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Association between Performance Measurement Systems and Organisational Effectiveness

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Association between Performance Measurement Systems and Organisational Effectiveness

Abstract
Purpose – The purpose of this paper is to investigate the role of Performance Measurement Systems in organisational effectiveness in the context of the financial services sector within a developing country.
Design/methodology/approach – Using the mail survey method data was collected from 69 financial institutions operating in Nepal. Multivariate analysis, in particular multiple regression analysis was employed to test the hypotheses.
Findings – The results suggest that non-financial measures and feedback are tightly intertwined with organisational effectiveness. While institutions are focused on using the performance measures concerning internal business process perspective, less emphasis is placed on using customer and employee related performance measures because they are considered less significant to organisational effectiveness. The findings also reveal that strategy related feedback is considered more critical by management, as opposed to performance and staff. The study also provides evidence that 40.58 per cent of the financial institutions in Nepal had implemented the Balanced Scorecard, which is considered to be high when compared with other developing countries.
Practical implications – The findings provide managers with valuable insights pertaining to the role of non-financial performance measures and the importance of feedback in improving organisational effectiveness, which could assist them in (re) aligning their performance measurement practices.
Originality/value – The findings of this study contributes to the limited management accounting literature on performance measurement and the impact on organisational effectiveness by providing evidence from the financial services sector within the context of a developing country.
Keywords – Performance measurement systems, Balanced Scorecard, financial services sector, organisational effectiveness, developing country.
Paper type – Research paper

1. Introduction

Since the mid-1980s, radical changes in organisational environments, such as advancements in information technologies, product innovations, and increased competition, have significantly transformed the way organisations function (Johnson and Kaplan, 1987; Kravchuk and Schack, 1996). Value creation for stakeholders has become a key focus for managers. These changes have also led academics and practitioners to argue for the need of a systematic approach to measure performance that goes beyond the scope of the individual stakeholder, and the need to integrate measures with the strategic
planning process, which requires stringent management control systems (Langfield-Smith et al., 2012). Without adequate and appropriate management control systems, of which performance measurement system (PMS) is an important element, organisations are at risk of failing (Turner and Weickgenannt, 2009), with retrenchment, downsizing and financial losses. It follows that an adequate and appropriate PMS can protect organisations from potential risks and losses, and improve organisational effectiveness (Fitzgerald, 2007; Turner and Weickgenannt, 2009; Munir et al., 2013).

A review of the literature suggests that traditionally organisations relied heavily on financial measures to assess the performance of their business activities. Different financial measures, such as return on assets, return on investment and earnings per share, were commonly used to measure operating and financial success or failure of organisations (Brignall and Ballantine, 1996; Chenhall and Langfield-Smith, 1999; Otley, 2001). These measures primarily focused on cost, revenue and profit, and described financial results of the business activities performed in the past. Hence, according to Langfield-Smith et al. (2012), financial measures provided limited direction for future actions to ensure potential growth, rather these measures mainly concentrated on reducing costs. This approach was not only criticised by researchers but also by practitioners for being highly aggregated, provided only a retrospective view with reliance on historical accounting data, with no direction for improvement, and in some cases, obstructed improvement (Aureli, 2010; Johnson and Kaplan, 1987; Kaplan and Norton, 1992; Neely et al., 1995).

Langfield-Smith et al. (2012) suggest that by using financial measures alone managers are likely to increase short-term profit at the cost of product quality and staff training and development, which could adversely affect, often long-term, organisational effectiveness.
Such consequences transpire when managers are under pressure from their shareholders to maximize short-term profit. Managers also want to increase short-term profit when their pay and incentives are linked with profit (Fitzgerald, 2007). There are many examples of managers maximizing their own pay and incentives at the cost of the organisations’ profitability. Recent failures in the banking industry, such as Lehman Brothers and Bear Stearns and other financial institutions in North America and Europe are primarily cited as classic examples of high risk taking in these institutions due to the managers’ lucrative behaviour and lack of management controls (Munir et al., 2013). Therefore, there is always a need for effective management controls through implementing a rigorous process of performance measurement to prevent organisations from such risk takings (Simons, 2000).

Given the continuously evolving technological, regulatory and competitive environment, managers are expected to achieve both financial and non-financial (i.e. tangible and intangible) organisational goals, while satisfying multiple stakeholders, such as customers, employees, suppliers, lenders and regulators, simultaneously or/and independently. The expectations of these stakeholders vary largely. For instance, more informed customers may expect good quality products or services at a low price, employees may seek a pay rise, while regulators and government departments demand stringent compliance with laws and regulations. It follows that in order to be effective organisations have to motivate their employees so that organisational goals are achieved, while meeting the multifaceted expectations of external stakeholders. With these expectations coupled with the limitations of the financial measures, many researchers have stressed that organisations must use PMSs which applies multidimensional performance measures (i.e. the financial measures and non-financial measures). A blend of financial and non-financial measures enables organisations to access performance of their business activities from multiple dimensions.
(Kaplan and Norton, 1992), which according to Neely et al. (2005) and Kaplan and Norton (2001) is the most appropriate way to achieve organisational effectiveness.

Evidence suggests that despite the perceived benefits of using multidimensional performance measures, a recent survey suggests that only 47 per cent of organisations worldwide have used or are planning to use multidimensional measures to assess the performance of their business activities by the end of 2010 (Rigby and Bilodeau, 2011), with the Balanced Scorecard (BSC) as one of the most commonly used PMS (Atkinson et al., 2012; Behn, 2003; Fitzgerald, 2007). These conflicting findings suggests that some organisations consider the role of multidimensional performance measures as important in achieving organisational effectiveness, while others still rely on financial measures alone, and believe them effective to achieve their organisational goals. While it is accepted that a PMS can make a positive contribution to organisational effectiveness, there is less clarity regarding the nature of performance measures (i.e. financial or/and non-financial) and how they can enhance the effectiveness of an organisation. Accordingly, this study contributes to this gap in the literature by examining the role of PMSs in organisational effectiveness.

