Point B	Point C	Point D
Employee perceived performance	1	.696**	0.576**	0.439**
Compensation	0.696**	1	0.607**	0.385**
Performance	0.576**	0.607**	1	0.555**
Promotion practices	0.439**	0.385**	0.555**	1

**.Correlation is significant at the 0.01 level (2-tailed).

above analysis, we can accept all our hypotheses.

Hypotheses result

H1: There is a significant association between compensation and employees' perceived performance
H2: There is a significant association between performance evaluation and perceived performance of employee

H3: There is a significant association between promotion practices and employees' perceived performance.
   All of the above hypotheses are accepted

CONCLUSION AND RECOMMENDATION

The purpose of this study is to determine the precise relationship and nature of relationship between the employees' perceived performance and HR practices

Table 5. Multiple regression.

	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.731	0.534	0.526	0.772

F=63.040; Sig=0 .000.

Table 6. Result of regression analysis.

	UnStandardized Coefficient beta	UnStandardized coefficient Std. error	Standardized coefficient beta	t	Sig.
Constant	0.656	0.445		1.473	0.143
Compensation	0.480	0.060	0.539	8.032	0.000
Performance	0.178	0.076	0.174	2.342	0.020
Promotion practices	0.227	0.108	0.134	2.097	0.038

(compensation practices, promotion practices and performance evaluation) in the pharmaceutical sector of Pakistan. In this study, quantitative data were collected through convenient sampling, with self administrated questionnaire consisting of 7 point likert scales. Analysis was conducted through SPSS software and all the hypotheses are accepted. We found that HR practices and employees' perceived performance have a positive and significant relationship in this study. The correlation result shows that all independent variables are strongly correlated with dependent variable and the regression analysis shows that compensation has premier role in explaining the employees' perceived performance.

So based on the above results, we recommend that all the pharmaceutical companies which are interested in becoming more profitable and in expansion through employees' perceived performance, they must place special emphasis on compensation, performance evaluation and promotion practices for strategy development. In future, researchers should use more HR practices to identify the relationship between employee's performance and company performance in public and private sectors of the World. Other   HR practices should also be investigated to provide a very clear and broader picture to managers and it will be very easy for them to decide which factors would encourage employees' perceived performance and the ones that would not in public and private sector organizations of the World.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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Full Length Research Paper

Marketing communication tools used in one of the traditional Hungarian food sectors

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Sales promotion events, personal selling and public relations are all familiar to Hungarian wine producers. Different marketing activities are important in this area, because the wineries examined in this study lack the resources for expensive marketing campaigns. We have attempted to answer a question: which marketing tools are used, and which are preferred by Hungarian wine producers? A questionnaire was developed in order to gain information about marketing channels that could ensure turnover for Hungarian wine producers. Data collection was carried out with 200 questionnaires, of which 102 evaluable questionnaires were returned. The statistical method was stratified sampling, by which we attempted to have at least one respondent from each wine region in our survey. The study was based on analysis of descriptive statistics, so statistical software was used for the questionnaire and data processing. Factor analysis provided information about the main group used in each Hungarian wine producing area. Among the variables, multicollinearity was applied; the correlation matrix, the Kaiser-Meyer-Olkin index, Bartlett's test, and the Anti -Image matrix are all confirmed for use in factor analysis.

Key words: Marketing communication, factor analysis, wine, Hungary.

INTRODUCTION

The ancestors of today's Hungarians arrived as conquerors in the Carpathian Basin to meet with extensive viticulture in the western area called Transdanubia, which was known by the Romans as Pannonia.

Hungarian wine production is based on a long historic tradition, and there are 22 wine regions located throughout the country (Bényei et al., 1999). Hungarian business is dominated by small and medium-sized enterprises, so family business is an essential form in Hungary.. A small family business tries to find new business tools in

marketing communication while ensuring maximum efficiency and minimum expenditure. We aimed to obtain information about how the marketing tools are used for successful communication. The structured questionnaire of the study was completed by Hungarian wineries.

Marketing Communication on the Winery Sector

Both tendencies in consumption and the wine culture have an effect on marketing communication in Hungary. The sale of wine is realized by means of supply chains (Banihashem et al., 2013), and heterogeneous layers of sellers can be recognized in the Hungarian market.

Regarding wine products, in addition to a preference for sales promotion events, personal selling and public relations are in use. The purpose of marketing communication is threefold: to increase turnover, retain existing customers, and build trust between a producer and a consumer. A potential buyer seeks information about the type, colour, packaging and price of a wine (Salai et al., 2014).

