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Editorial

In today's 'runaway world' (Giddens 2000) with unprecedented advances in technologies, highly competitive markets *and* erratic fluctuations in financial markets that keep reshaping our lives, creating and disseminating new knowledge become increasingly important to face the new challenges that confront organizations and society. The NSBM Journal of Management (NSBMJM) with the publication of its second issue continues to contribute towards meeting this need by presenting the findings of studies that cover a wide range of themes which are of topical interest to academia, industry and policy makers. They will have direct implications in managerial settings locally as well as in similar developing countries, and further, draw the attention of researchers in the developed world as they seek to understand their changing world of complexity and diversity.

The current issue of NSBMJM consists of seven papers: two positivist and thee non-positivist studies, an action-based case study and a book review. The topics covered range from financial markets, innovation, consumerism, and ethics in accounting, gender issues and quality management. Thus, the journal has widened its scope to appeal to a wider readership with varied interests and needs. Further, NSBMJM continues to adhere to its policy of publishing papers with contrasting philosophical underpinnings, viz. ontological *(what is reality)* and epistemological *(how can I know reality)* owing to its firm conviction that the method should emerge (and not precede) the research question being studied.

With the advent of neo-liberalism and globalization sweeping across the world managing foreign exchange fluctuations is of prime importance in the wealth creation process. NSBMJM unfolds on a *global* note with the study of exchange rate fluctuations in three emerging market economies: Korea, Taiwan and Thailand. Prabhath Jayasinghe, the author, looks into the time-varying characteristic of exchange rate exposure coefficients by estimating a much used multivariate BEKK-GARCH-M model. He observes mean-reverting long-memory processes in two of the three cases with implications for investment and hedging strategies. The study is of direct relevance to Sri Lanka, a country attempting to reach middle income level status in the near future.

Zooming into the local context, the second paper is on innovation which is the gateway to prosperity in the current knowledge-based economy. As a result, organizations are being compelled to develop innovative knowledge to create value, gain competitive advantage, and thereby beat competition. In this evolving context, taking the less researched services sector in Sri Lanka as her empirical site, Seshika Kariyapperuma explores how activities should be organized with a view to generating and exploiting new forms of knowledge. Through a non-positivist approach, she identifies three work-related activities by which knowledge for innovation is generated. Kariyapperuma proceeds to explain how they provide common ground for knowledge creation and illustrates how conventional organizing tends to destroy such knowledge.

The present day consumerist society is ever expanding and constructing the identity of consumption is becoming increasingly important for marketing strategists. In the third paper, Dinuka Wijetunga, while lamenting the simplistic approach adopted in prior studies where consumption objects were relegated to the status of mere symbols, proceeds to unearth the associated complex meaning construction processes. This she carries out with respect to the mobile telephone consumption practices in Sri Lanka. Wijetunga

finds that different patterns of using a product could feature in the consumer's construction of identity in order to distinguish among them. Further, consumers manage multiple identities either by maintaining two conflicting identities simultaneously or by transiting from one identity to another.

In the fourth paper, Roshan Ajward investigates ethics in accounting, an important area of study which has re-emerged as an area of research in the aftermath of the recent global financial crisis, though at low intensity in the Sri Lankan context. In order to shed some light on this area the researcher uses a scenario-based questionnaire to collect data from a sample of professionals from the accounting and auditing disciplines. The findings show that the ethical perceptions of professionals differ according to the nature, direction, materiality and intention of the earnings manipulations involved. Further, it was revealed that the ethical perceptions of professionals are not impacted by the selected demographic factors considered in the study such as age, gender and educational and professional qualifications.

Though Sri Lanka has made significant advances towards gender equality, thanks to universal franchise and equal opportunities in education and employment, sexual harassment still seems to lurk in various forms in the local workplace. In her paper, Arsosha Adikaram probes different forms of sexual harassment that are fragmented through dialogue and information sharing among social networks involving friends, family, co-workers and sometimes superiors which sometimes transform the issue into an open, non-private and social phenomenon. A qualitative study based on the theory of social support accompanied by in-depth and focus group interviews, her findings will be of value to managers in dealing with sexual harassment in their organizations.

The penultimate paper, a case study on quality management, documents the implementation and implications of applying Six Sigma methodologies at a local wall tile manufacturing facility. Focusing on process inefficiencies resulting in defective items in the glazing and printing operations, the researchers D M A Kulasooriya and Nihal Kumarasinghe narrate how the systematic implementation of DMAIC, the five-step cycle, resulted in anticipated gains in production as well as cost savings. The case study with vivid descriptions provides a useful guide to managers to carry out similar experiments in their work settings. It is a known fact that many a workshop/seminar is conducted in Sri Lanka with large patronage but where the use of 'real life' examples are few and far between; this paper contributes towards bridging this gap.

The journal concludes with a review of The *Stronghold of Tradition and Tensions in Juxtapositions (Exploring the Sri Lankan MOD-TRADI Consumer)* by Dinuka Wijetunga. The review is a noteworthy attempt to build on Uditha Liyanage's previous work on the mod-tradi consumer with a view to developing a holistic body of knowledge on the subject. The reviewers Sumanasiri Liyanage and Chamari Jayani Wijayawardane aptly suggest areas that should draw the attention of those who venture to do further work in the area of study.

The Editorial Board wishes to place on record their appreciation of the efforts of the contributors, paper reviewers as well as those who were involved in desktop publishing and printing the journal. The continued support of the Board of Management of NSBM in this endeavor is also acknowledged.

Prof. Mangala Fonseka
Editor

Time-Varying Exchange Rate Exposure: Evidence From Emerging Markets

Prabhath Jayasinghe

Abstract

Using weekly data obtained from three emerging market economies, this study looks into the time-varying characteristic of exchange rate exposure coefficients. In doing so, unlike in some previous studies, exchange rate exposure is viewed through the eyes of an investor in the relevant country. The analysis is carried out using country-level stock indexes and trade-weighted exchange rates. Time-varying exchange rate exposure coefficients are obtained by estimating a multivariate BEKK-GARCH-M model with explicit focus on the non-orthogonality between exchange rate changes and market returns. The findings of the study indicate that, although they are likely to vary over time, exchange rate exposure coefficients of two out of the three cases follow mean-reverting long-memory processes. The presence of mean-reverting exchange rate exposure coefficients has important implications for investment and hedging strategies. In addition, time-varying exchange rate exposure coefficients turn out to be more volatile than respective market betas.

Keywords: fractionally integrated processes; International Capital Asset Pricing Model; multivariate GARCH-M models; time-varying exchange rate exposure

JEL Classification: C22; F31; F37; G12; G15

Introduction

The exposure of firms' profits to exchange rate changes, commonly known as exchange rate exposure, is three- fold: accounting, transactions and operating exposure. Accounting exposure refers to the change in value of a firm's foreign currency denominated accounts in response to a change in the exchange rate that occurred after the transaction had taken place. Transaction exposure refers to the changes in the value of the cash flows that stem from

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contracts entered into prior to a change in exchange rates and to be received/paid after the change in exchange rates. Finally, operating exposure refers to the change in a firm's future operating cash-flows caused by unexpected changes in exchange rates. The second and third elements of exposure are mostly considered together in the literature and are jointly called economic exposure. Following this common practice, the term 'exchange rate exposure' in this study refers to the two components known as 'economic exposure.'

Taking the firm value as a sufficient proxy for firms' expected cash flows, exchange rate exposure is commonly measured as the impact of exchange rate changes on stock returns. As such, exchange rate exposure is estimated using the equation suggested for capital asset pricing model (CAPM) augmented by another independent variable that represents exchange rate changes. The coefficient associated with the exchange rate changes is expected to indicate the firms' exchange rate exposure and is usually known as the exchange rate exposure coefficient. Following the tradition that the coefficient of the market returns is known as *market beta,* sometimes the coefficient of the exchange rate changes in such a specification is also known as *exposure beta* (Bodnar & Wong 2003; Dominguez & Tesar 2000, 2006).

This approach which does not allow for the time-varying nature of exchange rate exposure to be reflected in exposure coefficients implicitly assumes that exchange exposure remains unchanged over time. Nevertheless, there are several reasons for assuming that exchange rate exposure is time-varying. First, the share of exports and imports in industries may change drastically over time due to both external and internal factors[1]. Changes in demand due to the rise of new competitors in the international arena are an example of the former while the introduction of trade liberalization policies is an example of the latter. Second, as substitutes are being introduced, elasticity of demand for a country's exports and the competitive structure of industries are likely to change over time. Allayannis and Ihrig (2001) argue that the changes in competitive structure affect the exchange rate exposure of industries. Third, financial market deregulations and liberalization attempts may lead to changes in foreign investments in local financial assets which, in turn, affect the exchange rate exposure of a country's stock index. Fourth, the change in location of production of MNCs in response to persistent strong currency positions may lead to changes in the sensitivity of sectoral returns to exchange rate changes. Fifth, incidents like the 1997 and 2008 financial crises may lead to remarkable volatility changes in exchange rate markets.

[1] Allayanis (1997) observes that the status of some US industries change from net exporters to net importers within the same sample period.

This study examines the time varying nature of the exchange rate exposure of country level stock returns in three emerging market economies: Korea, Taiwan and Thailand. It also looks into certain aspects of the underlying the stochastic structure of exposure betas. While using the methodology adopted in Jayasinghe, Tsui and Zhang (2014), it goes a step further by incorporating two important features. First, this study uses weekly data to check the robustness of their findings which are based on daily data. One can argue that the evidence for time-varying exchange rate exposure associated with daily returns may not be a surprising finding because a day is a very short return horizon. Second, based on trade-weighted exchange rates of the relevant currency, the present study views exchange rate exposure through an investor in the relevant country whereas Jayasinghe et al. (2014) views exchange rate exposure through a US investor in terms of bilateral exchange rates between the US dollar and the relevant currency. As discussed in Section 3, the use of trade-weighted exchange rates is more appropriate within the Adler and Duma's (1983) ICAPM framework than the use of bilateral exchange rates.

An important empirical finding of the paper is that, although exchange rate exposure betas are likely to vary over time, in at least some cases, they follow mean-reverting long-memory processes. The presence of mean-reverting exchange rate exposure coefficients has important implications for investment and hedging strategies. However, in some emerging markets, the time-varying exposure coefficient is not mean-reverting and hence non-stationary.

The rest of this paper is organized as follows. The next section provides a brief literature review. This is followed by the conceptual framework of the study. Econometric methodology is elaborated thereafter. The next section presents the information related to the data and a preliminary analysis of the returns and exchange rate series. The main empirical findings are reported in thereafter followed by concluding remarks.

A Brief Literature Survey

In the exchange rate exposure literature, there are three groups of studies that capture the time-varying nature of exchange rate exposure in their analyses. The first group uses some simple statistical analyses for this purpose. For instance, Dominguez and Tesar (2006) divide the sample period into a few sub-periods and estimate an exposure coefficient for each sub-period. Williamson (2001) uses dummy variables to distinguish between sub-periods to observe that the exposure is time-variant. Alternatively, Entoff and Jamin (2003) use overlapping moving window regressions to show the time-varying behaviour of the exchange

rate exposure of a bunch of German firms. Bodner and Wong (2003) also use moving window regressions with various return horizons (1, 3, 6 and 12 months)[2].

The second group of studies uses pre-specified determinants of exposure to analyze the time-variation of exposure. Allayannis (1997) finds evidence that exchange rate exposure of US manufacturing industries varies systematically over time with the monthly share of imports and exports in the industry. Using an appropriate model to accommodate this relationship, the study cites evidence for time-variation of exposure in some 4 digit level SIC industries. He reports that the same data set at industry level show significant exchange rate exposure only when the exposure is assumed to be time-varying. Allayannis and Ihrig (2001) inquire into the same phenomenon in terms of three determinants of exposure: (a) an industry's competitive structure where it sells its products; (b) the interaction of the competitive structure of the export market and the export share; (c) the interaction of the competitive structure of the imported input market and its imported input share. Markups are used as a measure of the competitive structure. Bodner et al. (2002) suggest a somewhat similar model in terms of time-varying exchange rate pass-through, though they are not able to show any significant evidence for time-varying exposure. Chiao and Hung (2000) use the same determinants appearing in Allayannis (1997) to examine the time variation in the exchange rate exposure of Taiwanese exporting firms. In addition, they employ dummy variables to check whether exchange rate exposure is affected by the timing of three liberalization effects introduced within the economy. Bodnar and Gentry (1993) add a few more variables to the list of pre-specified determinants of exposure, namely, whether the relevant industry produces traded or non-traded products, the amount of internationally-priced inputs used and the industry's foreign direct investment. In attempting to find the determinants of the exchange rate exposure of Japanese firms, Chow and Chen (1998) use three proxies for the hedging incentives which, in turn, depend on firm size. In addition to aggregate export and import shares to GDP, Entorf and Jamin (2003) use the absolute distance between exchange rates and their long-run mean as a determinant of exposure.

The findings of the second group of studies are more appealing than those of the first group as they show the determinants of the time-variation in exposure as well. These include factors like time-varying export and import shares, markups and pass-through. Nevertheless, those studies are not without limitations. First, the studies that analyze the time-variation in exchange rate exposure in terms of a set of pre-specified variables implicitly rely on a somewhat questionable assumption that there are no other (left out) determinants of time-

[2] Dominguez and Tesar (2006) and Williamson (2001) employ Seemingly Unrelated Regressions (SUR). Bodnar and Wong (2003) rely on Generalized Method of Moments (GMM).

variation. However, mainly due to the absence of theoretical explanations of such relationships, there may be unidentified factors which are yet important in explaining the time-variation in exposure. Second, the unavailability of data for much shorter return horizons may force the researchers to ignore some determinants or use unsuitable proxies[3]. Moreover, if the return horizon in question is a day, the data for some variables may not be available with daily frequency. Third, the above studies seem to have neglected the impact of the time-varying volatilities which is one of the major and crucial determinants of model parameters and their time-varying element. Fourth, the underlying stochastic structure of the exchange rate exposure betas is largely left unexamined. For instance, such studies do not answer the question whether the time-varying exposure betas are mean-reverting.