While a few studies have been undertaken to examine the role of PMSs in organisational effectiveness, most of the studies have been conducted in the context of developed countries, with very limited research undertaken in the context of developing countries (De Waal and Frijns, 2009; Ismail, 2007; Joshi, 2001; Khan et al., 2011), thereby leaving an empirical gap in this area. Existing literature suggest that the political, social, economic and technological environment of developed countries fundamentally differ from the developing countries, it is, therefore, likely that studies conducted in the context of developed countries only provide a one-sided view about the role of PMSs in
organisational effectiveness. This argument is more relevant when it is applied within the context of the financial services sector. For instance, many developed countries have restructured their financial sectors according to the international standards including more sophisticated technology, while developing countries are still in the emerging stage in terms of information system adoption, use of contemporary technology and human resource development (Munir et al., 2013). Further, financial institutions operating in developing countries face many challenges compared to their counterparts of developed countries (Bascom, 1997). An unstable economic and political environment, lack of technically competent staff, and the absence of risk management systems are some of the key examples. Apart from these challenges, huge non-performing loans and pressures from politically motivated labour unions are common in developing countries (Khanal, 2007).

Accordingly, the objective of this study is to contribute to the literature by examining the role of PMSs on organisational effectiveness in the context of the financial services sector within a developing country.

Based on the literature outlined above, the following research question is examined in this study: What is the role of PMSs in achieving organisational effectiveness in the context of financial services sector within a developing country?

The remainder of the paper is structured as follows. Section 2 reviews the literature and develops the hypotheses. Section 3 discusses the method followed by the results in Section 4. Finally, the conclusion is presented in Section 5.

2. Literature Review and Hypothesis development

2.1 The nature of organisational effectiveness
Organisation theorists claim that given the conceptual complexities of organisational effectiveness, a simple definition is difficult to provide. For instance, Nord (1983, p.95) suggests, “The definition of organizational effectiveness requires some explicit normative statement about what the organisation should be doing for whom”. Jackson (1998) notes that organisational effectiveness is the measure by which an organisation can depict how well it is performing. Similarly, Merchant and Simons, (1986) asserts that managers perform their activities with the intent to attain competitive advantage, which, in turn, leads to organisational effectiveness. It follows that performance is very close in meaning to effectiveness. While numerous researchers (e.g., Evan, 1976; Scott, 1977; Cameron, 1986; Daft, 1998) use these terms interchangeably, Porter (1996) states that effectiveness is essential to superior performance. Clearly, the boundaries between the meaning of the terms ‘performance’ and ‘effectiveness’ have been rather unclear in the literature. However, it becomes clear from the literature that organisational effectiveness is primarily about measuring performance of organisations using different criteria. These criteria have a host of different labels such as financial, social, economic, input, output, productivity and efficiency. For the purpose of this study, it is assumed that assessing organisational effectiveness corresponds to measuring its performance and appropriate PMSs encourage actions that contribute to successful operation and profitability of the organisation.

According to Wesley (2008), organisational effectiveness can be viewed from three perspectives: whether an organisation is a rational system or a natural system or an open system. While rational systems act in a mechanical order to achieve specific goals in order to be effective, natural systems adapt the environmental changes to stay competitive (Scott, 2003). Unlike rational and natural systems, open systems claim that organisations are formed by many different small partial systems and those systems are connected to the
main organisation in different ways and they all operate differently with the aim to attain organisational goals (Scott and Davis, 2006). While effectiveness is considered a desirable feature in all three perspectives, according to Steers (1975), an understanding of an organisation’s operational and environmental uniqueness is a precondition to assessing its effectiveness. In this context, Cameron (1980) has suggested a four dimensional criteria to evaluate organisational effectiveness, which include (i) whether an organisation accomplishes its objectives, (ii) the ability to acquire vital resources to sustain, (iii) if the organisation has effective management systems, and (iv) if the organisation has satisfied stakeholders.

Using this criteria, Ford and Schellenberg (1982) have proposed three models for assessing organisational effectiveness, namely the goal-based model, multiple constituency model and systems model. While the goal-based model proposes an organisation is effective when it accomplishes its own unique set of goals, the multiple constituency model view organisational effectiveness in the context of an organisation’s ability to meet the objectives of stakeholders who provide resources to the organisation. The systems model suggests that performance is multidimensional, and must be examined using multidimensional measures simultaneously, which are appropriate to the phenomenon of interest, to allow comparison across organisations. Having described the nature of organisational effectiveness, the rest of this section reviews literature concerning performance measurement and develops hypotheses.

2.2 The use of financial measures and organisational effectiveness

Financial performance measures such as profit, cash flows and return on investment are important tools, which play a central role in business organisations (Merchant and Van der
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Stede, 2003; Otley, 2007). The role of finance is very important in any organisation regardless of whether it has a for-profit or not-for-profit motive. Either to create value through earning profit, or through rendering services, organisations have to manage their financial resources, efficiently and effectively to meet their financial needs. Being unable to manage such resources effectively, organisations may always be at risk of suffering financial losses, potentially leading to a complete failure. This shows the importance of the rigorous use of financial performance measures.

Financial measures provide important financial information to investors, financial analysts, auditors and the government through annual reports, such as balance sheets, profit and loss accounts, and cash flow statements (Atkinson et al., 2012; Merchant and Van der Stede, 2003; Otley, 2007; Sawalqa, 2011). These reports are audited and their disclosures are mandatory, which can be useful information for potential shareholders or investors because organisations’ audited financial disclosures reflect external as well as internal performance measures. Compared to the other management control tools, financial measures represent a common language or a unit of measurement of different organisational activities (Otley, 2007), which are more accurate (Chow and Van Der Stede, 2006), and less expensive to implement as well as easy to understand (Merchant and Van der Stede, 2003).