The customer acquires more information about the product when it is tasted, but he or she bears the risk, simply because the customer must pay the price. The consumer experiences the taste after the wine is purchased, without a refund guarantee. Thus building trust is important, because without it, marketing activities fail to increase consumption. If the customer experiences negative effects because after he tastes it, the product does not won his trust, he turns to other competitors' products. Communication with disappointed or lost customers will only marginally affect consumerS' choice, because in the wine market for potential buyers, tasting is crucial (Lehota and Komáromi, 2004).

Marketing communication can be divided into five main areas: advertising, sales promotion (Sales Promotion), personal selling (Personal Selling), public relations and direct marketing (Szakál, 2008).

The main tools of wine advertising in Hungary are:

1. Newspapers and magazines
2. Radio
3. Billboards, leaflets
4. High-end store sales, promotions
5. Direct marketing
6. Tasting and personal selling
7. Internet advertising
8. AMC activity
9. Collective marketing

It was assumed that the Hungarian wine industry uses generally preferred marketing communication tools such as wine tastings, wine dinners, and other types of gastronomic events. Advertising is the most widely used communication method in addition to the opportunities provided by the Internet.

Due to the lack of resources and the fragmented business market, the Hungarian wine industry prefers cheaper advertising methods, making sure that the message reaches as many potential customers possible. An important feature of small family businesses is that spending for marketing is higher compared to real expenditure items. It is interesting to note that more capital-intensive producers choose cheaper and more effective forms of advertising (wine tasting, event support, Internet, wine and dinner support) over the more expensive communication channels such as TV and radio advertising (Solcansky and Simberova, 2010).

In contrast to advertising, an expensive marketing activity, there are cheap web solutions specializing in marketing communications elements, which build on the power of social networking. The nature of trust prevails in wine products, so personal wine tasting and promotional advertising are the most common responses provided by the Internet. Many wine businesses are not considered appropriate for expensive TV advertising or poster campaigns, because wine is a "confidence product.." If the potential consumer is not familiar with the brand, advertising costs will result in a significant expenditure for the company. Every confidence product needs step-by-step branding and tasting.

The Hungarian wine promotion and marketing communication has evolved since the 90s, but the promotional opportunities are still limited for many producers. Opportunities for television ads are open only to dominant market players, because this way of marketing communication involves high advertising costs. The expense of television advertising is increased by the longer and denser advertising space needed to build well-known brands. Most wineries choose personal selling and promote different culinary and cultural festivals to publicize their wine products.

We will show how wine products support events as a method of marketing communication. By supporting a conference, a producer enables several hundred potential customers to taste the wine product, and such wine tasting events take place in numerous locations and environments.

Tasting influences consumer choices. Consumers routinely purchase food products such as wine, and a lot of consumers choose a well-established brand without wanting to risk buying a new product or spending time searching for and testing new items (Sipos, 2009).

In our opinion, potential customers can be influenced by consumer purchase tasting. Potential customers learn important information about the brand and build up knowledge that influences the future decisions of a potential buyer.

The wine industry helps its members through communication. Conferences and various cultural and gastronomic festivals are good opportunities for wine producers, where direct marketing tools are used to gain new customers. In addition to personal sales promotion,

some of the larger wineries support events with their name and image, which may create an introduction to the products.

Today, the Internet penetration of the wineries is higher. They are connected to the Internet via their web-sites, and every potential customer can get information about a wide range of their products. Those who are interested are able to visit, make purchases, and share the website with the help of social networking tools. Due to the possibility of sharing the knowledge with micro-blogging messages, wine products can reach a significant percentage of the audience with minimal marketing expenditures. Sharing follows sharing to increase the number of disclosures exponentially. The promotional activities do not require additional financial outlays from the producer after the launch of the blog or Internet advertising. In the marketing literature, the name of this effect is "buzz." This advertising communication method takes effect during Internet communication. The confi-dential nature of wine descriptions calls for other ways of communication. The descriptions of different wine pro-ducts provide a good opportunity for wine lovers to speak about the producer, the vintage and other features (Tauder, 2005; Baewise and Farley, 2005; Szakál, 2008).

Marketing communication is difficult, because most of the wineries operate with a deficit, so the marketing strategy of Hungarian wine producers is limited (Hofmeister and Toth, 2004).