The third group of studies, which include Hunter (2005), Lim (2005), Jayasinghe et al. (2014) and Long, Tsui and Zhang (2014) use time-varying second moments to derive time-varying exchange rate exposure coefficients. While Hunter (2005) analyzes the time-varying exchange rate exposure of small and large firms using Fama-French-type size-based portfolios, Lim (2005) derives the time series of both market and exposure betas at country level. More importantly, Lim allows for non-orthogonality between the factors, a feature that Hunter fails to accommodate. Unlike Hunter (2005) or Lim (2005), Jayasinghe et al. (2014) and Long et al. (2014) directly use the mean structure of conditional ICAPM theorized by Adler and Dumas (1983) and made econometrically feasible by De Santis and Gerard (1998) to derive time-varying exposure betas. They also look into certain aspects of the stochastic structure of exposure betas and report that time-varying exposure betas are likely to be mean reverting and follow long-memory processes.

Conceptual Framework

In a hypothetical world in which purchasing power parity (PPP) holds, exchange rate risk emanates solely from unexpected inflation. The asset holding of a representative investor in such a context is characterized by two types of portfolios: (a) a world market portfolio of risky assets; and (b) 'a personalized hedge portfolio which constitutes the best protection against inflation as [the investor] perceives it'. As such, the expected return on an asset may consist of two parts: the market premium which depends on the asset's world market risk and an additional premium which depends on its usefulness in hedging purchasing power risk. Assuming a world with $L + 1$ number of countries (and currencies), the expected excess return on equity i is formally expressed as:

[3] For instance, Allayannins and Ihrig (2001) make an assumption that markups vary on an annual basis, though they work with monthly data, due to the unavailability of markups on a monthly basis.

$$E_{t-1}\left(r_{i,t}\right) = \lambda_{m,t-1} Cov_{t-1}\left(r_{i,t}, r_{m,t}\right) + \sum_{l=1}^{L} \lambda_{\pi,l,t-1} Cov_{t-1}\left(r_{i,t}, \pi_{l,t}\right) \quad (1)$$

In Equation 1, $E_{t-1}(.)$ and $Cov_{t-1}(.)$ are expectations and covariances conditional on the current information set I_{t-1}; $r_{i,t}$ is excess return on a certain asset *i;* $r_{m,t}$ is excess return on world market portfolio; $\pi_{l,t}$ is the inflation rate in country *l.* The conditional covariance between $r_{i,t}$ and $r_{m,t}$ represents the world market risk and, as in the case of standard CAPM, $\lambda_{m,t-1}$ is known as the market price of risk. The conditional covariances between $r_{i,t}$ and $\pi_{l,t}$ represent both inflation and currency risk that stem from PPP violations. Specifically, $\lambda_{\pi,I,t} Cov_{t-1}(.)\ r_{i,t}\ \pi_{I,t}$ is the inflation premium that the investor demands for the co-movement between the asset's nominal return and the inflation in the l^{th} country.

A more parsimonious version of the above model can be obtained by adopting a trade-weighted exchange rate, which may represent the relationship between the currency of the country, to which the asset in question belongs, and L number of other currencies (Giurda and Tsavalis, 2004). Then L number of currency premiums can be replaced by a single currency premium as follows:

$$E_{t-1}\left(r_{i,t}\right) = \lambda_{m,t-1} Cov_{t-1}\left(r_{i,t}, r_{m,t}\right) + \lambda_{x,t-1} Cov_{t-1}\left(r_{i,t}, r_{x,t}\right) \quad (2)$$

where $r_{x,t}$ is the change in the relevant trade-weighted exchange rate in time *t.* The ICAPM relationship represented by Equation 2 can also be expressed as follows:

$$E_{t-1}\left(r_{i,t}\right) = \beta_{m,t-1} E_{t-1}\left(r_{m,t}\right) + \beta_{x,t-1} E_{t-1}\left(r_{x,t}\right) \quad (3)$$

Where $\beta_{m,t-1}$ and $\beta_{x,t-1}$ are market beta and the exchange rate exposure coefficient (beta), respectively. $\beta_{m,t-1}$ measures the asset's exposure to market risk while $\beta_{x,t-1}$ measures its exposure to currency risk. Viewed from this perspective, the time-varying nature of the second moments makes both betas time-varying. The intuition is that, while the expected returns on an asset is proportional to market returns and exchange rate changes, depending on the conditioning information that is publicly available at time *t*-1, the proportionality factors (market and exchange rate exposure betas) themselves are also time-varying. In other words, the investors are sensitive to 'the new information that periodically becomes available to [them], who then use it to adjust their investment strategies' (Harvey, 1991).

Within the above framework, the focus is on the return on financial assets in a few emerging markets. The return on the relevant country stock index is assumed to be a reasonable proxy

for the return on an asset in that country. The ICAPM relationship represented by Equation 2 is applied to each country. Viewed from this perspective, the return on a certain country stock index can be explained in terms of the covariance between the returns and the return on the world market portfolio and the covariance between the returns and the changes in the selected trade-weighted exchange rate. Obviously, this is a too simplified specification of the original Adler and Dumas (1983) model. However, the information loss that may stem from making the model simple has been neglected as the main objective of the study is to derive exchange rate exposure betas, but not to test the validity of the Adler and Dumas (1983) version of ICAPM[4].

Contrary to the common practice, returns are not converted into a common/reference currency. Returns on each country index are measured in the relevant local currency. A value-weighted world market index which is not converted into a common/reference currency has also been selected. The purpose of selecting indexes that are not converted into a common/reference currency is to obtain country level portfolios and a world market portfolio which are free from exchange rate fluctuations (MSCI, 1998). The author's reluctance to convert returns on country indexes and the world market index into a common currency is due to a few theoretical and empirical reasons. First, it helps to separate market risk from currency risk. As Giannopoulos (1995) argues, these two risks are not additive and conversion of various country stock index returns into a common currency will have an adverse impact on their volatility. Second, conversion of country index returns (the dependent variable) into US dollars using the exchange rate chosen would lead to inaccurate exposure coefficients because the changes in the same exchange rate is an independent variable in the regression[5]. Third, conversion of the returns on a world market index denominated in a common currency (mostly in US dollars) into local currency might have resulted in an unaffordable degree of multicolinearity between the two regressors. In addition to the resultant inefficient parameter estimates, it would also lead to unrealistic estimates of exchange rate exposure beta.

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[4] See De Santis and Gerard (1998) and Cappiello et al (2003), for attempts to test the validity of ICAPM using a set of countries and a number of relevant exchange rates.

[5] Strictly speaking, this exercise is done using the exchange rates moderated by the base year rate. However, there exists a strong correlation between a series converted using the moderated exchange rates and a series converted using the current rates.

Econometric Method

Assuming constant prices for market risk and currency risk[6] and that the market returns and exchange rate changes are not necessarily orthogonal, a trivariate BEKK-GARCH (p, q, K)-M model is employed to estimate time-varying exchange rate exposure coefficients.

$$r_{j,t} = \lambda_{0,j} + \lambda_X h_{X,t} + \lambda_M h_{M,t} + \theta_j \varepsilon_{j,t-1} + \varepsilon_{j,t} \quad (4)$$

$$j = i, m, x$$

$$z_t = \varepsilon_t H_t^{-1/2} \quad (5)$$

$$\varepsilon_t \mid I_{t-1} = (\varepsilon_{i,t} \varepsilon_{m,t} \varepsilon_{x,t})' \mid I_{t-1} \sim N(0, H_t)$$

$$H_t = C'C + A'\varepsilon_{t-1}\varepsilon_{t-1}'A + B'H_{t-1}B \quad (6)$$

$$H_t = \begin{bmatrix} H_t^{uu} & H_t^{uv} \\ H_t^{vu} & H_t^{vv} \end{bmatrix} \quad (7)$$

$$\mathrm{B} = \left[H_t^{vv} \right]^{-1} H^{vu} \quad (8)$$

where $r_{j,t}$ is 3x1 vector that consists of three elements: return on country index at time t ($r_{i,t}$), return on world market portfolio at time t ($r_{m,t}$) and changes in trade-weighted nominal exchange rate between the currency of country i and other currencies at time t ($r_{x,t}$)[7]. An intercept and a MA (1) term is included in each of the three mean equations in order to capture any remaining risk or market inefficiencies. ε_t is a 3x1 vector of residuals from mean equations in (4), which are assumed to be normally distributed with mean 0 and variance H_t, which is a 3x3 variance-covariance matrix. And, $\varepsilon_t \mid I_{t-1}$ denotes the vector of random shocks at time t given all available information at time (t-1). In addition, $h_{X,t}$ and $h_{M,t}$ are 3 x 1 vectors that consist of the elements in the second and the third columns of H_t, respectively[8]. Finally, z_t denotes the standardized residuals that are assumed to be identically and independently distributed with mean 0 and variance 1.

Parameters λ_M and λ_X are market price of risk and currency price of risk, respectively. C is an upper triangular 3x3 matrix that contains the constants in conditional variance and covariance

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[6] Constant prices can be justified on the grounds that the suggested model is just a data generating process to obtain time-varying market and exchange rate exposure betas in terms of time-varying second moments.

[7] The exchange rate is expressed as the local currency price of foreign currency and an increase implies a depreciation of the relevant currency relative to the other currencies.

[8] Since we allow for non-orthogonality between market returns and exchange rate changes, a non-zero $h_{xm,t}$ term enters into mean equations for market returns and exchange rate changes.

equations. Both A_{kl} and B_{kn} are 3x3 parameter matrixes. Although the use of a trivariate model offers the opportunity to capture the interdependence between the volatilities in terms of non-zero off-diagonal terms in parameter matrices, we make the restrictive assumption that parameter matrixes A_{kl} and B_{kn} are diagonal for two reasons. First, the full BEKK formulation is less parsimonious and computationally tedious[9]. Second, as the results of diagnostic tests reported in Section 5 show, the suggested diagonal version of the model sufficiently captures the non-linearities in stock returns and exchange rate changes. For parsimony, it is assumed that K=1. As a residual analysis based on the Ljung-Box statistic reveals, the optimal lag orders for GARCH and ARCH terms are as follows: p=1, q=1.

Time-varying betas can be obtained through Equations 7 and 8. In Equation 7, H_t^{uu}, H_t^{vu} and are the conditional variance-covariance matrixes of the assets to be priced, the factors with which the assets are priced, and between the assets and factors, respectively.

Assuming that the standardized residuals of the suggested trivariate GARCH model are conditionally normally distributed, the conditional log-likelihood of residual vector ε_t at time t can be defined as follows:

$$\ell(\phi)_t = -\frac{1}{2}\ln(2\pi) - \frac{1}{2}\ln|H_t| - \frac{1}{2}\varepsilon_t' H_t^{-1}\varepsilon_t \qquad (9)$$

The log-likelihood function of the sample is obtained as $L(\phi) = \sum_{t=1}^{T} \ell(\phi)_t$, where T is the number of observations. The parameter vector φ of the trivariate BEKK-GARCH (1, 1, 1)-M model is estimated by maximizing L with respect to φ. In order to accommodate the non-normal features reflected in the basic statistics of country returns and exchange rate changes, all estimates of the parameters are obtained through the quasi-maximum likelihood (QML) estimation method proposed by Bollerslev and Wooldridge (1992). Under certain regularity conditions, the QML estimate is assumed to be consistent and asymptotically normal. Therefore, statistical inferences can be drawn due to robust standard errors. The required computer programmes are coded in GAUSS and use BHHH algorithm to compute QML estimates.

Data

The data relate to three emerging economies: Korea, Taiwan and Thailand. Weekly closing stock prices obtained on Wednesdays for the period from December 30, 1998 to 30

[9] In our initial round of regressions, we found that the full BEKK model did not converge in some cases.

December 30, 2006 were used[10]. The resultant sample period results in 418 observations. All stock indexes are from Morgan Stanley Capital International (MSCI) and extracted from Datastream. Country level portfolios are represented by MSCI country indexes measured in the relevant local currency. The world market portfolio is represented by the MSCI world market index MSWRLDL. It is a value-weighted world market index which is not converted into a common/reference currency and, therefore, free from exchange rate fluctuations (Giannopoulos, 1995; MSCI, 1998). All trade-weighted exchange rates are from J P Morgan and extracted from Datastream.

Continuously compounded weekly returns and exchange rate changes are calculated as follows:

$$r_{j,t} = \ln\left(R_{j,t} \Big/ R_{j,t-1} \right) * 100 \qquad j = i, m, x$$

where $R_{j,t}$ and $R_{j,t-1}$ are the stock prices/exchange rates for the week t and (t-1) respectively. *i, m* and *x* denote the country in question, world market portfolio and the relevant exchange rate, respectively.

All return series show excess kurtosis which ranges from the lowest 0.4755 (Korea) to the highest 1.9398 (Thailand)[11]. The Jarque-Bera statistic is high in all cases except for Korea. Exchange rate changes show somewhat higher excess kurtosis ranging from 2.5770 (Taiwan) to 5.6381 (Thailand). In all three cases, excess kurtosis of the exchange rate changes is greater than that of the returns on the relevant country index. The high Jarque-Bera statistic together with excess kurtosis in some cases implies that the exchange rate changes are not normally distributed. The non-normal features of both country stock returns and exchange rate changes justify the use of the QML method of estimation.

As evidenced by the augmented Dicky-Fuller test, continuously compounded returns on all country indexes and the world market index and exchange rate changes are stationary. The Ljung-Box test for returns evaluated at 20 lags (Q (20)) reveals that there are no linear dependencies. Exchange rate changes for all three economies show the same pattern and are free from linear dependencies. However, the Ljung-Box test for squared returns evaluated

[10] The financial crisis period is excluded from the sample in order to avoid the impact of unusual currency moments. Though we attempted to include Singapore and Australia in the sample, the exchange rate exposure coefficients of the country level stock returns of these economies are not significant for weekly return horizons.

[11] To conserve space, results are not shown here.

for 20 lags (Q^2 (20)) displays that all returns and changes in exchange rate series possess a great deal of non-linear dependencies. This provides some empirical support for the use of GARCH-type models to derive time-varying exchange rate exposure betas.

Empirical Findings

In this section, the results of a few tests that provide evidence for the likeliness of time-varying or unstable parameters in the selected sample have been reported. From this pre-estimation assessment, we move on to deriving time-varying exchange rate exposure coefficients and some diagnostic checks for adequacy of the proposed model to derive exposure coefficients. This is followed by a brief investigation of the stochastic structure of time-varying exposure coefficients.