However, using financial measures alone is criticised by many researchers (Atkinson et al., 2012; Van der Stede et al., 2006). For instance, Evan (1976, p.25) criticised using financial measures and posits that “... such measures as earnings per share, return on investment, and profit as a percentage of sales emphasize output or relation between input and output; however, they ignore transformation processes and feedback effect”. Fitzgerald (2007) suggests that financial measures reward short-term behaviours because these measures
look at short-term results, ignoring the long-term organisational effectiveness. The limitations of using financial measures alone encouraged organisations to move towards using a mix of financial and non-financial measures. Kaplan and Norton (1992) stressed that financial and non-financial measures should not be viewed as substitutes for each other; rather their combination is very useful to produce the desired outcomes. The empirical evidence suggests that the use of both the financial and non-financial measures enhance organisational effectiveness (Davis and Albright, 2004; Lingle and Schiemann, 1996).

Despite the perceived benefit of using a mix of financial and non-financial measures, the most recent survey conducted by Rigby and Bilodeau (2011) showed that only 47 per cent of organisations worldwide were using both the financial and non-financial measures (the BSC in this case). Similarly, De Geuser et al. (2009) could not find any evidence to support the fact that a combination of financial and non-financial measures generates value, while Adler et al. (2000) found that financial measures were still very popular among business organisations in New Zealand. In the context of developing countries, Khan et al. (2011), reported that financial measures are still widely used in Bangladesh. Based on these findings, it can be argued that a number of organisations still consider the financial measures highly relevant for achieving organisational effectiveness, which lead to the first hypothesis of this study:

H1: The use of financial measures is positively associated with organisational effectiveness.

2.3 The use of non-financial measures and organisational effectiveness

As eluded in the preceding section, given the changes in organisational environments during the last two decades organisations started using PMSs that accommodate financial
measures as well as non-financial measures to overcome the limitations of using financial
measures alone. Unlike financial measures Non-financial measures generally include
customer satisfaction, employee motivation, quality, productivity and market share. Kaplan
and Norton (1992) grouped these non-financial measures into three categories: customer,
learning and growth, and internal business process.

Ittner and Larcker (1998a) suggest that there is a direct relationship between customer
satisfaction and financial performance because it increases customer loyalty, reduces
marketing costs through word of mouth advertising, and enhances brand image which
lowers price elasticity. Organisations are placing greater emphasis on customer measures
because it is believed that these measures are drivers of future financial performance
(Atkinson et al., 2012; Banker et al., 2000; Ittner and Larcker, 2001). This statement is
supported by Banker et al.’s (2000) empirical study of the hospitality industry, where
researchers have investigated a chain of 18 four-star hotels and found significant
correlations between customer satisfaction and financial performance. Ittner and Larcker
(1998a) used customer and business unit data in their study and found that customer
satisfaction helped to increase the revenue, profit margins, and return on sales.

According to Kaplan and Norton (1996), employees are also integral parts of organisations
and are represented in the BSC as ‘learning and growth perspective’. Learning and growth
focuses on employees’ satisfaction, retention, and training and development programs.
Yeung and Berman (1997) suggest that satisfied employees can serve customers better,
which, in turn, result in improved customer satisfaction and loyalty. They have further
suggested that increased customer satisfaction may also increase an organisations’ revenue
through repeat sales. In this way, employee satisfaction plays a key role in improving
organisations effectiveness in the long run. Lee and Yang (2010) have also found significant relations between employee satisfaction and organisational performance.

The internal business process focuses on innovation with unique products and services that provide an organisation with a sustainable competitive advantage (Langfield-Smith et al., 2012). Being the main driver of operating performance, Kaplan and Norton (2001) found a direct association between the internal business process perspective and the financial performance measures. Similar association was also found by Lee and Yang (2010) in their study. In the context of the banking sector, Davis and Albright (2004) examined the impact of combining financial and non-financial measures and reported that by using a mix of financial and non-financial measures as compared to using financial measures alone, banks improved their performance. Other supporting evidence is provided by Van der Stede et al. (2006), who claim that higher diversity in a PMS is directly associated with higher performance. In contrast, Ittner et al. (2003) found no relationship between the mixed use of financial and non-financial measures and enhanced organisational performance. While Griffith and Neely (2009) found a mixed result of the non-financial measures on organisational performance, Perera et al. (1997) found no relation between the use of non-financial measures and increased manufacturing performance. Hence, these mixed and contradictory findings lead to the second hypothesis:

H2: The use of non-financial measures is positively associated with organisational effectiveness.

H2a: Financial institutions, whose performance measurement system uses more customer related measures, will have greater organisational effectiveness.

H2b: Financial institutions, whose performance measurement system uses more learning and growth related measures, will have greater organisational effectiveness.
H2c: Financial institutions, whose performance measurement system uses more internal business process related measures, will have greater organisational effectiveness.

2.4 Performance measurement feedback and organisational effectiveness

Feedback is the mechanism, which differentiates between an effective and ineffective PMS (De Geuser et al., 2009; Forza and Salvador, 2000; Kaplan and Norton, 1996a; Lynch and Cross, 1991). An effective PMS provides constant and up to date feedback, whereas using financial measures alone, organisations evaluate organisational and employee performance at the end of the financial year, at times, in some cases, three months after the years completion. Late feedback may not be very useful to take corrective action (Davis and Albright, 2004; Neely et al., 2005; Fitzgerald, 2007).

Feedback can be provided on overall organisational performance, or it could relate to the strategy being used by an organisation and on staff related outcomes. Feedback can be received from different sources, such as from supervisors, peers, and subordinates or may come from customers. Complaints and criticism about the product or services can be taken as an informal type of feedback. Although it cannot provide the actual information on the nature and degree of the problem that exists, it can be regarded as a reliable source. While strategy or objectives of the organisation are communicated in the planning phase, feedback identifies opportunities for development. When such opportunities are identified, a corrective action can be taken for improvement. Forza and Salvador (2000) stress that the overall purpose of feedback should be to enhance organisational performance by communicating vital information within the organisation.