MATERIALS AND METHODS

Statistical method and sample

The method of testing was stratified sampling, meaning we tried to ensure that there was at least one respondent from each wine region participating in the survey; and that at least 50% of the whole sample would consist of companies. Data collection was questionnaire-based where 200 questionnaires were sent out and 102 evaluable questionnaires were returned. Efforts were made to have every Hungarian wine producer in all operating regions complete the questionnaire.

The method assessed the marketing communication tools used by Hungarian wineries and measured the form of enterprise and its economic terms and volume (Kotler and Keller, 2004). MS Excel and SPSS 16.0 software was used in creation of the questionnaire and for data processing. Calculations for the study were done with descriptive statistics. Multicollinearity was used among the variables which were examined prior to the factor analysis, and a correlation matrix, the Kaiser-Meyer- Olkin index, Bartlett's test, and the Anti-Image matrix are all confirmed for use in factor analysis.

Wineries participating in the survey

On average, the volume of each wine region was 3% of the sample, and the most common responses were received from the Villany wine region, which is 15.1% of the sample, while 3-5% of completed questionnaires came from other wine regions. From wineries completing the 102 questionnaires, 93 indicated a geographical location, and 9 did not. The geographical origin of the wineries that returned questionnaires was not representative of the size of the

wine regions and regional distribution.

In addition to the geographical location, type of business form and size were studied (Ambler et al., 2001). The magnitude of annual revenues and number of employees and shareholders' equity were examined, and it was considered important to assess the companies' economic strength as well. Individual enterprise and limited liability company forms were the most frequent. 49% of the respondents defined the functional forms as sole proprietorships and 42.2% indicated they were a limited liability company. In our sample 2.9% were joint stock companies and 5.9% operated as limited partnerships (Table 1).

If the size of the annual revenue is examined, the majority of wineries indicated average annual income from 0 to 5 million USD. The main reason for this was a high proportion of micro-businesses among the participants in the survey, and these were operated as a family business.

Survey of Marketing Communications Equipment

In the questionnaire, we measured the following response options regarding use of marketing communication tools (6th question) (Szmilkó, 2006; Danaher and Rossiter, 2006).

1.Leaflet
2.Newspaper advertisement
3.Individual sale (wine tasting)
4.Sales promotions
5.Internet
6.Event support
7.Other

In our study we aimed to use factor analysis in surveying the Hungarian wineries, and to determine what classes of marketing communications are used in their operations.

Terms of Factor Analysis

In our experiment, we chose R-type factor analysis for mapping the marketing communication tools. According to Sajtos and Mitev's book on SPSS, which is said to be the best exploratory analysis of the structure, the R-type factor analysis is carried out on a heterogeneous population, and the researcher tries to divide it into homogeneous groups (Sajtos, 2004; Sajtos and Mitev, 2007).

In the first step, we examined the relationship between the stochastic level and the correlation matrix before performing the factor analysis. The results showed that more than 50% of the partial correlation coefficients were greater than 0.3, which is sufficient to use factor analysis.

The application of factor analysis supported the sample size (N = 102), which formed a statistically large sample. There were eight possible answers about marketing communication tools, so there were eight variables. A general statistical rule is that the number of items in the sample should be ten times higher than the number of the variables examined. The item was N = 102, which allowed the use of factor analysis, because N=102 > 8 x 10.

For the factor analysis step, we chose the principal components method, which uses (common and unique variance + variance of mistake) of the total variance value. This method is frequent in practice, because in most cases at the initiation of the investigation the researchers have information about the variance and behaviour of variables. Before performing the factor analysis, the Kaiser-Meyer-Olkin (KMO) (Williams et al., 2012) (Table 2) criterion was specified for the marketing communication tools being investigated.

Table 1. How has the annual turnover changed in the past year?

	Frequency	Percent	Valid percent	Cumulative percent
Valid	5	4.9	5.0	74.3
15000001 - 30000000 Ft	11	10.8	10.9	85.1
30000001 - 70000000 Ft	8	7.8	7.9	93.1
70000001 Ft – 150000000 Ft	7	6.9	6.9	100.0
150 000 000 Ft -	101	99.0	100.0	
Missing 99	1	1.0		
Total	102	100.0		

Table 2. Kaiser-Meyer Olkin index and results of Bartlett's test.

Kaiser-Meyer-Olkin Meausure of Sampling Adequacy.		
		0.594
Bartlett's Test of Sphericity	Approx. Chi-Square	84.993
	df.	28.000
	Sig	0.000

There was a general expectation for statistical validity that the KMO index would be greater than 0.5.