Some Pre-Estimation Results

A few tests were used to show that countries selected the sample are more likely to possess time-variant (unstable) exchange rate exposure coefficients. All tests are based on OLS estimation of the conventional augmented market model that is widely used to estimate exchange rate exposure[12]. The first such test is the cumulative sum of squared recursive residuals (CSSRR) test suggested by Brown et al. (1975). The CSSRR test is performed at the 5% level of significance. During the sample period, the CSSRR crosses the critical value boundaries in all cases, thus suggesting the underlying parameter instabilities[13]. White's (1980) test for unconditional heteroskedasticity and ARCH-LM test for conditional heteroskedasticity are used to diagnose possible parameter instabilities. White's test statistic is significant in all cases except for Korea at 5 degrees of freedom at the significance level 1%, suggesting the presence of unconditional heteroskedasticity. The ARCH-LM test statistic for 4 lags is significant for all the cases at the significance level 1%. Results from all three tests suggest that the parameters in the specification represented by Equation 3 are highly likely to be time-variant.

Time-Varying Exchange Rate Exposure Coefficients

The maximum likelihood estimates for the suggested trivariate BEKK-GARCH (1, 1, 1)-M model are reported in Table 1. According to ICAPM reasoning, the market price of risk (λ_M) must be positive and the same for all countries. However, there is no such restriction for the

[12] This refers to the constant parameter version of the regression equation in (3).

[13] To conserve space, results are not shown here.

currency price of risk (λ_X). As the estimation results reported in the very first row of Table 1 indicate, λ_M is positive and does not vastly vary across countries. More specifically, λ_M is not statistically significant in any of these three cases. Unlike market price of risk, λ_X varies remarkably across countries between the range 0.1623 (Korea) and 0.5657 (Taiwan). Since the relevant exchange rate varies across countries, this variation in the parameter can be understood. In all cases, currency price of risk is also not statistically significant[14].

Table 1: Maximum Likelihood Estimates for the Proposed Model

Coeff	Korea	Taiwan	Thailand
λ_M	0.0094	0.0091	0.0218
	(0.31)	(0.20)	(0.63)
λ_X	0.1623	0.5657	0.2659
	(0.72)	(0.82)	(1.00)
b_i	0.9812*	0.9661*	0.9776*
	(211.38)	(5.94)	(66.03)
a_i	0.1706*	0.2406	0.1783*
	(6.45)	(0.43)	(2.70)
b_x	0.8840*	0.8266*	0.9265*
	(13.45)	(4.02)	(12.91)

Notes: The reader is referred to the set of Equations 4 - 8 for the relevant model; t-values are in parenthesis; * indicates the significance at %5 level. Due to convergence problems, the sample period for Taiwan is taken as March 1, 1999-December 30, 2006.

Furthermore, all GARCH terms (denoted by b_j for $j=i,m,x$) are highly significant, suggesting that the conditional variances are highly correlated to the past conditional variances. All ARCH terms (denoted by a_j for $j=i,m,x$) are also significant except in one case suggesting the presence of volatility clustering in both stock and exchange rate markets of all three countries.

The diagnostic checks for the estimated model, results of which are not shown here for reasons of space, reveal that linear and non-linear dependencies have been adequately captured by the proposed trivariate BEKK GARCH(1,1,1)-M model. Ljung-Box statistics for standardized and squared standardized residuals evaluated for 20 lags *(*Q(20) and Q^2(20) are not only well below the critical value of 31.481 at the 5% level, but are significantly lower than those of the return and exchange rate series. These results imply that the suggested model adequately filters linear and non-linear dependencies and is appropriate for deriving reliable estimates of time-varying exchange rate exposure betas.

[14] These results are consistent with the previous findings in the literature. For instance, De Santis and Gerard (1998) and Cappiello et al. (2003) also find that both market and currency premiums are insignificant as long as the prices are not allowed to be time-variant.

The Stochastic Structure of Exchange Rate Exposure Coefficients

Table 2 compares the mean values of time-varying exchange rate exposure betas and their OLS point estimates. The mean value of each series is reasonably close to the relevant OLS point estimate.

Summary statistics of exchange rate exposure betas are reported in Panel A of Table 3. Standard deviation of exposure beta series ranges from 0.3885 (Korea) to 0.7447 (Taiwan). All exposure beta series are positively skewed and leptokurtic. A comparison between Panel A and B in Table 3 indicates that the standard deviation of exchange rate exposure beta is usually higher than that of market beta. In all three cases, kurtosis of each exposure beta distribution is also always higher than the kurtosis of its counterpart market beta distribution. This suggests that an exposure beta distribution tends to have more outliers than the outliers in its counterpart market beta distribution.

Table 2: OLS Point Estimates of Betas and the Mean Values of Time-Varying Coefficients

Country	Market beta	Exchange Rate Exposure beta		
	OLS β_m	Mean of $\beta_{m,t}$	OLS β_x	Mean of $\beta_{x,t}$
Korea	0.8807	1.0516	1.2112	0.9318
Taiwan	0.7084	0.8813	2.0817	1.7347
Thailand	0.6227	0.7616	1.6996	1.4858

Table 3

Panel A: Preliminary Statistics of Time-Varying Exchange Rate Exposure Coefficients

Coefficient	Korea	Taiwan	Thailand
Mean	0.9318	1.7347	1.4858
Maximum	2.2004	5.3367	4.9305
Minimum	-0.0916	0.0310	0.0439
S D	0.3885	0.7447	0.7195
Skewness	0.3480	2.1149	1.7795
Kurtosis	3.1422	9.4108	9.0372
J-B stat	8.74	973.33	851.34

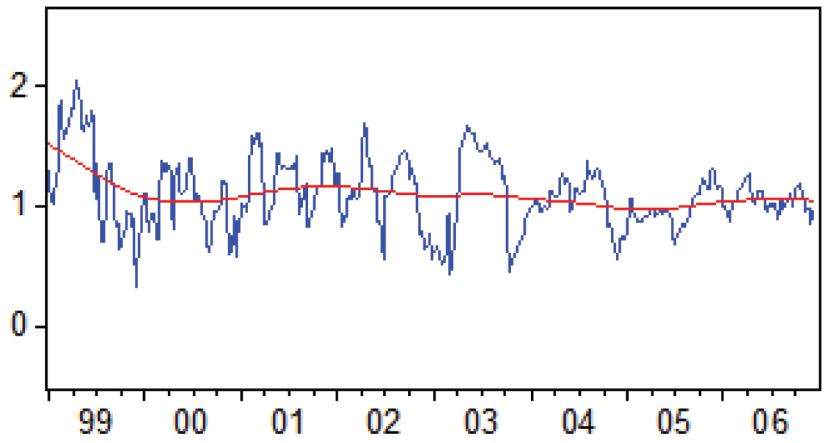
Panel B: Preliminary Statistics of Time-Varying Market Betas

Coefficient	Korea	Taiwan	Thailand
Mean	1.0517	0.8823	0.7616
Maximum	1.6052	1.3209	1.6454
Minimum	0.4760	0.2796	0.2501
S D	0.2322	0.2019	0.3049
Skewness	-0.2576	-0.3678	0.5402
Kurtosis	2.4129	2.8611	2.7460
J-B stat	10.57	9.24	21.35

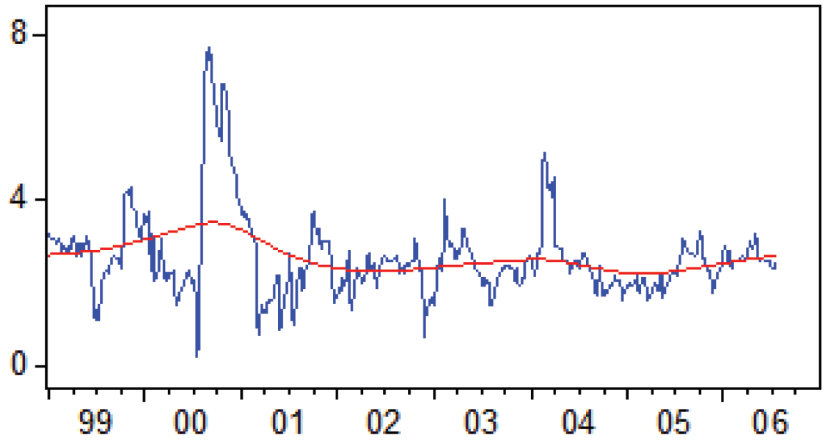
Figure 1 provides a visual glimpse of all time-varying exposure coefficients. Since estimates of weekly time-varying betas may be 'still volatile and inevitably subject to estimation error' (De Santis & Gerard 1998), the Hodrick-Prescott filtered trends of betas are also included in Figure 1. Each exposure beta seems to fluctuate within a wide range.

Figure 1: Time-varying Exchange Rate Exposure Coefficients

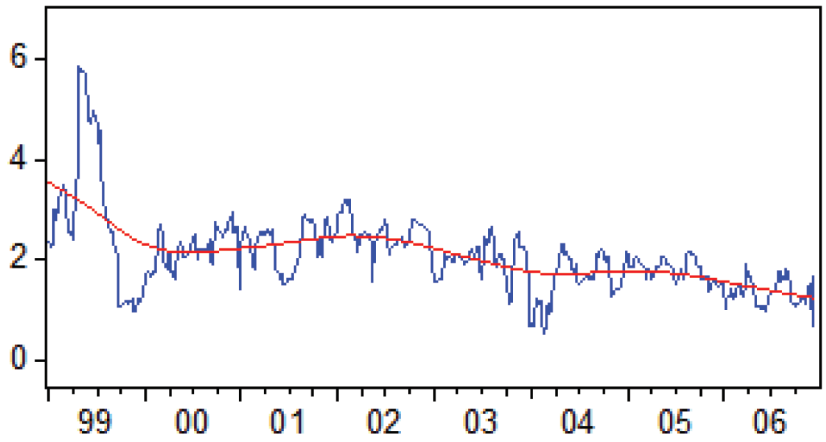
(a) Korea



(b) Taiwan



(c) Thailand



Next, whether the exchange rate exposure coefficients are mean-reverting and stationary was examined. Widely used semi-nonparametric Gewek and Porter-Hudak (1983) test was employed for this purpose[15]. In order to see the sensitivity of the estimates of the fractional difference parameter *d* to the choice of α, three values of α were used here: 0.50, 0.55 and

[15] In $I(\omega_s)=c+\phi\ln(4\sin^2(\omega_s/2))+\zeta$ for s=1,2,.....n(T) where *T* is the number of observations in the series concerned; $I(\omega_s)$ is the periodogram of a series at harmonic frequency $\omega_s=(2\pi\ s/T)$ with *s*=(1,2,.....*T*-1; ζ is random error; *n* represents the number of low frequency ordinates and is usually determined as $n=T^{\alpha}$. OLS estimation of φ provides a consistent estimate of -*d* in the ARFIMA process $\phi(L)(1-L)^d y_t=\Theta(L)\upsilon_t$ where $\upsilon_t \sim(0,\sigma^2)$.

0.60. First, a one-sided test was performed to check the validity of the null hypothesis of $d = 0$ against the alternative of $d > 0$. The null was rejected at the 5 % level for all three cases suggesting that all exposure coefficient series are more likely to be represented by an ARFIMA process. Then a second one-sided test was performed for the null hypothesis of $d=1$ against the alternative of $d < 1$. Test results for exchange rate exposure coefficient are reported in Table 4. The null is rejected at the 5% level for Korea and Taiwan under all three α values. However, null is accepted under all three α values for Thailand suggesting the presence of unit roots. Korea shows a difference parameter d that is less than 0.5 when α=0.5 and α=055. Taiwan shows a difference parameter d that is less than $\alpha = 0.5$ only when .

Table 4: GPH Test Results for Time-Varying Exchange Rate Exposure Coefficients

Country	Value of difference parameter *d*		
	$\alpha = 0.50$	$\alpha = 0.55$	$\alpha = 0.60$
Korea	0.3331*	0.3314*	0.5932*
	(-2.74)	(-3.74)	(-2.51)
Taiwan	0.4638*	0.6836*	0.5896*
	(-4.07)	(-2.28)	(-3.68)
Thailand	0.8189	0.8275	0.7914
	(-0.89)	(-1.03)	(-1.67)

Notes: d represents ϕ in the regression equation; In $I(\omega_s)=c+\phi \text{In}(4\sin^2(\omega_s/2))+ \zeta$; t-statistics are in parentheses; * indicates the significance at least at the 5% level

The findings from the GPH test can be summarized as follows. First, all time-varying exchange rate exposure coefficient series consistently reject hypothesis $I(0)$. It suggests that all exposure coefficients in the sample are characterized by a $I(d)$ process with $0 < d < 1$ or a unit root process. Second, in the case of Korea and Taiwan, hypothesis $I(1)$ is rejected. The fact that the difference parameter d for exposure beta series in those two countries is greater than 0 and less than 1 implies that they are mean-reverting. However, the impact of a shock on exposure betas is likely to decay hyperbolically, which is much slower than a rapid geometric decay represented by a standard ARMA process. On the contrary, hypothesis $I(1)$ is accepted for Thailand meaning that the difference parameter d for exposure beta is more likely to be greater than 1. Third, though exposure betas of Korea and Taiwan are mean-reverting, they are more likely to show covariance non-stationary dynamics.

Overall Implications

Evidence for time-varying exchange rate exposure partly explains why past studies that use time-invariant exchange rate exposure beta estimation techniques show a lack of evidence for exchange rate exposure at firm, industry and country level. Incorporating the time-varying nature of exchange rate exposure into investment decision making are more likely to improve the accuracy of their decisions.

Exposure beta associated with the relevant trade-weighted exchange rate is positive in all three emerging markets. The intuition is that importers or investors whose consumption basket consists of a lot of imported goods from these countries cannot hedge against currency risk by investing in stocks in those markets. This is because returns on stocks in those countries are positively correlated with the depreciation of local currency (or appreciation of the importers' currency). However, the exporters to these economies can hedge against currency risk by investing in stocks in these emerging markets for the same reason.

As the GPH test results show, exposure betas of Korea and Thailand are likely to be mean-reverting whereas those of Thailand are not. Mean-reverting exchange rate exposure betas have both theoretical and empirical implications. First, since returns are linear functions of betas (that represent exposure to market risk, currency risk or any other risk), it is argued that mean reverting betas are an essential element in ensuring the stationarity of returns. Second, the absence of mean reversion makes the notion of equilibrium have little relevance even in the long-run (Lai, 1997). Third, mean reverting exposure betas imply that these coefficients can be used for forecasting purposes. This may be extremely important news for hedging against currency risks.

Derived exchange rate exposure beta series (or distributions) can be used as a useful source of data for further analyses which are helpful for those who are engaged in cross-country investments in their decision making. First, those series can be used to compare the exchange rate risk between countries using the stochastic dominance criterion . Second, time varying market and exchange rate exposure betas can be used to examine the relationships among market, currency and total risk premiums in each country.