Feedback also helps employees to analyse their achievements against given business goals. Business managers generally use feedback to motivate and evaluate employees in the
organisation (Langfield-Smith et al., 2012). Feedback allows managers to track employees’
progress towards achieving the strategic goals. Lingle and Schiemann (1996) claim that
feedback is the largest single measurement area that distinguishes successful companies
with the less successful ones. Based on the above discussion the study develops the
following three hypotheses:

H3: Financial institutions, whose performance measurement system provides feedback on
performance, will have increased organisational effectiveness.

H4: Financial institutions, whose performance measurement system provides feedback on
strategy, will have increased organisational effectiveness.

H5: Financial institutions, whose performance measurement system provides feedback on
staff, will have increased organisational effectiveness.

3. Research Method

To collect the data a mail survey (questionnaire) method was used. Nepal’s financial
services sector was selected because the sector has witnessed a radical improvement in the
performance of financial institutions after the enactment of Nepal Rastra Bank (NRB) Act
2002. For example, prior to the implementation of this Act, the entire financial sector had a
non-performing loan portfolio of over 59 per cent with a deficit of approximately US$435
million, which was equivalent to 7 per cent of the gross domestic product (World Bank,
2004). However, after financial sector reforms beginning in 2002, such as the introduction
of a credit monitoring system, implementation of human resource development programs,
establishment of IT platforms, and setting up accounting and auditing practices, and a new
performance measurement culture, the non-performing loans of the entire financial
services sector declined to 10.85 per cent with significant performance improvement of
financial institutions in recent years (Adhikary et al., 2007; Dhungana, 2005; World
Bank, 2004; Ministry of Finance, 2012).
The questionnaires were mailed to the Chief Financial Officers of the financial services institutions operating in Nepal. The Chief Financial Officers were selected as respondents because they were expected to have relevant knowledge concerning PMSs being used in their institutions. Their contact details were gathered from the websites of the financial institutions. While there are 300\(^1\) financial institutions in Nepal, questionnaires were distributed to 243\(^2\) institutions. 57 institutions were excluded from the sample because these institutions were classified by the central bank of Nepal as small operating in the remote areas of the country and were not expected that have a formal PMS. These institutions were excluded to avoid the expected bias in the results.

The Dillman (2000) tailored design method was used to administer the survey. In total, 69 responses were received with a response rate of 28.40 per cent. Using Cohen’s (1988) standard power calculations to estimate the number of responses that are required to validate the results (with 80% power at the 5% significance level) a validation sample of 58 responses was required to conduct the regression analysis. The response rate is in line with the other management accounting studies, such as Baines and Langfield-Smith (2003) 20 per cent, Hall (2008) 22.5 per cent, and Lee and Yang (2010) 25.19 per cent. However, the response rate is quite high in comparison with other studies from developing countries, such as Jusoh et al. (2008) 12.3 per cent and Anand et al. (2005) 8.52 per cent. Non-response bias was assessed by comparing dependent and independent variable values and no significant difference was noted.

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\(^1\) These include: 31 commercial banks, 87 development banks, 79 finance companies, 21 micro-finance companies, 25 insurance companies, 16 cooperatives, 38 licensed NGOs, 1 provident fund, 1 investment trust, and 1 postal saving bank (Nepal Rastra Bank, 2012).

\(^2\) These include: 31 commercial banks, 87 development banks, 79 finance companies, 21 micro finance institutions, and 25 insurance companies.
There were six sections in the questionnaire. The first section required the demographic response. Descriptive statistics including gender, qualification, and working experience were asked to obtain background information. It was ensured that respondents and their organisations were not identified in the questionnaire. The second section required information on whether the participating organisation was using the BSC. The third section contained questions about reasons for using the PMS and the perceived organisational effectiveness. The fourth section was focused on identifying the type of performance measures being used in respondents’ institutions, and the fifth section required respondents to describe how they perceive the role of PMS in the overall organisational effectiveness. In the final section, respondents were asked three open-end questions: (i) What are the best aspects of the performance measurement system being used in your bank/institution? (ii) Are there any aspects, which you disliked about the performance measurement system used in your bank/institution? (iii) What are the aspects of your current performance measurement system that can be improved? These specific open-ended questions were set to obtain the respondent’s opinion that could not be expressed in the close-ended questions.

3.1 Variables and measurement

The organisational effectiveness was assessed using two approaches. First, organisational effectiveness was measured by assessing the extent to which 20 outcomes of PMS were attained. These measures of outcomes were developed based on the review of existing literature concerning PMSs and organisational effectiveness (Bourne et al., 2000; Neely et al., 1995). Respondents were required to indicate on a five point Likert type scale, with anchors ranging from 1 ‘not effective’ to 5 ‘very effective’ the extent to which the use of PMS contributes to organisational effectiveness. Second, respondents were required to indicate if they found their PMS ‘highly ineffective’ or ‘highly effective’. Respondents
were also asked to indicate reasons for which their institutions were using PMS, with anchors ranging from 1 ‘not at all’ to 5 ‘to a great extent’. This approach was used to complement respondents’ understanding of the reasons for using PMS.

Reliant upon respondents’ understanding, the respondents were also required to indicate the extent to which their institutions were using 25 different measures to assess their performance. Using the BSC approach these measures were categorised into financial and non-financial performance measures (customer, internal business process, and learning and growth). These measures were further categorised into feedback related measures, with three sub-categories: (i) performance related feedback, (ii) strategy related feedback, and (iii) staff related feedback. Organisational effectiveness was operationalised and converted into the dependent variable, while financial measures Non-financial measures and feedback also followed the same process to convert into the independent variables.

3.2 Data analysis
Cronbach’s (1951) alpha was used to test the reliability of the survey instrument. After collecting the data, the reliability test was conducted, which indicated that all the scores of the Cronbach’s alpha were well above the acceptable point (Table 1) i.e., 0.6 or higher (Bryman, 2012). The Statistical Package for Social Sciences program (SPSS; Version 20) was applied to perform the data analysis. Descriptive statistics, Pearson correlation and multiple regression analysis were used to test the hypotheses.