After testing the response options (marketing communication tools used), the KMO index value was 0.594, which complies with our expectations. The KMO value was 0.6, moderate in intensity relative to the maximum possible value of 1. The KMO variable is related to the partial correlation between the variables examined. If the correlation value between the examined variables is higher, the KMO value will be higher, where the maximum value is 1.

The KMO value was derived and Bartlett's test was performed in order to examine these partial correlations. The Bartlett's test H0 hypothesis did not show correlation and multicollinearity among the examined variables. Table 2 shows that the Bartlett's test results were $p \leq 0.05$; therefore, the H0 hypothesis was rejected and the H1 hypothesis accepted, meaning there was a multicollinear relationship among the marketing communication tools used. Bartlett's test confirmed the use of factor analysis.

The variance of variables can be divided into explained (image) and unexplained variance (anti-image). The matrix spur is close to one, while the non-diagonal elements take on a low value, which is close to 0. Non-diagonal elements of the Anti-Image show the proportion of the variance covariance matrix of squares, which is independent of the other variables. In factor analysis, we must rely on correlation, so the factor test can be started only if the value of three quarters of the non-diagonal (SPUR) elements is less than 0.09. Table 3 shows that the Anti-Image matrix meets these requirements, so the use of factor analysis is confirmed by the Anti-Image matrix.

Determination of the number of factors

The primary task in the factor analysis was to determine the number of factors. Setting the number of factors was based on an initial value, because there was no information about correlation between the strength of the tested variables prior to the statistical analysis. In the case of the marketing communication tools three priority criteria were taken as the starting number of factors for the analysis.

The statistical variance method, which is based on the proportion of variance, is suitable to define the number of factors. Because in an economics study information is limited, the proportion of variance

has to cover 60% of the total variance. If we are able to cover at least 60% of the proportion of variance, our study provides useful information.

The most significant information from Table 4 is that the first factor (main component) explained 24.135% of total variance. If we add the explaining variance values together, four factors will cover 60% of total variance. The variance method proposes the use of four factors during factor analysis. When three factors were used, the indicated value was 55.985%, which is close to the 60% rule.

Using a fourth factor would decrease the number of marketing communication tools in a factor-group. Therefore, we decided to use only three-factor analysis, which is supported by the Scree-test.

Several factors can be examined with the Scree-test, which is based on the assumption that the first factor generates low individual variance value, and this ratio will decrease to the last factor group. The Scree-Plot line chart showed the values of the factors in order. The assessment means we should choose factors such that the curve of the Scree-plot will be straighter after the steep section.

Figure 1 shows the slope of the line graph, and after the third factor the Scree Plot decreases significantly. Using three factors is recommended as the starting factor, based on the Scree Plot rule.

FINDINGS OF FACTOR ANALYSIS

Factor analysis was used with three factor numbers and the factor rotation method, For results of the performance, see Table 5.

Table 5 contains the weight of factor value, which is expressed as the correlation between variable and factor. If the value is raised to the square, that is the value of explaining variance in the subject factor group. If the factor component is greater than 0.55 in the factor table, the result is considered significant. We therefore used factor rotation, which yields more proportional factor values. After the factor rotation we moved the factors which were close to the extreme values. The procedure does not modify the communality and variance—it only affects the value of factors. The Varimax rotation method that we chose was designed to maximize the explained variance while ensuring a more balanced distribution. The method produced a very highly correlated factor, or less variable pairs.

Table 3. Anti-Image covariance matrix.

	6.1. TV/ Radio Ad	6.2. Leaflet	6.3. New-spaper ad	6.4. Personal selling
Anti-images Covariance				
6.1. TV/ Radio Ad	.768	-.228	-.070	.072
6.2. Leaflet	-.228	.581	-.308	-.024
6.3. Newspepar advertisement	-.070	-.308	.654	-.039
6.4. Personal selling	.072	-.024	-.039	.968
6.5. Sales promotions	.005	-.106	.041	-.028
6.6. Internet	-.014	.028	.001	-.076
6.7. Event support	-.051	.003	-.044	.062
6.8. Other marketing communication	.096	-.007	-.082	-.090

	6.5. Sales promotion	6.6. Internet	6.7. Event support	6.8. Other marketing
Anti-images Covariance				
6.1. TV/ Radio Ad	.005	-.014	-.051	.096
6.2. Leaflet	-.106	.028	.003	-.007
6.3. Newspepar advertisement	.041	.001	-.044	-.082
6.4. Personal selling	-.028	-.076	.062	-.090
6.5. Sales promotions	.955	-.088	.118	.010
6.6. Internet	-.088	.885	-.221	.170
6.7. Event support	.188	-.221	.897	.073
6.8. Other marketing communication	.010	.170	.073	.912