Concluding Remarks

A trivariate BEKK-GARCH (1, 1, 1)-M model based on a conditional ICAPM framework has been used to obtain time-varying exchange rate exposure betas. This approach does not require a prior understanding of the determinants of the time-variation of exposure beta to

obtain the estimates of the same. Also, the suggested approach is more appropriate than the GARCH-based methods that use inappropriate mean structures in deriving time-varying betas. As the mean structure in such models does not represent a relevant ICAPM, the resultant information loss may lead to inaccurate estimates.

In deriving time-varying exchange rate exposure betas, the need to take the non-orthogonality between exchange rate changes and market returns into account has been emphasized. A portion of exchange rate exposure is always captured by market beta and is also priced under the label of market risk. What counts for the decisions of firms and investors is the portion of exchange rate exposure that is not captured by market beta and hence not priced under market risk. As such, the estimated time-varying exchange rate exposure betas are more reliable than those in the studies that do not take this non-orthogonality into account.

The examination of the stochastic structure of the time-varying exchange rate exposure betas offers some useful insights. As evidenced by their basic statistics, exposure betas are usually more volatile than market betas. And, as compared to the market beta series for each economy, exposure beta series tend to have more outliers. Results from the GPH test reveal that exposure betas of Korea and Taiwan are long-memory processes characterized by fractional integration. Exposure beta in both cases turns out to be mean-reverting though their mean reverting dynamics could be highly persistent and display a slow hyperbolical decay. As for the covariance stationarity, however, we did not obtain unambiguous results and the matter is left for future research. Exposure beta of Thailand is characterized by a unit root process and non-stationarity.

A possible limitation of the study is that these conclusions are based on the sample period from December 30, 1998 to December 39, 2006. However, two remarks in relation to this are worth mentioning. First, as mentioned in Section 5, selection of this sample period was partly due to the need to avoid the period of financial crisis, during which the behaviour of the variables in question were far from normal. Second, though the reliance on an old data set may look like a data mining attempt in suggesting the presence of time-varying exchange rate exposure in those markets, it hardly matters in demonstrating a more appropriate approach to compute time-varying currency betas and analyze their stochastic structure, which is the main contribution of this paper to the literature.

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Knowledge Management for Service Innovation: A Study of Sri Lankan Business Service Organizations

K A S K Kariyapperuma

Abstract

The world is moving fast from a production-based economy towards a knowledge-based one. As a result, organizations are becoming more knowledge-intensive and are increasingly dependent on innovative knowledge to create value. Therefore, the question of how activities should be organized in order to generate and exploit new forms of knowledge is very important. The main objective of this research is to explore practice-based innovation (or how this is done) in service sector organizations. Building on qualitative data from five business service sectors, the analysis identified three work activities through which knowledge for innovation is generated, showed how they constitute a common ground for knowledge creation and redefined practice as a coherent frame for these activities. The three work activities are routine designing activities, participating in the whole flow of designing, using and reflecting in action. Further, the study explains how conventional organizing destroys this knowledge. In addition to the main findings, this research identified the key factors that influence knowledge management and innovation in Sri Lankan service sector organizations. Of clear importance are strong internal linkages, open and less hierarchical structural elements, an open and positive organizational culture, strong knowledge dissemination, the availability of an expert and skilled work force, carrying out internal R&D, technological exploration, internal systems and processes. The study makes both an empirical contribution to the emerging work on service innovation on the basis of knowledge intensiveness, and by extending a theory grounded in the existence and role of practice-based knowledge.

Keywords: knowledge intensiveness, knowledge management practices, service innovation

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Introduction

Today service organisations offer tremendous potential for growth and profitability in the global economy. Service industries have expanded rapidly in the recent decades and comprise more than 70% of the gross domestic product (GDP) of all developed nations (OECD 2014).

In fact, in advanced economies services account for about two thirds of employment (OECD 2014). In the Sri Lankan context, in terms of value added, manufacturing has remained roughly constant at 31 percent of GDP, while the value addition of agriculture has declined to 10.5 percent with the service sector having a share of 58.5 of GDP (Central Bank Report 2014) indicating that the growth of the service sector is likely to continue. Even economies with a strong focus on manufacturing are shifting to service-oriented societies (Meffet & Bruhn 2009). Now services have become the source of sustainable and strategic competitive advantage rather than competition on the basis of physical products.

It is believed that organizations must constantly develop new services to be able to compete in changing environments and thus achieve performance which requires innovation. (Teece, 2007, Popelpub 2011). Further, service organizations require service innovation for sustained growth, for raising the quality and productivity levels of services, responding to changing customer needs and expectations, or standing up to superior competitive service offerings (Miles 2005, Das et al. 2006, Spohers et al. 2008, Consoli 2009, Consoli & Elche-Hortelano 2010,). They face a principal challenge: to '...offer the marketplace continuously improved, if not new, services' (Bullinger et al. 2003). Service innovations are value propositions not previously available to the customer and result from changes made to the service concept and the delivery process.

However, the status of innovation in both the service and manufacturing sectors in Sri Lanka at the moment is generally considered weak even by the standards of a developing country (Vitharana 2011). Making a presentation at the recently held 18th annual general meeting of the National Chamber of Exporters of Sri Lanka, Kelegama (2012) mentioned that the country's export performance relating to both the industrial and service sectors since 2000 has not been 'satisfactory' due to lack of innovation and limited markets. The poor state of innovation is reflected in all the innovation indexes prepared by different world national forums. In the Global Innovation Index, in 2014, Sri Lanka ranks 105th , down from 98th place in 2013 and 94th place in 2012; it is continuously declining. Its drop in the ranking is the result of the relatively poor performance of innovation on the input side where it came in at 125th place in 2014 among 142 countries. .One of the key findings of this report

(Global Innovation Index – GII, 2014) was that all the top ranking countries in the GII have invested comparatively higher amounts of resources to develop service sector innovation capabilities. Countries such as Singapore, Finland and the Netherlands that have proactively built innovative capability for the service sector have prospered.

In contrast, the limited focus on innovative capability constrained the progress of countries such as Sri Lanka and Greece (Innovative Input Index, Sri Lanka, 125th). The poor state of innovation is reflected in the very fact that it took sixty years since independence in 1948 for a national policy on innovation to be adopted in May 2009. The history of attempting to design and adopt a national innovation policy dates back to the 1960s and the final outcome related only to science and technology. Service innovation was merely seen as a subset of technological innovation or similar to innovation in manufacturing. The role of innovation in the service sector has been underappreciated.

For the above reasons, policy makers and business leaders alike now have a tendency to promote growth in the service sector in Sri Lanka. However, insufficient understanding of service management, especially in service innovation that is believed to be the new engine of economic growth in sectors such as financial, hospitality and Information and Communication Technology (ICT), may reduce the enormous benefits that can be gained from the service sector. It will hamper the growth of the Sri Lankan economy.

Research Problem

Successful service innovation requires the integration of the organization's resources and bundles of capabilities to meet customer needs. They involve understanding how the complex processes of designing services interact with the complex processes of using services (Leonard-Barton 1995). Knowledge of designing new services and using services is ambiguous since technologists often cannot say how different service designs might work without trying them out while customers cannot say what they need without trying the service either. To help this ambiguous knowledge for designing new services to surface , researchers have developed techniques for services that rely on hands-on interaction between innovators and potential customers, such as the early release of new software so that users can discover limits (Ianseti 1998) and teams can visit customers (Dougherty 1992).

Service organizations face two specific challenges when it comes to the ambiguous knowledge of designing and using service innovations surfacing. Both challenges arise from the intangible, heterogeneous, simultaneous, relational and continuous nature of services

(Yakura 2001). The first is determining what should be organized in the first place to generate new knowledge for designing new services. This is deeply and continuously intermeshed with using services, so one cannot simply organize separate venture teams, and one cannot ignore the intermeshing once the service is produced to specifications. Knowledge for new services literally exists in 'daily operations' (Itami 1987), or in the practice, which implies that services must organize everything to capture the necessary knowledge. To overcome this challenge, it is necessary to identify the kinds of activities that are most crucial to the production and capture of designing and using knowledge.

The second special challenge for service innovation is strategic. While all innovations should be framed strategically, innovation in services is more deeply intermeshed with strategy. Competitive and market pressures are forcing many service firms to provide a 'complete solution' or a more complex, end-to-end package of activities (Meyer & DeTore 2001). According to Dankbaar (2003), service innovation concerns introducing order from a strategic perspective since allowing every client encounter to be unique produces only variation, not innovation. Services must be deployed systematically across clients to ensure quality, keep costs down and absorb new knowledge from particular applications so that the offerings can be continuously enhanced in the face of strong competition (Lowendahl 2000).

Thus, to generate and exploit knowledge for innovation, service firms must organize their work to capture the horizontal flow of designing and using, as well as the vertical flow of strategic focus and unique deployment. This study was based on the literature which considers work as practice because researchers have found that a significant amount of knowledge for service innovation is embedded in the actual practice of innovation. The practice perspective provides a view of work that fits services, but differs significantly from more established views. The traditional view conceptualizes work as a static slice of specialized labour and jobs as pre-defined activities to be executed without ambiguity. These views overlook the continuous flows of activities that comprise work by focusing on outcomes rather than on the activities through which people produce those outcomes. The traditional view of work also emphasizes the knowledge that exists in routines or expertise, and do not address the kind of knowledge that is continuously generated in practice. The literature on practice is also incomplete, which is why more theories are necessary. The current literature is based on a limited view of practice, does not connect practice to managerial issues of innovation and competitive advantage, and does not address how to organize practice for strategic ends.

Thus, the present study explores how work in service organizations can be organized to capture and exploit the knowledge that is necessary to create new services. In addition, under the broad area of knowledge management it is expected to explain why conventional organizing operates as an anti-practice strategy that eliminates the common ground and de-legitimates the continued articulation of practice. Finally, the researcher tries to identify other internal factors that influence practice-based knowledge management and its influence on service innovation in the Sri Lankan context. The result of this study can be tested, elaborated and corrected in subsequent research, providing a pathway for advancing the theory of practice-based knowledge management for service innovation.

Literature Review

At the outset, the core concepts of services and service innovations are defined and described. This is followed by a narration factors affecting service innovation and thereafter aspects of capturing practice-based knowledge for innovations in business services.

Services

The literature provides a wide variety of definitions for "services". One of the earliest attempts to codify services was to define what services are not. For example, Quinn and Gagnon (1986) defined services as those economic activities in which the primary output is neither a product nor a construction. While some definitions highlight services as an activity or performance in order to solve a specific issue of the customer (e.g. Kotler 1999) others describe services as a bundle of competencies that have to be delivered (e.g. Gadrey et al. 1995). More recent literature emphasizes the interaction of service customers and service producers (Gronroos 2007). According to these definitions, the goal of a service is to provide a solution to a customer problem while making use of human-centred competencies and capabilities. However, this solution only transfers the customers' perception of reality; the outcome does not result in actual ownership. Furthermore, during the service delivery process, cooperation between client and provider plays an essential role and influences the customer's perception. Based on these foundations, and in line with Hertog et al. (2010), services can be defined as an experience or a solution for the specific issue of a customer. This definition includes all the elements of services that innovation can include and therefore is applicable to the whole service industry. This is relevant in the context of the present study

Service Innovation

Service innovation is an activity that incorporates ideas and knowledge into new or existing services to satisfy customer demands (De Jong & Vermeulen 2003). As defined by Eurostat (1995), innovation in the services sector comprises new services as well as significant changes in services or their production or delivery. It concerns both the introduction of new services (proposed to firms or to individuals) and the reconfiguration or improvement of existing services (Miles 2005). Service innovation is different from product innovation because of the characteristics of service -intangibility, heterogeneity, perishability, and inseparability (IHIP) (Zeithaml, Parasuraman & Berry 1990).

This unique nature of services means that service innovation may be very different from product innovation. For instance, interaction with the customer in the service development process makes the development of a new service far more complex than the development of a new tangible product (Johne & Storey 1998). Due to its intangible nature, the development of a new service usually takes significantly less time (Griffin 1997) and requires fewer investments in physical assets. But they are less protected from direct imitation by competitors (Terrill & Middlebrooks 1996).

They are usually interactive (client-intensive) whereby high levels of contact occur between service supplier and client in the service activity (Miles 2005). Innovation occurs as a result of such interactivity, which often means that service products are customized to the client's specific needs.

Factors Affecting Service Innovation

Researchers studying what factors determine or influence innovation (Damanpour 2001, Wolfe, 2004, Tidd et al. 2005) suggested the individual factor, the organizational factor, and the contextual factor. Kwon and Mud (2007) classified variables affecting technology adoption into individual, task-related, innovation-related, organizational, and environmental characteristics. Tornatzky and Fleischer (2006) suggested that the adoption and implementation of technological and administrative innovation would be affected by the technological context, organizational context, and the external environmental context. Scupola (2003) used technological, organizational, and environmental characteristics to explain innovations in the service sector.

Capturing Practice-based Knowledge for Innovations in Business Services

Practices

Practice is not simply about tacit knowledge, expertise or experience, but is rather about the artful, skilled combination of these along with knowledge of routines, procedures and equipment in the situation (Dougherty 2004). For example, experience affects people's ability to comprehend insights generated in practice. It would be useful to explore the kinds of experience that may enable or disenable practice-based knowledge in the business world of services (Carlile 2005).

The Practice-based Perspective of Knowledge

The concept of practice as epistemology interconnects multiple perspectives and negotiations, addressing the link between knowledge and practice, and practice as the generative source of knowledge for innovation. The practice lens is an 'original and distinctive critique of the modernist conceptions of knowledge' (Gherardi 2009, p. 115). '….It has a constructive ontology and disagrees with cognitivism and rationalism because it defines knowledge as a practical and situated activity, rather than as a "transcendental account of a decontextualized reality"' (Gherardi 2009, p. 124). Knowing is not separated from doing and the practice-based perspective connects both. According to this perspective, knowledge is the situated product of work practices. Based on this, Lave (1988, pp. 180-181) defined knowledge as 'a situated knowing constituted by a person acting in a particular setting and engaging aspects of the self, the body, and the physical and social worlds'. Therefore, the work of creating knowledge for strategies and innovation is a practice that is situated, the actions within this practice are emergent and thus dependent on a variety of inter- dependent factors that occur in the moment of knowing and of fulfilling knowing needs. From this perspective, activities and knowing always have a 'where' and a 'when'; they are always situated (Nicolini et al. 2003, p. 27).