4. Results
4.1 Descriptive statistics
Table 1 presents the descriptive statistics for all the independent and dependent variables. The mean score of the financial performance measure (40.1) is unexpectedly below its
midpoint of the minimum and maximum scores. The finding suggests that responding organisations do not regard financial measures alone contribute to organisational effectiveness. The mean score of non-financial performance measure (38.8) is at 99.5 per cent of its midpoint range (almost at its midpoint range), which suggests that organisations recognise non-financial performance measures as an important part of PMS compared to the financial measures. However, in particular, when three different perspectives of non-financial measures (customer, internal business process and learning and growth) were assessed, it was found that only the mean score of internal business process achieved its midpoint, while the mean scores of customer, and learning and growth perspective were relatively below the midpoint range (Table 1). The findings indicate that performance measures used for internal business processes are regarded as an integral part of non-financial measures, whereas very important perspectives of non-financial measures; i.e. customers and employees (represented by learning and growth) are found to be less significant.

The mean score of feedback on strategy is 25.03, which is highly above its midpoint of the minimum and maximum scores (Table 1) among the five independent variables, while feedback on staff is just above its midpoint. However, feedback on performance is below its midpoint score. The findings indicate that while feedback, in general, is regarded as a central part of the PMS, the significant aspect of performance related feedback is considered as less important indicators of the PMS.

4.2 Correlation matrix
Table 2 presents the correlation coefficient matrices of all the variables. All the independent variables (financial, Non-financial, performance related feedback, strategy related feedback and staff related feedback) are positively related to the dependent variable organisational effectiveness, which is significant at $p < .001$. The result presented in Table 2 shows that strategy related feedback and organisational effectiveness are highly positively correlated ($r = .854$, $p < .001$). Although there is a positive correlation between overall effectiveness of PMS and organisational effectiveness ($r = .394$, $p < .01$), the relation seems quite weaker compared to other associations. On the other hand, financial performance measure is unexpectedly moderately correlated with organisational effectiveness ($r = .658$, $p < .001$), while non-financial performance measures and organisational effectiveness are strongly significantly correlated ($r = .756$, $p < .001$).

4.3 Multiple regression analysis and hypotheses testing

Table 3 and 4 present the multiple regression analysis results produced through SPSS (version 20). Table 3 shows the overall regression model is statistically significant ($F_{5, 60} = 68.401; p < .001$), where 85.1 per cent of the variance (adjusted 83.8 per cent) in the dependent variable (organisational effectiveness) is explained by the five predictor variables; financial Non-financial, performance related feedback, strategy related feedback and staff related feedback.

4.3.1 The use of financial measures and organisational effectiveness

The prediction in H1 is that the use of financial measures is positively associated with organisation effectiveness. The result (Table 3) suggests that the use of financial measures
is not statistically significant to organisational effectiveness \((F_{5, 60} = 68.401; p > .05)\), where standardized coefficient beta \((\beta)\) is -.009. The standardized beta value revealed by the result is negative, which indicates that the use of financial measures alone is negatively related to the organisational effectiveness; however, this association is not significant at \(p < .05\). It can be concluded that the H1 is not supported by the evidence supplied by the multiple regression analysis at the significant level of \(p < .05\) (obtained \(p\)-value = .906). Hence, contrary to prediction, the hypothesis (H1) is rejected.

This finding is consistent with several previous studies (Atkinson et al., 2012; Ittner and Larcker, 1998b; Kaplan and Norton, 1992; Van der Stede et al., 2006). However, contrary to prediction, this finding is not in line with previous studies conducted in the context of the developing countries, such as Joshi (2001) and Khan et al. (2011). The result also contradicts with the findings of Adler et al.’s (2000).

4.3.2 The use of non-financial measures and organisational effectiveness

H2 states that the use of non-financial measures is positively associated with organisational effectiveness. The results (Table 3) show that the use of non-financial measures is statistically significant to organisational effectiveness \((F_{5, 60} = 68.401; p < .001)\), where standardised coefficient beta \((\beta)\) is .323. Therefore, it can be concluded that H2 is empirically fully supported, as predicted, at 1 per cent of significant level.

\[ \text{Insert Table 3 about here} \]

This result is consistent with the previous studies of Banker et al. (2000), Davis and Albright (2004), and Hoque and James (2000). On the other hand, the positive beta value \((\beta)\) of .323, and \(t\) value of 4.480 (Table 3) show that the use of non-financial measure is
strongly (but not negatively) significant to organisational effectiveness at 1 per cent
significant level. The finding contradicts with prior studies of Ittner et al.’s (2003) results, where non-financial measure has significant but negative association with sales growth.

4.3.3 The use of customer, learning and growth and internal business process and organisational effectiveness

H2a, H2b, and H2c predict that organisations, whose PMS uses more customer, learning and growth and internal business process related measures, will have greater organisational effectiveness. To assess the association between the independent variables (customer, learning and growth, and internal business process) and dependent variable (organisational effectiveness), an additional multiple regression analysis is performed (Table 4). The result shows that the overall regression model is statistically significant \( (F_{3, 63} = 31.405; p < .001) \), where 59.9 per cent of variance (adjusted 58.0 per cent) in the dependent variable is explained by customer, learning and growth, and internal business process perspectives. Contrary to prediction, customer, and learning and growth perspective reveal the lack of statistical significance to organisational effectiveness \( (F_{3, 63} = 31.405; p > .05) \), where standardised coefficient beta (\( \beta \)) of customer and learning and growth are .060 and .150, respectively. The obtained \( p \)-values for both predictor variables are >.05 \( (p\)-value of customer = .657, and learning and growth = .256). Therefore, both hypotheses H2a and H2b are rejected.