Table 4. Variance values are explained by factor groups

Component	Initial Eigenvalues			Extraction Sums os Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	1.931	24.135	24.135	1.931	24.135	24.135	1.918
2	1.452	18.145	42.280	1.452	18.145	42.280	1.442
3	1.096	13.706	55.985	1.096	13.706	55.985	1.119
4	1.024	12.806	68.791	4			
5	.815	10.194	78.985				

Extraction Method: Principal Component Analysis.

Table 5 shows the marketing communication tools used among the surveyed wineries, and the results can be divided into three groups of factors (Nema et al, 2011). The first group of wineries used TV/radio advertisements and flyers, and newspaper advertisements or other combinations (this group reported a preference for the media). The second factor group favoured the Internet and event support as marketing communication tools (Internet communicators PR group). The third factor focused on personal sales activity (wine tasting) and sales promotion (tasting group). No better results could have been achieved beyond factor rotation, so the three factors in our study were mapped with this statistical method.

RESULTS

Hungarian wine producers use different tools of marketing communication, but we have pointed out that their principal goals are to optimize expenditures with minimal cost against maximum profit. Because the Hungarian wine sector lacks financial resources for more expensive marketing channels, less expensive methods are more popular (wine tasting, sales promotion, the Internet, and event support). An important question is, what measures will help Hungarian wine producers achieve maximum profit? Our questionnaire showed that the less expensive marketing channel is popular with the study sample. Using factor analysis, three different groups were identified: the media referring group, the Internet communication/PR group, and the wine tasting group.

The first group consisted of the wine producers who have greater volume and financial resources, and use expen-sive and widespread ways of marketing commu-nication, such as TV or radio. Public limited companies
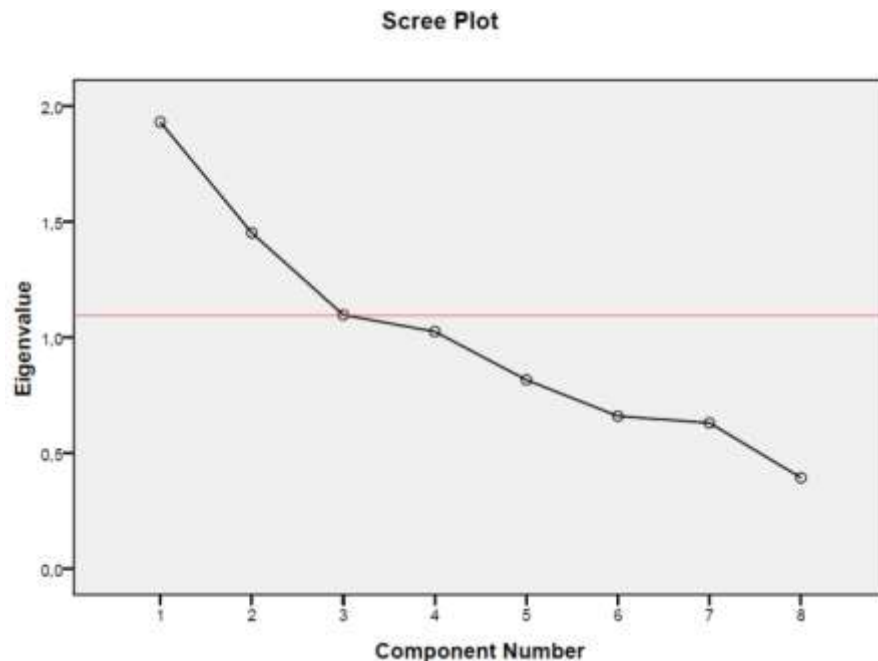
Scree Plot

Figure 1. Scree Plot diagram

Table 5. Factor table after the factor rotation.