Gherardi (2003, p. 357; 2006, p. 39) summarized the core aspects of a practice-based epistemology into knowing and knowledge as being the following: (a) Knowledge is constructed by situated practices of knowledge creation and by the use of technologies for representing and mobilizing knowledge by human and non-human agents; (b) Knowledge is an emergent process rather than a given one. It is a 'bricolage of material, mental, social and cultural resources'; (c) Knowledge is 'embedded in the world of the sensible and corporeal', meaning that knowing and knowledge are not limited to cognitive and mind aspects and (d) Adopting a practice-based approach is to go beyond dualisms (e.g. mind/body, human/

nonhuman) and considering that 'in practicing a practice all these elements are simply present'.

Several reasons lead to the use of a practice-based perspective for this study. It can provide unique insights into designing supportive approaches for knowledge creation, communication, and use that aim at service innovation. This is because a practice-based approach enables understanding how knowledge is created, and how and why knowledge is differently needed and used. In addition, this approach enables gaining a deep understanding of how knowledge is situationally constructed, activated, transformed, mobilized and how it contributes to knowledge creation and finally innovations. Most importantly, a practice epistemology incorporates the creative and interpretative actions in which existing knowledge is needed, used, and communicated.

Focusing on the actual activities of work

As explained earlier, one important contribution to knowledge management from the practice-based perspective is the identification of a kind of knowledge that is embedded in a situated activity. Practice refers to how people actually get work done (Brown & Duguid 2001). Practice includes the means and the ends of work, the practical wisdom people rely on, and the '…rich, socially embedded clinical know-how that encompasses perceptual skills, transitional understandings across time, and understanding of the particular in relation to the general' (Brown & Duguid, 2001). Practice-based knowledge is produced continuously in situated action, as people draw on their physical presence in a social setting, on their cultural background and experience, and on sentient and sensory information (Orlikowski 2007). Practice-based knowledge does not exist independently of social action, and its content does not necessarily mean the same thing to all involved (Dougherty 2004).

To manage practice-based knowledge for service innovation, it is therefore necessary to focus on the actual activities of work, to enable the situated activities through which people accomplish tasks, to foster skills of knowing and to legitimate engaged participation in the practice (Barley, 2006). The skills for knowing comprise the 'artful competence' of applying the principles of the profession to unique situations, and making do with resources available (Orlikowski 2002). According to Brown and Duguid (2001), practice highlights know-how defined as the ability to put know-what into practice.

Research Design

Methodology

Ethnographic interviews (Fielding & Fielding 1986, Fontana & Frey 1998) were carried out with 24 senior executives in ten service firms about how they develop new services and what factors influence innovation in their organizations. Questions were considered, rephrased and analyzed so that the interviewees could discuss how they experience their work, and what kinds of things are meaningful to them. The people who were involved in new service development had functional expertise of different kinds and worked at senior levels of management. The interviews lasted from between half an hour and one hour, and were done at the interviewee's work site. Respondents were asked to describe what they knew about usage and design as they innovated, how they developed new services with specific examples and how they incorporated knowledge into their work. Top managers were asked how they supported innovation, allocated resources and developed strategies. Further, questions were raised to collect information on factors that influence service innovation at organizational and contextual levels. This interview data revealed the kinds of interactions people were engaged in, the nature of their participation in work situations and activities, what they knew about designing and using new services, how they worked across boundaries to create and share knowledge, and how their organization of work affected their ability to generate and use practice-based knowledge.

Sampling

The domain of the service sector is large, so the researcher deliberately limited sampling to five service sectors with three attributes in common: operating for 10 or more years, experiencing market and technological transformations and trying to innovate. Firms that were trying to innovate were selected because this is a study of innovation, and is not intended to capture knowledge in services that do not innovate. Within these boundaries, five types of service were sampled: finance, tourism, management consulting, IT and software, and telecommunication. Although these services have different backgrounds, the firms in each type had similar competitive and marketplace transformations, and were trying to change their services to embody the knowledge of designing and using it more fully. All were building more ongoing relationships with customers and more flexible internal innovative capabilities.

The ten firms used in the analysis are listed in Table 1.

Table 1: Organisations in the Sample

Organisations	Number of people interviewed
Finance Services	
FIN01	03
FIN02	03
Consultancy services	
CON01	03
CON 02	02
IT and Software Developing	
ITS01	02
ITS02	02
Communication	
COM01	02
COM 02	03
Tourism	
HOT01	02
HOT 02	02

Source: Author

Data Analysis

Specific analytical steps described by Strauss (1987) as elaborated by Dougherty (2002): 'open coding' (to surface many possible categories), 'axial coding' (to hone categories and articulate properties) and 'selective coding' (to articulate a core category that integrates others into a theory) were followed. Relating to the practice-based knowledge the preliminary categories included knowledge about customers, kinds of relationships with customers, kinds of work boundaries and how they were crossed or not, and connections between designing and using. Further relating to influencing factors, preliminary categories included the kind of linkage (both internal as well as external), nature of human capital (expertise, skills, and experience), nature of service systems and processes, technological exploration, nature of the home market and the mentality of workers and customers. Many people said that innovation required different mindsets and a more holistic view of the minutiae of everyday work.

Discussion and Findings

The analysis produced three major insights. The first insight was that people generate practice-based knowledge for innovation if they collectively enact three kinds of activities in their everyday work: *routinely doing their particular designing activity, participating in the whole flow of designing and using and reflecting in action.* These activities constitute a common ground for social action, so people can engage in situated learning and make sense of what they learn in similar ways across the organization and use the knowledge for future innovation. An example from one of the information technology firms (ICT02) illustrates the activities of practice through which people generate knowledge for innovation. When one of the senior executives was asked how they designed a successful new service, he explained that they looked at improvisations that the operations people had already tried:

> Actually it was very easy. We were already doing this on a random basis because some customers wanted this kind of service, so from time to time, we were doing it for free. We were already providing this service for a few customers …..sort of experiment….With the knowledge coming from operations in most of my career, I find it is not hard to envision what to do and where to go… (ICT02)

When the same question was asked from a top manager of a private commercial bank (FIN01), he replied that they let the operational people from different functional areas get together to design the service, implement it and discuss the outcome after the implementation process.

> Our job was to figure out how to implement new computer technology. Our method was to infiltrate the organization, not just single functions. . . We'd get people from different departments together . . . and say here is a problem that runs across the programmes and functions. . . You figure it out. Solve the problem and implement it. That was very successful . . .' (FIN01)

They used their everyday practice of supplying the service to learn about new services. They drew practice-based knowledge on integrated customer issues integrated with operations issues. They also did not set and solve the problem abstractly, based on algorithms of modeling. Instead, they were deeply engaged in the firm's actual practices by working with functional managers, project managers, other operational level workers and drawing on their own experience in designing software and providing financial services. They traced out the *ad hoc* improvements that were made for particular customers and even experimented by adding new services and features to their services. They reached deep into the realities of

their operating system to see the interconnections among activities, and to reflect in action on how new interactions could mesh with the system.

Both examples of innovations are general solutions that are adapted to particular problems of existing services. Researchers emphasize that services are about solving customers' problems (Morris & Empson 1998). In 2010, Hertog et al. defined service innovations as new solutions for the specific problems of customers. However, based on the findings of this study, the present researcher suggests that services are more than solutions for specific problems, and that practice in services can be defined as ongoing interactions of problem setting and problem solving and providing solutions for problems that the clients actually face. Conceptualizing practice in service innovations as an active, situated and coherent flow of problem setting and problem solving activities is a simple framework for the three activities, binding them sensibly and providing people with an image of what needs to be done.

In relation to the second insight (objective) it was found that the service organizations in which their organizing activities are centred on pre-established outcomes rather than ongoing current practices eliminates common grounds for knowledge creation, sharing and using the shared knowledge for innovation. In these organizations, the activities are separated into functional units so employees are involved in their own work without regard for how these are connected with the activities of others. These conventional approaches to organizing are 'anti practice' in two ways. First, they push the activities into the background, which eliminates the common ground for knowledge creating, sharing and replicating that the three activities provide. Second, conventional organizing de-legitimates practice by focusing attention on generic outcomes that do not frame everyday activities coherently and sensibly. People cannot articulate new ideas and combine them with old ones, so the organization cannot learn. The following three excerpts illustrate the way the traditional approaches eliminate the common ground for knowledge creation, sharing and using the knowledge for innovations.

> …We recognized that we were not doing a good job . . . Everyone was doing it in their own way and there was no synergy. We lost the synergy of a bigger company. We would use just a parochial approach . . . due to our cost-centred approach..(FIN02)

> ...This is a very traditional organization and each department has responsibility for certain areas. If you need them to do something you have to do the specs for them and hand the job over to them.'(FIN02).

> For years we have been an organization with … corporate priorities per year. A few years ago I personally was working on 5 or 6 corporate priorities. There are no resources for all this work. . . The organization does prioritization without meaning.(HOT01)

The innovation-related problems of these organizations could not however be resolved by shifting around the current structure, or by adding new links or parts. The more successful reorganizations were based on very different principles of organizing. The following three examples illustrate new ways of creating knowledge for service innovation:

> We no longer have a [build it?] and they will come with an attitude. We are more customer- and business problem-oriented. (HOT02)

> We are changing, with more emphasis on quality and how we manage, and more elements of performance evaluation are on the outside activities (COM02)

> We start with a needs assessment, a strategic analysis of the organization. We start with their (client's) strategy and see how this demand for training contributes to it. (CON02)

Further, a range of internal factors were found to be related to the knowledge management practices and innovative performance of the service firms in this study. The importance of internal linkages, structural elements, and organizational culture, poor knowledge dissemination, the availability of an expert and skilled work force, carrying out internal R&D, technological exploration, internal systems and process stands out.

The respondents recognized the need to develop practice-based new knowledge and encourage it through internal networks:

> We need to talk to one another and from that interact and we [then] create new knowledge and better ways of doing things (CON01)

However, one of the participants mentioned his experience of the lack of innovation in his organization as:

> `We are not used to having discussions and letting knowledge emerge out of that. It is usually a one-way [top-down] process.(FIN02)

Another participant (COM 02) quoted his experience where a complex designing problem was solved not by technical experts or senior engineers but by bringing together a group of people who had a lot of tacit knowledge of designing. This tacit knowledge, shared through discussion and interaction, was embodied into a solution for the designing problem. Thus, through internal connections, employees at all levels can contribute to innovation through knowledge construction (Demerest 1997).

Some participants considered service innovation resulting from practice-based knowledge management as being reflected in the organization's structure. Agreeing with Handy (1984), Peters (1992) and Bessant (1996), they preferred open flat dialogue-based structures.

> It's a mixture of bottom-up and top-down...you can set up depositories of knowledge which people can access...faster decision making. (COM01)

Further, the role of a supporting open and participative culture (Brand, 1998) was seen as vital for service innovation through knowledge sharing practices:

> We try to limit them [employees] and hence lose a lot of knowledge.
>
> Knowledge is power, there is also fear...it is a cultural problem.
>
> Fear of giving up knowledge. Will it affect my usefulness?

The frustrations associated with lack of innovation because of poor knowledge dissemination were also expressed:

> The information is there and available to everyone but it is not being transferred, absorbed and accepted. (FIN02)

The availability of staff with expertise and skills and the existence of different sorts of routines and norms to share knowledge were also found to make a strong impact on innovative performance.

> There is internal training provided by people such as experts and specialists to newcomers and people who move to new jobs or internal job rotations. And there are innovation days and we have these days on a regular basis for people to innovate and prototype and learn new stuff and so on. There are certain days for you (employees) that are not related to project jobs. You (employees) must be here at work and do something but not project work, something else. (COM01)

The analysis supports the findings of earlier research concerning the importance of the above factors as a means of boosting innovation.

Implications

Theoretical Implications

Large scale surveys and government-sponsored research projects relating to innovation in services were launched in the UK and other western countries (e.g., Community Innovation Survey (CIS) -UK Department of Trade and Industry.). However, further steps to theorize or generalize the findings regarding innovation in services is still in its infancy (Flikkema et al. 2007). Most of the papers titled "Innovation in Services" deal with questions of typology both for services per se and innovation in services (Bessant & Davis 2007 as cited by Suphawan 2009).

The other line of research regarding innovation in services investigated the drivers of service innovation or service development processes. For example, Flikkma et al. (2007) emphasized changes in macroeconomics, e.g., social and technological dimensions as drivers of innovation; Fujakawa and Kay (2008) pointed out that new services are the exploitation of change in consumer life styles; Wilson (2008) as cited by Suphawan (2009) reviewed five models of new service development based on a case study of health care service providers. However, the innovation process, especially how innovation in services is created, has not been fully addressed in the world context or the Sri Lankan context. According to the available resources, the researcher is in the opinion that no research has been done in the selected area in the Sri Lankan context.

The empirical finding of this study is that three organizing principles (routinely doing their particular designing activity, participating in the whole flow of designing and using and reflecting in action) together provide a relational infrastructure through which people generate practice-based knowledge organization-wide. The findings suggest that practice-based knowledge has strategic value for service organizations because it captures the designing and using of knowledge necessary for innovation. The present study confirms that a practice-based view would add a much richer perspective that is more closely aligned to employees' actual work and it rejects the non-practice based approaches (cognitive and structural) to knowledge creation which are based on a rationalistic and objectivistic idea of knowledge (Gherardi2006, Patriotta 2003). Thus, this research creates a new category of knowledge in the area of study. The knowledge created through this research is an original contribution to

the existing body of knowledge. Since there are no past studies done in this area, variables that operate in this environment are not identified and documented.

Implications for practice

The strategic articulation of practice standardizes people's understanding of what we do, how and why, providing common, sensible frames for practice (Fiol 1994). The first strategy is defining each practice as a kind of problem that employees set and solve, articulates what people should do and how they should make sense of their actions. They can thus approach specific projects more systematically because they think about the overall process that produces the problem, not just the unique aspects of particular situations. The second strategy is to formally include the three activities of practice in everyone's job. Such organizing keeps everyone in the know because they can apply similar knowledge in their everyday work, which provides a common ground for knowledge creation and sharing across boundaries. The third new principle is to formally address the factors that influence practice-based knowledge management and service innovation. For example, creating strong internal networks, building open and less hierarchical structural elements and positive and open organizational cultures and hiring experts and a skilled work force can be considered as strategies which can be used to create a favorable climate for service innovation. The top management should give their fullest attention to those factors that influence service innovation at organizational level. Together, these organizing principles articulate the practices themselves and the relationships among the activities in the practices (Obsfeld 2003).