The rejection of H2a contradicts with the previous empirical study of Ittner and Larcker (1998a) and Lee and Yang (2010). The prior studies support the fact that there is a direct relation between customer satisfaction (customer perspective) and increased organisational effectiveness. However, the results obtained from this study (Table 4) do not support H2a because of the lack of statistical significance. The rejection of H2b also contradicts with the previous empirical studies of Yeung and Berman (1997) and Lee and Yang (2010). The
results (Table 4) show that only internal business process perspective is statistically significant to organisational effectiveness \( (F_{3, 63} = 31.405; p < .001) \), where standardised coefficient beta (\( \beta \)) is .601. As predicted, H2c is fully supported at the significant level of 1 per cent. This result is consistent with Kaplan and Norton’s (2001) BSC framework, and also in line with the findings by Lee and Yang (2010).

4.3.4 Performance related feedback and organisational effectiveness

H3 predicts the relation between organisations using PMS that provide feedback on performance and greater level of organisational effectiveness. The results (Table 3) indicate that the association between increased organisational effectiveness and organisations using PMS, which provide feedback on performance is statistically significant \( (F_{5, 60} = 68.401; p < .05) \), where standardized coefficient beta (\( \beta \)) is .268. It is, therefore, concluded that the prediction made in H3 is empirically fully supported at 5 per cent of significant level. This result is in line with not only the PMS literature, but also with the findings of Forza and Salvador (2000).

4.3.5 Strategy related feedback and organisational effectiveness

H4 predicts the relation between organisations; whose PMS provide feedback on strategy, and higher level of organisational effectiveness. The results (Table 3) suggest that there is a statistically significant impact of the organisations; whose PMS provides feedback on strategy, to organisational effectiveness \( (F_{5, 60} = 68.401; p < .05) \), where standardized coefficient beta (\( \beta \)) is .252. The prediction of H4 is fully empirically supported, as predicted, at the significant level of 5 per cent. The finding is consistent with the findings of Lee and Yang (2010). Their findings revealed that organisations with a greater use of the PMS with linkage to strategy have increased organisational performance. The study, undertaken by De Geuser et al. (2009), has the similar results.
4.3.6 Staff related feedback and organisational effectiveness

The hypothesis (H5) predicted that there is an association between the independent variable (feedback on staff) and dependent variable (organisational effectiveness). The result (see Table 3) presents strong evidence to support the fact that the feedback on staff is statistically significant to organisational effectiveness ($F_{5, 60} = 68.401; p < .05$), where standardized beta ($\beta$) is .214. The association between the organisations, whose PMS provides feedback on staff, and increased organisational effectiveness is positively and statistically significant. As predicted, H5 is empirically fully supported at the significant level of 5 per cent. The result is consistent with findings of Lingle and Schiemann (1996) and Yeung and Berman (1997).

4.4 The Balance Scorecard Usage

To find the adoption rate of the BSC in the context of financial services sector in Nepal, respondents were required to indicate whether their institution was using the BSC approach. In response, 28 respondents out of 69 (40.58 per cent) indicated that they were using the BSC approach. The finding was quite unexpected because of the worldwide BSC usage rate of 47 per cent (Rigby and Bilodeau, 2011). Very few developing countries had such a high BSC usage rate. For instance, the BSC adopters in Bangladesh are only 10 per cent (Khan et al., 2011), while the usage rate is relatively low in Malaysian organisations, i.e. 8.7 per cent (Jusoh et al., 2008).

5. Conclusion
The aim of this study was to investigate the role of PMS in organisational effectiveness in the context of financial services sector within a developing country. The study assessed organisational effectiveness in the context of the financial services sector by evaluating the extent to which 20 different outcomes were attained, thereby contributing to the literature concerning PMSs as most of the prior literature has only assessed organisational effectiveness of manufacturing organisations. Further, the findings of the study also contribute to the literature concerning PMSs by providing evidence on the adoption of the BSC in a developing country. The findings reveal that 40.58 per cent of the financial institutions in Nepal had implemented the BSC by the end of 2012. The BSC usage rate in the financial services sector of Nepal can be considered quite high compared to the BSC adoption rate in some other developing countries, such as 10 per cent in Bangladesh by the end of year 2011 (Khan et al., 2011) and 8.7 per cent in Malaysia by the end of year 2008 (Jusoh et al., 2008).

The first aim of the study was to examine the association between the financial measures and organisational effectiveness (Hypothesis 1). While existing literature indicates that the financial measures are quite popular in the developing countries (Khan et al., 2011), the study found contradictory results in the context of financial institutions of Nepal. The finding is also in line with the empirical evidence of Van der Stede et al. (2006). However, the result contradicts with the empirical findings of Adler et al. (2000), where financial measures were found quite popular in the New Zealand based manufacturing organisations. While financial institutions are under tremendous pressure to improve their financial performance, which requires applying financial measures, such as profitability, the financial institutions were more successful in improving organisational effectiveness by placing greater emphasis on the non-financial measures. It follows that the nature of performance measures may not depend only on the nature of organisations or countries.
Rather, the nature and use of performance measures is more influenced by the organisational desire of achieving efficiency and effectiveness (Merchant and Simons, 1986). Accordingly, the findings suggest that a good PMS should incorporate more forward-looking performance measures, which are less prone to manipulation from the markets. This may require a reconsideration of short term incentives for management.

The second aim of this study was to examine the association between the non-financial measures and organisational effectiveness (Hypothesis 2). While this study found support for the positive impact of overall non-financial performance measures usage on organisational effectiveness, results of this study are rather diverse when taking the three non-financial perspectives of the BSC perspectives separately (Hypothesis 2a, 2b, and 2c). The results indicate that the financial institutions with greater usage of internal business process oriented performance measures will experience better organisational performance (Hypothesis 2c supported empirically). However, the usage of customer and learning and growth oriented measures were found to have no significant impact on organisational effectiveness (rejection of Hypothesis 2a and 2b). These results are in line with the previous findings of Banker et al. (2000) and Davis and Albright (2004). The positive association between the internal business process and organisational effectiveness is in line with Kaplan and Norton’s (2001) BSC and also consistent with the findings of Lee and Yang (2010). However, the results contradict with the findings of Ittner et al. (2003), where non-financial measure has significant but negative association with sales growth. Non-financial measures therefore are critically important for financial institutions in developing countries for achieving organisational effectiveness.