Rotated Component Matrix[a]			
	Component		
	1	**2**	**3**
6.1. TV/ Radio Ad	.715	.180	-.108
6.2. Leaflet	.858	-.044	.127
6.3. Newspepar advertisement	.799	-.095	.063
6.4. Personal selling (wine tasting)	-.032	-.122	.670
6.5. Sales promotions	.099	.053	.695
6.6. Internet	-.042	.750	.297
6.7. Event support	.132	.626	-.245
6.8. Other marketing communication	.044	-.654	.087

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

prefer these solutions. The main advantage of this advertising method is it reaches a high percentage of potential customers. Although TV advertisements offer both advantages and disadvantages, we believe that a TV campaign's main advantage is the wide range of audiences who see it. The combined audio and visual effects of TV convey the message and attract a consumers' attention. A successful TV advertisement will establish credibility and thus maximize a wine producer's profit. The frequency of TV advertisements influences target market groups to buy the products of a winery. A wine producer can justify the high cost of TV and other media advertising with increasing sales figures and with profit growing at maximum as the brand awareness of potential customers rises.(Yoo, 2003).

Alongside the advantages, TV advertising's numerous disadvantages include high costs which are detrimental for wineries that use this type of marketing. Several types of costs must be managed if a producer would like to market his wines successfully on TV. Aside from the expensive air time rates, the winery has to pay some professionals to create the advertisement for the campaign. Also, a script writer, video editor, models or an advertising agency will be hired.

Although TV ads need just a few seconds to capture a consumer's attention, this is not enough to provide sufficient information about what is being offered, and why the given producer's wines are better than their competitors'. Because of this, some consumers doubt the credibility of the ads and just ignore them, so it is

impossible to reach the whole target market. Usually TV ads should be shown a minimum of five times to attain message retention on the part of the potential customer (Wang et al., 2005).

Factor analysis showed the second group prefers Internet communication and other money-saving PR solutions. A large percentage of wine producers lack resources for expensive marketing campaigns, so low cost methods are popular among those we surveyed. The main advantage of the second group's marketing preference is the "buzz" effect, which is the practice of gathering volunteers to try products, such as at a wine tasting, then sending them out to talk up their experiences with friends and other people (Sawhney and Zabin, 20022; Walter, 2006). This method of marketing communication is less expensive, due to the Internet's good interface with interested shoppers who talk about wine products and provide information to target markets. This process is extremely important because wine is a confidence product. If the consumer does not have enough experience or information about the wine brand, the sale will falter.

The third group identified through factor analysis was the wine tasting group. Producers in this group often use the type of marketing communication which offers real experiences to the target market. Wine dinners and tastings provide an opportunity to give potential customers relevant information about the brand being promoted. This group prefers to use real experience with personal connections to win over potential customers and convince them to buy the wine. Wine tasting is one of the cheapest methods of marketing communication in the samples we studied. This is an important advantage. Purchasing wine, especially unknown brands and wine types or new vintages, is always risky for the consumer. The well-known brands ensure excellent quality for the shopper who searches for tried and true wine brands on the shelves. What makes wine tasting one of the best methods of marketing communication is reduced risk to the potential customer who attends a wine dinner event.

The fourth factor is the group using other marketing communication methods, but it is not mentioned as a real factor group, because only 7,8 percent of the sample chose these ways. In other words, this represents every type of the marketing communication not mentioned in the questionnaire. From our data it can be concluded that the most popular marketing communication methods are as follows:

1. TV / radio advertisements
2. Leaflets
3. Newspaper advertisements
4. Individual sale (wine tasting) ? personal selling?
5. Sales promotions
6. Internet
7. Event support

TV/radio advertisements, leaflets and newspaper advertisements are preferred as ways of marketing communication by the first group (media referring group). Sales promotions and Internet methods of marketing communication are common in the second group and are favoured by the group (Internet communication PR group). The third group chose event support and individual sale, such as wine tasting, because the real experience is important in the wine sector.

Conclusion

In conclusion, our research has demonstrated that Hungarian wine producers prefer using different marketing tools (Danaher and Rossiter, 2006; Sticker et al, 2007). The Hungarian wine market tries to optimize its expenditures with successful marketing (Hodgson and Hodgson, 2008). Three groups of Hungarian winemakers were identified on the basis of the marketing tools they favoured, using a rotated component matrix with factor analyses. One group prefers media tools like TV/radio and flyers or newspaper advertisements. The Internet communication PR group would rather exploit the opportunities of the World Wide Web, and the third group uses marketing activity to support events where wine products are showcased (festivals, harvest home, various community programs). Personal sales activity is the most important marketing tool in the third group (tasting group). It would be worth analysing how the three different groups affect each other on the wine market with their own marketing strategies. Further it would be useful to compare the marketing communication with sales figures and expenditure data, because presumably the turnover and total expenditure determine the choice of wine producer.

Conflict of Interests

The author have not declared any conflict of interests.

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