Conclusion

The creation of practice based knowledge is one of the most unstructured and difficult work practices to be facilitated and supported. It presents a particular nature and dynamics that is marked by emergent, unplanned and situational sense-making, demanding different approaches to communicate knowledge as inputs to and products of such practice. However, as organizations move further into a 'knowing economy' where knowledge creation and innovation are increasingly central to organizational effectiveness, it is necessary to pay more attention to the ways knowledge creation and use can be facilitated and supported. It is necessary to promote interactions and relationships that individuals can rely on to access each other's' personal and practice based knowledge to accomplish work activities, and mainly, to become more strategic and innovative.

This research integrates work as practice with knowledge for innovation and strategic services management. Even though it was found out that three organizing principles together provide a relational infrastructure through which people generate practice-based knowledge organization-wide, there are no simple processes. As indicated by the findings practice based knowledge is not simply about tacit knowledge, expertise or experience, but rather it is about the artful, skilled combination of these along with knowledge in routines, involvement in the whole process and reflection. Thus, research on interactions among knowledge types is necessary. For example, experience affects people's ability to comprehend insights generated in practice. It would be useful to explore the kinds of experience that may enable or disable practice-based knowledge in the business services.

Further, even though this papers has examined organizational level factors that influence knowledge management practices and service innovation, it has not examined the influence of external factors and other contingency factors have on the concepts of knowledge management and service innovation. I acknowledge that these factors are important to future research. Further work needs to be undertaken to understand how contingency factors will alter the relationships discussed in this paper, by contextualizing any future empirical work based on a contingent approach. Finally, findings of this research can be utilized for future studies by taking quantitative research method through empirical surveys.

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'I am *How* I Consume': The Construction of Identity through Use of the Mobile Telephone

Dinuka Wijetunga

Abstract

Although identity construction has been discussed extensively in relation to consumption, such studies have also been criticised for reducing consumption objects into mere signifiers or symbols of various identities, ignoring the complex meaning construction processes of *objects in use*. This paper addresses this criticism, through a study of mobile telephone consumption practices in Sri Lanka, by examining how different usage patterns of the mobile telephone could play a role in consumer identity construction processes. The study focuses on three consumer groups: senior business managers, young consumers representing a high socio-economic stratum, and young consumers representing a lower socio-economic stratum. The findings indicate that consumers use differences in consumption patterns as a means of distinguishing their identities from those of others; further, varying the consumption patterns is used by consumers to manage multiple identities of the same individual.

Keywords: Consumption patterns; identity construction; multiple identities; mobile telephone

Introduction

Identity construction has long been considered in consumer behaviour literature as a key function associated with consumption (Arnould & Thompson 2005, Slater & Miller 2007). This body of literature is quite extensive and covers many facets of the relationship between consumption and identity, such as products being an extension of one's self (Belk 1988), how consumption objects are related to different social identities (Kleine III, Kleine & Kernan, 1993), use of objects in distinguishing oneself from others (Hebdige 1988/2000, Jantzen, Østergaard & Sucena Vieira, 2006), and the management of multiple identities through consumption (Firat & Venkatesh 1995, Ahuvia 2005,). However, all these studies

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appear to focus on the role played by different consumption objects, in other words, *what* one consumes. How *different consumption patterns of the same* product or service are implicated in constructing one's identity is not discussed. Due to this omission, identity studies have been criticised for reducing objects to the symbolic meanings embodied in them without paying attention to the complexities of products in use and how meanings are created through usage (Slater & Miller 2007). This paper demonstrates, through a study of mobile telephone use in Sri Lanka, that different consumption patterns of one object are used by consumers in complex ways in order to differentiate their identities from others. Further, consumers also utilize different usage patterns of the same product to manage multiple identities.

In the remainder of the paper the above stated knowledge gap is first established through a review of the literature on the consumption-identity relationship. This is followed by a brief description of the methods adopted in the research, which consisted of a consumer study where data was collected through focus group discussions from three different types of consumers, namely, senior managers and youth belonging to two different social classes. The findings are presented next, followed by a theoretical discussion indicating how concepts previously used to discuss the consumption-identity relationship could be used, albeit with modification in some instances, to theorise the role played by different patterns of consumption, or how consumption items are used, in the processes of consumer identity construction. The paper concludes with implications of the findings for marketing practice and for future research.

Consumer Culture & Identity

It has been said that today's society could be termed as a 'consumer society' (Lee 2000, p. ix) where consumption occupies a dominant position in social activity. The latter part of the 20th century witnessed an important shift in the history of consumption practices when, encouraged by advertising, '[w]hat was emerging was not merely a consumer society, but a consumer *culture*…' (Miles 1998, p. 9, emphasis in original). The distinction here is that in a consumer culture consumption permeates everyday life at a much more significant level than mere prolific consumption (Slater 1997, Miles, 1998). Engaging in an interesting and meaningful word play, Slater (1997, p.24) says that consumer culture is not about '…a particular consumption culture…,' in that it does not refer to '…a particular pattern of needs and objects…' Instead, it refers to a '…culture of consumption…' where '…core social practices and cultural values, ideas, aspirations and identities are defined and oriented in relation to consumption rather than to other social dimensions such as work or citizenship, religious cosmology or military role…' (Slater 1997 p. 24, emphasis in original).

This high significance of consumption in social activity has a dual focus (Featherstone 2007, Slater, 1997). First, the high regard accorded to consumption has resulted in a spill-over of consumption-related values into non-consumption areas such as education and the public service, where it is advocated that students and the public served by government organizations be treated as 'customers' and their needs as 'sovereign' (Slater 1997, Holt & Schor 2000, Ritzer & Slater 2001,). Second, increasingly more areas of social life are being reproduced through the use of commodities (Slater 1997, 2005), where they are used not just as utilities, but as symbolic '…communicators…' (Featherstone 2007, p. 82). In other words, people use consumption objects to signal various different things to themselves and to others (Hill 2002).

Such symbolic meanings are constructed for different products through interactions between the broad socio-cultural meanings of objects, marketing activity (especially advertising) and individual consumption activity (Lee 1993). These symbolic meanings help consumers in constructing identity. As noted by Arnould and Thompson (2005), '…the marketplace has become a preeminent source of mythic and symbolic resources through which people … construct narratives of identity…' (p. 871). Thus, goods '…are two media of communication: both bulletin boards for internal messages and billboards for external ones…' (McCracken as quoted in Hill 2002, p.274) signalling one's identity to oneself and to others.

Identity Construction, Identity Change & Multiple Identities

Identity has generally been conceptualised in two ways: as a psychological, personality characteristic that is enduring over time, or as a fragmented, situationally constructed phenomenon (Hall, 2000, Ybema et al. 2009). Both conceptualisations have featured in studies on the relationship between consumption and identity. An example of the former category is a seminal study on the consumption-identity relationship, where Belk (1988) speaks of consumption as an extension of one's core self. Later research (e.g. Holt 1995, Gould & Lerman 1998, Ahuvia 2005, Shankar, Therkelsen & Gram 2008, Elliott & Fitchett 2009) shows that consumption is also utilised by individuals in the construction of situated and multiple identities. In this latter group, identity is treated as a construction or as a 'presentation, not self' and as 'persona, not personality' (Ybema et al. 2009, p. 306).

This notion of individuals reflexively constructing situated identities is very much in line with discussions of identity in much of the consumer culture literature. Slater (1997, p. 29) notes that in the contemporary post-traditional society the consumer culture has become the '…privileged medium for negotiating identity and status…' He notes that unlike in the

traditional society where one's identity and place in society was assigned to one at birth, in a post-traditional society identity and status are not regulated by tradition, and therefore not given nor fixed. Thus, these need to be 'negotiated' by the individual. The term negotiation is significant as it highlights the fluid nature of identity creation in this culture where '…not only is one's position in the status order no longer fixed, but the order itself is unstable and changing and is represented through ever changing goods and images...' (Slater 1997, p. 30).

Bauman (2001, p. 28) terms this instability of the 'order' as '…institutional erosion coupled with enforced individualization…' He further explains it by comparing the present society with that described by Durkheim. According to Durkheim (Bauman 2001), society was important for man because it represented a sense of permanence compared to the mortality of man. However, asserts Bauman (2001, p. 23),

> ['S]ociety' has moved from the role of caring, albeit exacting warden/keeper into the position of one of the players…. Once the mainstay of stability and the warrant of assurance, it has become now the prime source of surprise and of a diffuse danger, frightening for its un-knowability…

In these conditions individuals are required to find solutions to the vagaries of a fickle system, and identities are 'projects' that individuals have to undertake and perform (Bauman 2007).

Present day individuals undertake this project primarily through consumption (Slater 2005). People not only use material goods to acquire and express identity, but also to enhance an identity, or in attempting to reach an 'ideal' identity (Dittmar 2008). This has been facilitated not only by the proliferation of consumption goods in society, but also by advertising messages that associate goods with 'idealised images' of people (Dittmar 2008, p. 12). In this scenario, identity becomes a function of consumption rather than the other way round (Slater 1997). This can be clearly identified in the following research excerpt where one research participant speaks of how two different brands of cars symbolise two distinctly different identities:

> …Sometimes I test myself. We have an ancient, battered Peugeot, and I drive it for a week. It rarely breaks down, and it gets great mileage. But when I pull up next to a beautiful woman, I am still the geek with the glasses. Then I get back into the Porsche. It roars and tugs to get moving, it accelerates even going uphill at 80. It leadeth trashy women … to make pouting looks at me at stoplights. It makes me feel like a tom-cat on the prowl. … Nothing else in my life compares – except driving along Sunset at night in the 928, with

> the sodium-vapor lamps reflecting off the wine-red finish, with the air inside reeking of tan glove-leather upholstery … and with the girls I will never see again pulling up next to me, giving the car a once-over, and looking at me as if I were a cool guy, not a worried over-extended 40-year-old schnook writer… (Stein as quoted in Belk 1988, p. 145)

Although the above excerpt is about how the consumer *experiences* different identities, the notion of constructing situated identities also implies a *multiplicity* of identities actively *constructed* by the same individual. The place of consumption in such activities has also been discussed in the literature. Some postmodern scholars of consumer culture argue that the notion of a stable, coherent identity is an oppressive myth of modernity (Slater 2005), and present a liberatory view of using consumption to construct multiple identities (Firat & Venkatesh 1995). They argue that consumers like the ability to change identity at will through their consumption patterns. This indicates a situation where '…society appears as a kind of fancy-dress party in which identities are designed, tried on, worn for the evening and then traded in for the next…' (Slater 1997, p. 30). However, other consumption studies suggest that people seek to manage multiple identities in some meaningful way rather than use and discard them in arbitrary fashion (Gould & Lerman 1998, Ahuvia 2005, Arnould & Thompson, 2005) and that people utilise different consumption strategies to manage the complexities of multiple, and at times, conflicting identities (Ahuvia 2005).

Whether in relation to single or multiple identities, it is useful to examine how the literature portrays consumption activities in consumers' identity construction processes.

The Consumption Modes of Identity Construction

Some scholars argue that identity studies have presented an overly simplistic picture of consumption:

> …One of the less helpful turns taken by consumption studies was the obsession with identity which seemed to reduce all this [i.e. complexities of consumption practices] to the banal question of how to perform a consistent persona, and reduced the object or good to a sign or marker; the object has a materiality only in a semiotic sense: as a signifier. A sign has to have material embodiment, and that's it. Beyond that the good is simply a term within a structure of meaning that individuals (and it's very much individuals) can employ as resources for constructing versions of themselves. It loses the sense of the broader materiality of the object, and it loses the transactional nature of objects and

> the fact that they have meaning within relationships which they reproduce…
> (Slater & Miller 2007, p. 19)

The concern of Slater and Miller is well founded because, in the discussions of consumption-identity relations the consumption objects are usually considered as 'symbolic' resources (Arnould & Thompson 2005) that help consumers to make use of symbolic meanings associated with the objects in constructing different identities. This is evident in the Porsche vs. Peugeot story above as well as in other research. For example, one study shows how middle class working women distinguished themselves from 'housewives' and 'harlots', based on the brand, colour and material of the underwear they use (Jantzen, et al. 2006, p. 184). Hebdige (1988/2000) explains how the Italian motor scooter that was introduced to the market as a mode of transportation for women was used in a symbolic fashion by the Mods, '…a highly stylized male youth subculture that fancied accoutrements that screamed modern and (slightly) effeminate…' (Holt & Schor 2000, p. xiv). In the arena of mobile telephones it has been noted that Italian girls use their phone as a fashion accessory where the brand of the phone is an important symbol (Fortunati & Cianchi 2006). Further, owning a phone itself has been discussed as a symbol of a strong sense of personal identity: '…it is you being called, not your home…' (Carroll, Howard, Peck & Murphy 2002, p. 57).

The foregoing discussion highlights the preoccupation of identity studies with the symbolic meaning of objects, which tends to ignore the different patterns of usage as well as the meanings objects take up when used in social relations (Slater & Miller, 2007). However, such complexities can play a role in identity construction. This is because identity construction includes '…bodily acts…' (Ybema et al. 2009, p. 304) which include the *use* of artefacts. Further, identity construction is a function of inclusion and exclusion (Hall 2000, Ybema et al. 2009) where 'self' is separated from the 'other' through the articulation of similarities and differences. It has been acknowledged in consumption studies that such differences and similarities can be articulated through *how one uses* the *same* product or service. For example, Holt's (1995) study of ritualistic practices at baseball games shows that some of the practices could establish affiliations and distinctions between 'expert' baseball fans and mere amateurs. However, Holt (1995) does not discuss such behaviours in the context of identity construction.

Some recent identity research on consumption has remedied the weaknesses highlighted by Slater and Miller (2007) to some extent, especially in terms of consumption meanings constructed in social relations. (For a discussion of recent studies on consumption and

identity, see Thompson, 2014.) However, these studies do not focus on how consumption of the same product in different ways could be used in constructing different identities.

This paper, which focuses on mobile telephone consumption by Sri Lankan consumers, demonstrates that consumers utilise different patterns of consumption in constructing different identities; in other words, identities are constructed through how they use the telephone.