Merchant and Simons (1986) suggest the importance of using internal business process measures to improve competitive advantage. Hence, the findings show that financial
institutions in Nepal are placing greater emphasis on the internal business process as compared to the customers and employees for achieving competitive advantage. Given the rapidly changing business environment in Nepal and ensuing competitive pressures on the financial institutions it seemed obvious that they would focus on efficient business processes to survive. However, managers should not underestimate the importance of employee and customer related performance measures, because they are important stakeholders of the organisation and, according to Yeung and Berman (1997), closely associated with organisational effectiveness in the long run. The performance measures relating to these two perspectives should be embodied in the design of a PMS. The open-ended responses also provide support for this finding. One respondent suggested, “Employee development and customer satisfaction are the major aspects that can be improved”. Another respondent wrote, “Staff complaints need to be addressed more effectively”.

The third aim of this study was to examine the association between PMSs providing performance, strategy and staff related feedback and organisational effectiveness (Hypotheses 3, 4 and 5). The empirical results support all of three hypotheses (Hypotheses 3, 4 and 5), which indicate that the financial institutions in Nepal consider feedback, as a whole, a significant factor of PMS. The findings also suggest that the financial institutions, which provided strategy related feedback, were more successful in achieving organisational effectiveness than those that only provided performance and staff related feedback. The result is consistent with the previous findings of Forza and Salvador (2000), De Geuser et al. (2009) and Lingle and Schiemann (1996). Kaplan and Norton (1996) suggest that linking performance measures to strategy and providing strategy related feedback is a key feature that makes a PMS highly effective. This study provides evidence to support this proposition. The study found that the strategy related feedback is positively
associated with organisational effectiveness, and the additive effect of this type of
feedback on organisational effectiveness is greater when a direct link exists.

The above findings also suggest that the financial institutions in Nepal tend to use the PMS
primarily as a strategic tool, while using it to a lesser extent as a management tool. The
emphasis on achieving strategic goals may have resulted from the intense regulatory
pressures on the financial institutions from the central bank after the adoption of Basel
Accords and the comprehensive financial sector reforms by the government in the mid-
2000. This finding infers that industries, in particular operating in developing countries,
having stringent regulatory controls focus more on strategic goals to comply with
regulations and secure legitimacy (Munir et al., 2013).

Ford and Schellenberg (1982) emphasised that an organisation is effective when it
accomplishes its own unique set of goals, the multiple constituency model view of
organisational effectiveness in the context of an organisation’s ability to meet the
objectives of stakeholders who provide resources to the organisation. It appears that the
increased focus of the financial institutions in Nepal on using non-financial measures and
providing strategy related feedback indicate that these institutions are centred on achieving
organisational effectiveness by accomplishing their organisational goals (Cameron, 1980;
Ford and Schellenberg, 1982). Other very important dimensions, such as implementing an
effective management system and the responsibility of satisfying multiple stakeholders
(customers and employees) are less emphasised, which is not surprising in the context of a
developing country. From this perspective, the financial institutions in Nepal could be viewed as a rational system, where these institutions seem to act in a mechanical order to
achieve specific goals in order to be effective (Wesley, 2008). The finding in this study
supports Cameron’s (1980) suggestion that in order to be effective an organisation should have effective management systems, and satisfy stakeholders. In the context of the financial services sector in Nepal, organisational effectiveness could be further enhanced if more emphasis is placed on the customers and employees.

The study contributes to the management accounting literature by examining the role of PMSs in organisational effectiveness. While numerous studies have been undertaken on this notion, they have either focused on the manufacturing organisations or have been conducted in the context of developed counties, thereby leaving an empirical gap in this literature. This study addressed this gap in the literature by providing evidence from the financial services sector within a developing country. In addition, existing literature has mostly focused on investigating the role of PMSs, in its holistic sense, on organisational effectiveness. While numerous studies have investigated the role of individual category of performance measures (i.e. financial vs non-financial, tangible vs intangible, hard vs soft performance measures), this study also investigated the role of both financial and non-financial performance measures coupled with the role of feedback on organisational effectiveness. The study considers feedback as an important dimension of an effective PMS.

The study provides important insights for practitioners in the financial services sector, in general, and financial services sector in Nepal, in particular. The financial services sector plays a significant role in the development of any economy (Bank of England, 2012). In the context of the financial services sector in Nepal, this study is important because the financial sector in Nepal constitutes 90 per cent of the companies listed on the Nepal Stock Exchange (Ministry of Finance, 2012). While several initiatives have been undertaken by the central bank after implementing Basel Accord II (2004) to improve performance
measurement practices and internal controls, given the rapidly evolving business environment the role of using prudent PMS and the need to use the appropriate performance measures is much higher than ever before. Hence, practitioners need to re-align their PMSs to focus on using multidimensional performance measures and enhance the level of feedback on strategy, customers as well as staff and performance, to enable organisations to enhance their performance effectively across different areas of organisational performance with a longer term focus.

5.1 Limitations and future research

While the findings of this study are expected to have important practical and theoretical implications, the study is subject to a few limitations. Firstly, use of surveys entails restricted inference for causation among the relationships of interest. In spite of following Dillman’s (2000) guidelines for a representative sample, response bias may still occur. Additionally, measurement error could arise based on reliance on self-reported measures for the variables examined. Secondly, this study has focused only on choice of performance measures influencing organisational effectiveness. It is likely that there are other contextual factors that could have an impact on an institution’s choice of performance measures and also other variables that might have a mediating effect. While the magnitude of the indirect effects found is significant, the study is unable to account for all the effects of organisational effectiveness. Nevertheless, organisational effectiveness is likely to be affected by more than choice of performance measures and feedback which provides opportunities for further research in this important area.