Method

This study was part of a broader research project on advertising and consumption of the mobile telephone in Sri Lanka. It was a social constructionist research, which enabled the researcher to identify how consumers construct different identities for themselves and also differentiate their identities from others through different usage patterns of the mobile telephone. Data collection of this project was from May – August, 2009. Given the speed of change in mobile phones this means that the actual usage practices at the time of publication of this paper are likely be different to the practices during the data collection period. However, the author believes that this does not affect the central argument of the paper, namely, that different usage patterns of the same product could feature in consumers' identity construction processes. Nor does it affect the temporal relevance of the argument to the time of publication since readers could easily relate the presented findings to a variety of different usage patterns, not only of the mobile telephone, but other products as well.

The data was collected from three different types of consumers: senior business managers, and two categories of youth. Business managers have always been a key user group of the mobile telephone (Agar 2003, Vesa 2005); when considering youth, today the phone has become not just a ubiquitous appendage, but also an identity symbol of the young 'Fun Generation' (Vesa 2005, p. 11), hence the use of these consumer groups in the study. In order to capture the socio-economic diversity of users, the author included two categories of youth: One group represented the socio-economic elite of the society, a group that has a high income, is directly exposed to global trends, and displays a conspicuously consumerist and Westernised lifestyle, that has been called the '…New Urban Middle Class…' or NUMC (Liyanage 2009, p. 35). The second group represented a lower socio-economic stratum employed in semi- or unskilled manual work, but are also prone to consumerist behaviours; this group is called the '…New Working Class…' or NWC (Liyanage 2009, p. 48).

Focus group discussions were used to collect data where nine discussions comprising three each of the three consumer types were conducted. The number of participants in the groups

varied between 4-8 members (Barbour 2007, Krueger & Casey 2000) and comprised both genders. In total there were 16 senior managers (11 male; 5 female), 16 NUMC youth (9 male; 7 female), and 16 NWC youth (7 male; 9 female). All youth were between 19-25 years of age and were unmarried. Most senior managers (except two males and one female) were married. All discussions were moderated by the author using a broad discussion guideline. Those with NWC youth were conducted, transcribed and analysed in Sinhala; all other discussions were conducted in English. The focus group discussions were analysed using a thematic analysis approach (Braun & Clarke 2006, 2013).

Findings

Overall, the findings indicate that in the everyday mundane consumption of the mobile telephone, consumers utilise different usage patterns in complex ways to construct and manage identity. First, by associating different usage patterns with different identities, they construct 'me' vs. 'other' distinctions. Second, by varying usage patterns they also succeed in managing multiple, and at times, conflicting identities. These findings are discussed in detail below:

Differentiating 'Me' from the 'Other'

The 'Executive'

In the identity talk of senior business managers, their professional identity was prominent. In talking about this identity they spoke of the mobile phone as a versatile business tool to be in control of work. Such references occurred frequently in the talk, and a number of managers referred to some aspect of this identity in answering the question 'What does the phone say about you?' (i.e. a direct identity-related question). This is seen in the following excerpt:

Vidya (M)[1] …Err I feel that the phone that you carry, especially when you're associating with the business crowd, you're in a different level. Like, some people, you see they're carrying a sophisticated phone, but you find that they can't afford it. Maybe that they are spending somebody else's money to carry it. But in our level, when we move with the

[1] In using excerpts from focus group discussions, the following presentation practices are used. Square brackets are used to include any explanatory notes or to present short interjections by others. Ellipses indicates that some sections have been omitted. The speakers will be referred to by a pseudonym followed by 'M' or 'F' to identify the gender. Therefore Vidya (M) would mean that Vidya is a male. However, the gender of speakers in the excerpts does not imply that there was gender specific significance in relation to what is discussed. In most instances, there were other similar discussions involving both males and females.

> crowd, you know the business crowd, executive kind crowd, I think the phone talks a lot of about you, … At the same time you feel proud also because you have all the names and the contact numbers with you, sometimes even the addresses you know. Suddenly even in our top management, sometimes, ask, 'Kulatunga [Vidya's surname] do you have this person's number with you?' 'Yes, I have the number.' 'Can you get him on line?' Sometimes my MD does not have, doesn't carry the numbers of our senior managers. But I have all the numbers. Right? And again, sometimes I have noticed, when my general manager is abroad, he used to give me a call and say, Can you ask that person to contact me? Because he knows that I used to answer quickly. Within one or two rings I used to answer. So that, I feel that has created something about me because of that sort of thing.

Here, construction of the 'executive' identity is very clear. First the speaker refers to himself as belonging to the 'business crowd' and 'executive' crowd and clearly differentiates himself from others who may carry sophisticated phones. He goes on to describe how the phone plays a role in this identity by showing that it has enabled him to be recognised by others as someone with the ability to reach and be reached by the business network, and thereby be in control of work, at all times. Different versions of this practice of being in control of work thorough the phone were given in a number of answers to the question 'What does the phone say about you?' – e.g. '…Basically, it doesn't make a difference whether I'm working in office or out of office. It's the same…' and '…[the phone being switched on 24 hours a day] shows I'm somebody who doesn't want to separate work and personal life. So, it's like work is everything for me…'. Such statements show that this usage pattern of utilising the phone as a tool to be in control of work is important in constructing the business executive identity since it 'says' something important about the person as an executive.

Many managers spoke of communication as a key function (but not the only one) that helps them to keep control of business activity. The phone facilitates this primarily by enabling two-way contactability at all times: one can reach, and be reached by, colleagues and subordinates at all times. There were references to the phone being switched on '24/7', factories working round the clock, branches in different parts of the world, and contacting people on the field, etc. While this contactability refers mainly to reaching people via phone calls, other features also come into play. For example, as demonstrated in the previous excerpt, one key aspect of being able to reach colleagues and business contacts at any time is the availability of contact

details on the phone; here the phone functions as an address book. In addition, there were other features the managers mentioned in relation to the communication aspect of controlling one's work, such as accessing business email on the phone -functioning as a computer, using SMS templates to send production and sales reports from various locations- functioning as part of a reporting system, and automated SMS alerts linked to computer systems -functioning as a part of an emergency alert system.

Apart from communication, the managers also use the phone and its different features in various other ways in their executive role. For example, some of them use it to access macro-business-environment information by subscribing to SMS alert services such as 'Lanka Business Online', or by using the phone to access financial information on the Internet. Some use the voice recorder to record meetings for later reference. There was also mention of using other features such as the camera or the video camera in relation to work activities, and synchronising one's personal organiser on the office desktop with the phone.

All these activities, although utilising common features of the phone, are very specific to the identity of a senior business executive. They describe the senior managers' usage patterns of the mobile phone, namely, using it to stay in control of their work, in relation to the 'executive' identity. It is equally interesting to note how these managers differentiate this identity from others who use mobile phones by referring to certain usage patterns as not only irrelevant for executives, but sometimes even as inappropriate. To a lesser extent, they also referred to their own usage patterns as unique to 'executives'.

The 'Other' vis-à-vis the 'Executive'

In a mild way the senior managers implied that the way they use the phone as described above is unique to executives. This was mostly done in answer to the question: 'What does the phone say about you?' Some managers declared that merely having a mobile phone can hardly say anything about a person since everyone from 'A/L students' to 'labourers' carry mobile phones these days and 'even low income people can have better phones' than the ones managers carry. However, they noted that some phones such as the BlackBerry may not be attractive to users who are not business executives since the features of these phones would not be relevant to the other users; this is a subtle indicator that certain usage patterns are unique to the executives. Referring to teenagers, one manager stated that '…BlackBerry would not have the attractive features that those other phones have…'. [Note: In 2009, at the time when data was collected, the BlackBerry enjoyed high recognition as a business phone], A similar sentiment was expressed by another manger in the following excerpt:

Tharanga (M) … Say for example, say if you're having a BlackBerry phone that means you are always linked with your office. You don't have to have a BlackBerry phone just to give a call? In that case I think you are linked with the office. You're like a mobile office. Even if you're at home you can contact your office and you can get the things done. So in that sense yes, of course it reflects something about you.

What Tharanga is doing here is connecting the usage patterns related to the executive identity with the symbolic associations of BlackBerry; the BlackBerry becomes a symbol of the business executive because it has features that enable the executive to perform his work. By implication, other phones would have different features facilitating different usage patterns because of which the BlackBerry can differentiate executives from others. It should be noted that although the usage patterns related to the 'business executive' identity dominated the discussions of senior managers, references to that usage pattern being unique to executives was not explicit and usually took subtle forms as shown here. One could speculate that this lack of explicit distinction was probably due to the fact that the practice of establishing their pattern of consumption related to the 'executive' identity was so strong that it hardly needed to be stated as unique.

The explicit distinction between the 'executive' and the 'other' is much more prominent in the managers' references to usage patterns that they do not engage in. One such practice is using the phone for fun and entertainment, particularly through using features such as games and MP3 music players. Often the managers referred to such activities as those of 'kids'. Even the ones who did say they use these features subordinated this fun/entertainment function to the business function of the phone (see the later section on managing multiple identities).

Two other practices that were rejected, but in a more emphatic manner, were changing ringtones and using ring-in tones (a song heard by a caller while waiting for the call to be answered). A number of managers spoke of these practices as things done by children. Here the construction of 'the other' was even clearer, because these practices were considered by some as inappropriate for executives. For example, one manager made this comment on using ring-in tones: 'Customers will call you and you have put an absurd song in your phone and he listens to that; doesn't make you serious.' The following excerpt is another example. It was an answer to the question whether they change ringtones from time to time:

Janadiri (F): My son changes, sometimes. You know a funny thing happened, not to me, a colleague of mine. We were at an important meeting, right? So he goes to, he's from Kandy but works in Colombo and he goes to Kandy at weekends. His son is about, say, I think, 11, 12 years. So he plays with the phone. Suddenly, at the meeting his phone goes 'Rosa polla geneng' [lyrics of a fast paced pop song.] Loudly as ever. [Here she breaks into laughter; as do the others in the group.] That was the tone he [the son] has put for his calls to his father. [More laughter from the group] Still I, [laughs], it was so [laughs]

She went on to say that her colleague was embarrassed, but 'luckily there wasn't anyone from outside, so it was ok.' Thus, not only are practices like changing ringtones and ring-in tones activities of children, but since these tones can be heard by others these 'childish' activities could be harmful to the identity of an executive because it 'doesn't make you serious.'

In this manner, the senior business managers engage in specific patterns of mobile phone usage that they consider as activities related to the work of 'executives,' and at the same time, dissociate themselves from other usage patterns that they connect with those who are not executives (such as 'kids'). This dissociation is very strong in some instances where they consider the usage patterns as inappropriate for executives.

The 'Youth'

Among the young participants of the study, the predominant identity linked to the phone was that of a 'youth.' In relation to this identity, all the young participants in the study considered the phone as something to 'have fun with'. This is a distinctly different usage pattern to the one associated with the 'executive' identity and includes activities that the senior managers tended to dismiss as practices of 'kids', clearly indicating that both groups of participants associate this usage pattern with the 'youth' identity. The young participants spoke of myriad activities as being fun. In short, doing many things 'with' as well as 'to' the phone is a part of their identity as youth. In the words of one participant: '…Since we are in the young age, [we] use many things on the phone. [We] use everything that is there…' [2]

An example of 'doing many things' associated with the youth identity is doing cosmetic changes 'to' the phone regularly. The young participants frequently change the ringtone and

[2] The participants were often speaking in colloquial Sinhala without a subject in the sentence, and pronouns have been inserted in appropriate places of the translation to make sentences meaningful. The original statement was: අපි තරුණවි(යේ) හින්ද ඉතිං ගොඩක් දේවල් ඉතිං පාවිච්චි කරනව phone එකේ තියන හැම දෙයක්ම පාවිච්චි කරනව

wallpaper. The following excerpt (key sections italicised) shows that these activities are routinized social behaviours common to their social group. The moderator had asked how often they change ringtones:

Lasitha (M) Every time you find that you like a new song…

Akbar (M) You go hunting, then. You check your friends' mobiles, you go to their gallery, just check whether they have, just *check on the list and in case you find something really interesting, ok I'll just try it.* I mean just transfer it through Bluetooth. *I mean when you meet your friends, you just ask for their mobile phones, and check for new ringtones something like that. And then if you find something interesting, you just transfer it.*

The latter part of Akbar's turn shows that checking for songs in the collections on friends' phones is not something one does simply when one is looking for a new song. It's a routine socialising behaviour where one checks the phones of friends for new ringtones to see if there would be something interesting. Also, notice the use of simple present (habitual) tense '…when you meet your friends…', etc., which emphasises the routine nature. It is also significant that throughout this exchange the second person 'you' is used in talking about the practice of looking for new ringtones. Here, it is not used as form of addressing anyone, but as a colloquial form that generalises the statement to include others in addition to oneself. In saying '…you go hunting…' instead of '…I/we go hunting…', Akbar is implying that this is a practice common to others besides himself and the immediate group present at the discussion. Therefore, 'hunting for ringtones' is not idiosyncratic to the speakers but a social behaviour. Thus, even the practices of 'doing things to' the phone, which on the surface appear to be private acts, are in fact shared social activities of these young participants, and hence, part of the identity of being a youth. The shared nature of these activities is exhibited not only in the participants' generalisation of them to a broader group, but also in their practices of exchanging content such as ringtones and wallpaper with one another.

Socialising with peers is prominent in the 'entertaining' usage patterns related to the 'youth' identity. In addition to the exchange of content such as ringtones, songs, pictures and wallpaper, they also use the phone in numerous other ways to socialise. Apart from phone calls and text messages, in a number of groups, there were lengthy and involved discussions regarding the use of 'missed calls' (calling someone and disconnecting the call before the other person answers) to signal 'I am thinking of you.' Here, they utilize the caller identification and missed call alert facilities to use a phone call as a form of electronic 'calling card'. In one

group, participants also mentioned that they use conference calls to tease one another, using the phone to 'hang out' with friends, even without their physical presence. It is interesting to note that in this manner even some of the features of the phone that senior managers use in their 'business work' are used by these young people in very different usage patterns.

There were some differences between the NUMC youth and NWC youth in their 'fun related' usage of the phone. For example, using the phone to participate in virtual social networks such as the Facebook was prominent in the NUMC talk but totally absent in the NWC talk. In spite of these differences in the specific usage patterns of young participants from the different socio-economic backgrounds, in essence, both groups construct the identity of a 'youth' in the same way: through engaging with the phone as something to have fun with, especially by using it to socialise with peers in entertaining ways.