Thirdly, this study represents the views presented by the Chief Financial Officers of the financial institutions in Nepal at a given point of time and setting. In terms of different time and settings, such as in the future, views may change and yield different results,
which provides an avenue for future research that could be conducted using a longitudinal case study and may include a larger sample size. Compared to the survey method, where the researcher remains absent, by conducting interviews researchers can prompt participants to obtain the first hand opinions. Further, the case study could be conducted to obtain rich contextual data so that further insights can be provided on the research area underpinning this study.
Appendix:

Measurement of dependent and independent variables

Dependent variable: Organisational effectiveness

- Achieve financial goals
- Control day-to-day activities
- Provide means of communication
- Motivate employees
- Evaluate the performance of specific initiatives
- Long-term planning
- Short-term planning
- Organise resources
- Evaluate the effects of change
- Determine reward distribution
- Provide information for decision-making
- Identifying which aspects of performance need improvement
- External reporting purposes
- Compare with other similar banks
- Communicate the bank’s values and priorities to employees
- Achieve financial objectives only
- Revise organisational strategies
- Identify best practices
- Evaluate the performance of individual employee
- Evaluate the performance of sub-units

Independent variables:

1. Financial measures:
   - Profitability
   - Capital adequacy
   - Liquidity
   - Working capital
   - Assets utilisation
   - Non-performing loans
   - Classification of assets
   - Deposits
   - Investments / loans / advances
   - Dividend and share prices
   - Marketing and advertising cost
   - Wages and salary

2. Non-financial measures:

   Customer perspective
   - Customer satisfaction
   - Number of new customers / accounts
   - Number of customers returned
   - Number of complaints from customers

   Learning and growth perspective
   - Hours of training provided
   - Number of complaints from staff
   - Number of complaints resolved

   Internal business process perspective
   - Quality of service
   - Cycle time of service
   - New product developed
Improvements in facilities
Investment in automation and computerisation
Productivity

3. Feedback

Performance related feedback
- Achieve financial goals
- Control day-to-day activities
- Provide means of communication
- Motivate employees
- Identifying which aspects of performance need improvement
- External reporting purposes
- Compare with other similar banks
- Achieve financial objectives only
- Evaluate the performance of sub-units

Strategy related feedback
- Evaluate the performance of specific initiatives
- Long term planning
- Short term planning
- Organise resources
- Evaluate the success/effects of change
- Provide information for decision-making
- Revise organisational strategies
- Identify best practices

Staff related feedback
- Determine reward distribution
- Communicate the bank’s values and priorities to employees
- Evaluate the performance of individual employee

Open-ended questions

Q1. What are the best aspects of the PMS being used in your bank/institution?
Q2. Are there any aspects, which you disliked about the PMS used in your bank/institution?
Q3. What are the aspects of your current PMS that can be improved?
References


York, NY.


Steers, R.M. (1975), “Problems in the measurement of organizational effectiveness”,


Table: 1 Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>N*</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach’s α</th>
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<td>19.00</td>
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<td>7.8971</td>
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<td>Performance related feedback</td>
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<td>Staff related feedback</td>
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<td>5.00</td>
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</table>

*Number of responses varies, as all questionnaire items were not completed by the respondents

Table: 2 Correlations

<table>
<thead>
<tr>
<th>Overall Effectiveness</th>
<th>Financial</th>
<th>Non-Financial</th>
<th>Performance Related Feedback</th>
<th>Strategy Related Feedback</th>
<th>Staff Related Feedback</th>
<th>Organisational Effectiveness</th>
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<tr>
<td>Pearson Correlation</td>
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<tr>
<td>Financial</td>
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<td>Sig. (2-tailed)</td>
<td>0.000</td>
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<tr>
<td>Non-financial</td>
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<td>.675**</td>
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<td></td>
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<td>Performance Related Feedback</td>
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<td>.624**</td>
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<td>0.000</td>
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<td>Strategy Related Feedback</td>
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<td>.592**</td>
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<tr>
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<td>0.000</td>
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<td>Staff Related Feedback</td>
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<td>.786**</td>
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<td>.756**</td>
<td>.851**</td>
<td>.854**</td>
<td>.803**</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Table 3: Result of multiple regression analysis

<table>
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<th>Predictor variable</th>
<th>Beta $^1$</th>
<th>t</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Financial</td>
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<td>-.119</td>
<td>.906</td>
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<tr>
<td>Non-financial</td>
<td>.323</td>
<td>4.480</td>
<td>.000</td>
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<tr>
<td>Performance related feedback</td>
<td>.268</td>
<td>2.573</td>
<td>.013</td>
</tr>
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<td>Strategy related feedback</td>
<td>.252</td>
<td>2.246</td>
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<td>Staff related feedback</td>
<td>.214</td>
<td>2.191</td>
<td>.032</td>
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</table>

$R = .922^a; \ R^2 = .851 \quad \text{Adjusted } R^2 = .838 \quad F = 68.401 \quad P = .000^b$

$^a$. Dependent Variable: Organisational effectiveness.
$^b$. Predictors: (Constant), Financial Non-financial, Performance outcomes, Strategy outcomes, and Staff outcomes.

Table 4: Result of multiple regression analysis

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Beta $^1$</th>
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<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Customer</td>
<td>.060</td>
<td>.446</td>
<td>.657</td>
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<tr>
<td>Internal business process</td>
<td>.601</td>
<td>3.776</td>
<td>.000</td>
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<tr>
<td>Learning and growth</td>
<td>.150</td>
<td>1.145</td>
<td>.256</td>
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</tbody>
</table>

$R = .774^a; \ R^2 = .599 \quad \text{Adjusted } R^2 = .580 \quad F = 31.405 \quad P = .000^b$

$^a$. Dependent variable: Organisational effectiveness
$^b$. Predictors: (Constant), Customer, Internal business process, and Learning and growth

$^1$ The unstandardized $b$-values and their significant are important statistics to look at, however, the standardized version of the $b$-values are in many ways easier to interpret (because they are not dependent on the units of measurement of the variables’ (Field, 2005, p. 193). Therefore, in this study, standardized $\beta$ values are chosen instead of unstandardized $b$-values to interpret the result.