The 'Other' vis-à-vis the 'Youth'

Similar to the 'executive' identity, the 'youth' identity was also distinguished from 'the other'; here the distinction was between 'the youth' and 'the adult'. However, unlike in the previous case, the young participants did not dissociate themselves from certain usage patterns. Instead, they clearly identified certain usage patterns as unique to youth. In order to do that they used distinctions in social meanings associated with some practices. Adults were categorised as the out-group because they are ignorant of the social meanings shared among youth in relation to certain practices. This was identified most clearly in relation to the use of missed calls, as shown in the following two excerpts:

Moderator	So you use missed calls a lot?
Lasitha (M)	Yeah
Wasuk (M)	Within the social groups it's kind of understood for what it might be and if you know the person
Lasitha (M)	Yeah. Sometimes it's 'Hi' and sometimes it's a 'Call me. Only incoming.'
Moderator	So how do you know? I mean a missed call is just a ring
Lasitha (M)	Depends on that person
Moderator	So you know if this one calls, it's because that person is out of credit and this one is telling me
Lasitha (M)	Just for fun. Yeah

The discussion continued where the participants described how they use missed calls. A little later, they were asked if they use missed calls with their parents:

Wasuk (M)	They're a bit more orthodox to understand [Laughter from Akbar and Shehani]
Lasitha (M)	Yeah
Moderator	They won't understand?
Wasuk (M)	They'll actually call back. Then it's not the same thing

In the first excerpt the participants construct the in-group in describing how those who belong to the 'social group' can decode the message contained in a missed call. In the next one they construct the parents as belonging to the out-group because parents are too '…orthodox to understand…' that a missed call is just a greeting, and therefore respond by calling back. The laughter that follows emphasises the out-group construction. In a similar discussion in another group of NUMC youth, the out-group - those who do not understand the missed call as a form of greeting - was labelled as '…a generation up…'. Clearly, the use of 'missed calls' in socialising is a usage pattern that is unique to the 'youth' identity and distinguishes it from that of adults.

The Technophile

This is a secondary identity constructed by a small number (eight) of male participants in the senior manager groups and the NUMC youth groups. This identity was based on superior knowledge of the mobile phone, which they claimed to result in 'sophisticated' usage patterns. The identity was distinguished from 'others' who only use the phone in 'basic' ways. Superior knowledge of the phone was displayed by these participants in two ways: they regularly interspersed technical terms in their talk and they ventured to teach other focus group participants about the phone. [Note: It should be remembered that these focus groups were conducted in 2009 when 3G was relatively new to Sri Lanka and smart phones were not as ubiquitous as they are today. Much of what the technophiles talk about was new at the time, but is common knowledge today.]

The following is an example of the heavy use of technical terms (key sections italicized):

Husain (M)	Earlier we were using GPRS. That the speed is very low. Like 3G, the speed is high. The packet data speed is higher than the GPRS. So that when you go to Gmail and say to chat or something, in a normal phone also, it'll be more faster and, since it has 3G, more faster and
Moderator	So you're happy that you've moved over to 3G? That it's giving you a better service?
Husain (M)	Yeah, yeah. Now it's 3.5G. 3G is outdated. 3.5G is exactly what is HSPA [This is a reference to a previous part of the discussion where he had explained the technology called HSPA]

Notice how Husain doesn't stop at saying 3G is faster. He provides a more technical explanation referring to '…packet data speed…'. Admittedly, some of the technical terms such as GPRS and 3G etc. are used today in everyday ordinary conversations. However, there was a greater use of technical terms in the talk of the technophiles compared to other participants. For example, 'HSPA' and 'packet data' are not terms that are generally used in casual conversations. Similarly other technophiles also used terms such as 'mini-SD' and 'micro-SD' which were not used by any of the other participants.

The technophiles educated others by providing detailed information about various features of the phone including information about other participants' phones.Notice how, in the following excerpt from an NUMC youth group, the participant is providing information about a feature that he is not using. This is significant because the participants were informed at the beginning of the discussions that it was a discussion about the different ways in which they use the mobile phone, and the discussion questions were also all relating to how they use it. Yet, there were many instances when the technophiles provided information about features they don't use:

Pasindu (M)	And I don't use the programme, but I have a, I have an application called Google Maps I'm sure you've heard about it. Like that has an option called latitude. It's for people to keep, like basically, if I add you like and if you agree to it, if you lend me your rights basically, then I can see where you are. So this is used for families and like if there is an issue. So my girlfriend, she has a sister. They both have it, and they know exactly where each other are and that's good

Notice how Pasindu begins his turn saying '…I don't use the programme…' and then gives a detailed explanation about how the programme works. What is even more interesting is the context in which this occurred in the discussion. It was in the middle of a discussion in relation to 'What does the phone mean to you?' and the other participants had mentioned how they feel lost without it because they are used to having it with them all the time. This turn of Pasindu occurred immediately afterwards and there is no visible connection between the previous discussion and his explanation of Google maps, except perhaps the reference to feeling 'lost'. Pasindu appears to be using the turn simply to provide information about an interesting feature of the phone rather than contributing to the discussion taking place at the time.

The following is an example of educating others about their own phones from a senior manager group (key section italicised):

Moderator	Do you have 3G? [From Ajantha]
Ajantha (M)	*No. I don't*
Tharanga (M)	*Your phone should have, those type of phones do*

Notice that Ajantha doesn't even express any doubts about whether his phone has 3G capability. He explicitly states that it does not. However, Tharanga insists that it should have because '…those types of phones do...' Other technophiles also volunteered similar information about the phones of others, but it was usually when the owners expressed some doubt.

The above findings explain how the participants who have been labelled in this study as 'technophiles' established their identity as 'knowledgeable' consumers. However, what is more interesting from the perspective of this paper is how they distinguished their usage patterns of the phone from others they consider as 'basic' users.

The 'Other' vis-à-vis the 'Technophile'

In constructing 'the other' the technophiles claimed to use more features in more functions than the 'basic' or the 'average' user and also expressed a preference for using features that are not commonly used by others. Sumith, a senior manager, was quite explicit about this preference, and the reason for this preference - self-awareness of superior knowledge compared to others. In the following excerpt he explains why he gets 'a kick' out of using features 'like GPS' (key sections italicised):

Sumith (M) Like when you're at a place which is not familiar to you, if you have GPS, you can see, compare familiar locations with where you are right now. Right? And basically you can educate the others. *Like everyone is not aware of maps and grid locations and things like that.* Every map has squares. V*ery hardly, rarely people know why that is. Like, those grid locations, lot of people, like, I mean that they don't know how to read a grid location.* So I use that as an educational tool to educate, may be like, when I travel with my family.

Here, notice how Sumith distinguishes himself from the majority users who have less knowledge of the phone – 'everyone is not aware of' and people 'rarely' know things like reading grid locations (of which he has knowledge). This discussion continued further and later he also said, '…And just like when you know… how to use it that others don't, certainly you get a kick out of that…' Sumith not only considers he has knowledge of the mobile phone that others don't, but he also enjoys using such features *because others don't know how to use them.* Much later in the discussion, he revisited the GPS saying, '…I don't use these common features much, like 3G, and everyone uses it. Seriously, I use things like that GPS, no one uses it…' Similarly there were references by other technophiles to 'basic users,' 'average users,' and 'most people' who are content with 'common' or 'basic' features of the phone, whereas they use the phone in more sophisticated ways. Thus, similar to the 'youth' identity, the 'technophile' identity is distinguished by a usage pattern considered by those who construct the identity as unique to them.

Managing Multiple Identities

Although attention was not paid to this aspect in the previous discussion, it indicates that people do construct more than one identity for themselves: some senior managers constructed both the 'executive' and 'technophile' identities for themselves and some NUMC participants constructed both the 'youth' and 'technophile' identities for themselves. Sometimes, although not in the above situations, such multiple identities can be incompatible with each other. It was evident in the participants' talk that *how* people use the mobile phone can help in managing such conflicting identities. In the senior managers' talk this took the form of 'juggling' different identities simultaneously, namely, the identity of a 'senior business executive' and that of a 'family member' or that of a 'fun-loving person.' In the talk of the young participants (NUMC only), it took the form of 'transitioning' from a 'youth' identity to a 'future business executive.'

Juggling Identities

Being a business executive and a caring family member are two identities that can easily come into conflict. However, many of the features on the mobile phone that are useful in performing the former identity can also be used in maintaining personal relations. Since these different functions are performed by the same features of the same artefact, the managers vary the usage pattern to assume the 'family member' identity while at work in a manner that does not disrupt the 'executive' activity. This enables them to simultaneously mange two conflicting identities; hence, 'juggling'.

One manager mentioned that he generally keeps his phone in 'mute mode' at meetings and has informed family members to call him repeatedly if they want to contact him on an important matter. The multiple 'missed calls' would signal the importance for him to return the call immediately after the meeting. Another mentioned that he would send an SMS to his wife when she is at work to ask if it was a good time to call. Given the important place occupied by the phone in the identity talk relating to work, the phone is obviously a legitimate artefact for the managers to carry at all times when they are at work. However, by using the phone in a different usage pattern -for maintaining personal relations- they are able to switch to the family member identity even at work, without interrupting the performance of their executive identity.

Another identity that can come into conflict with an executive identity is that of a 'fun-loving person'. Managing these two identities is another instance where varying the usage pattern helps to juggle conflicting identities. As previously noted, most managers stated that they do not use the phone for leisure-related activities. The ones who do use it for such activities spoke of the 'fun/entertainment' function of the phone as subordinate to the 'business' function. However, those managers use the phone to switch to the fun-loving identity when circumstances allow them to 'take a break' from the executive identity while they are at work. In so doing, they use the phone in a different usage pattern, such as playing games or listening to songs, that is not associated with the executive identity.

The subordinate state of 'fun' in relation to 'business' was often signalled in the way managers couched leisure activities in references to work. Further, any references to fun and leisure were usually accompanied by laughter of the speaker, joined by others in the group, signalling that these activities are somewhat 'nonsensical' elements related to the mobile phone and not to be taken too seriously. However, using the phone in different ways allows

them to construct this subordinate identity without harming the superior one. The following is an excerpt that demonstrates how the managers achieve this:

Moderator	So, so for you it's [the phone] really something to have fun with?..
Udula (F)	Yeah. It takes five minutes [laughs]
Ram (M)	I mean you spend lots of time, waiting for lots of things to happen. And, er, I suppose this is quite nice to have. [indicating his phone]
Moderator	Mmm. So you listen to songs?
Ram (M)	Yeah. Even radio. I mean if it is at that point of time, you switch on the radio. I mean the mobile has a radio. You switch it on then you can be listening whilst you're working, not necessarily while you're waiting. But let's say games are useful when you're waiting for someone.
Udula (F)	When you're waiting. Yes.

This is part of a discussion where Udula had previously said she plays games on the mobile phone, prompting the moderator to ask the first question in the excerpt. The 'juggling talk' begins when she says that games take '…*only* five minutes…' indicating that it's not a time wasting activity. This idea is taken up by Ram and developed further in saying that one spends time '…waiting for things to happen…', which (implicitly) could be used for fun activities. The moderator then turns that implicit comment into a more explicit question by asking if he uses the time to listen to music because he had earlier mentioned that he uses the phone as a '…song depository...' His answer once again shows the ability of assuming the fun-loving identity without disrupting performance of the executive; because he points out that one can listen to music 'while' working, whereas games are useful when one is '… waiting for someone…'. Udula agrees readily that this is when one can play games.

Once again, the different usage patterns enable juggling the two identities. Due to its role as a 'business tool' the phone is an artefact to have with one when at work. Since it also has features that are related to leisure and fun, one can make use of them when the opportunity arises at work, such as times when one is '…waiting for things to happen…'. This enables switching between executive and fun-loving identities, without disrupting one's work.

This section demonstrates how varying the usage pattern of the mobile telephone helps consumers to manage multiple conflicting identities simultaneously. The next shows that

it can also help consumers to smoothly move from one identity to another when they are in transitional stages of their lives.

Transitioning from One Identity to Another

A number of participants in the NUMC youth groups were in their first jobs, having just completed their undergraduate studies. Some others were doing part-time work while still undertaking undergraduate studies. These youth are beginning to use the phone in their work as well. Further, they anticipate using it in various different ways in the future in relation to their work. They associate different functions of the phone with the identity of a 'youth' and an anticipated 'future executive' identity and change their usage patterns accordingly. These changes are of two kinds: on the one hand, in their future work life as executives they anticipate using new features they currently don't use; on the other, they are discontinuing, or have discontinued, some phone-related practices they used to engage in as youth because they have now started to work. Thus, there is a temporal dimension to the changes in use pattern; hence 'transitioning.'

In constructing a future executive identity, the youth stated that they anticipate using features of the phone that they don't currently use, when they progress in their career. For some of them this is in the near future, as in the case of one boy who said that he is '…now finding the need…' to access email and MS Word documents on the phone. For others, the anticipation is more distant, where they say that they don't currently need certain features, but anticipate that they would need them later. The temporal -anticipatory - nature of these phone uses is demonstrated in the following excerpt which shows that the identity of executive and practices related to it are placed in the future:

> Rasika (F) Again, if I get into, like I'm just getting into work and stuff like that and if I get into marketing later on, I probably will be looking at investing in a BlackBerry as well. Because it's just convenient, and I've heard this over and over, and I've seen it. And I'd probably get one of those later on. But it's not again a priority for me right now.

While referring to anticipated new phone uses in the future, the youth also spoke of practices they have discontinued, *because they are now starting to work.* These practices were often spoken of in terms of altered priorities, e.g., having no time to play games anymore because they are busy with work. In one focus group these were discussed with specific reference to the identity of 'a youth'. In that group two participants - Sahan and Sureni- claimed that they

have now '…passed the age…' of being highly concerned about the appearance of the phone, or desiring the latest features that come into the market, with Sahan saying that he used to like 'flashy' phones when he was 'young'. The following is an excerpt from a conversation that occurred a little later. Another participant - Lakmal - had just stated that he had bought a 3G phone to have video conversations with his girlfriend and that he thought 'it was kind of cool'. None of the others had 3G:

Moderator	So you didn't change over? None of you did? And you don't think it's cool or
Sahan (M)	Age has passed […]
Sahan (M)	Now the age is passed like now we are more into like if we have the opportunity, to go for a professional phone. One that will help us in work.

Here, since Lakmal is the only person who had said he switched to 3G, the moderator asks the others whether they don't think of it as 'cool' and Sahan is quick to respond -'…Age has passed…'. He is clearly referring to the earlier discussion where he had stated that considering any newly introduced feature as desirable or 'cool' was a characteristic of his past youth. He builds on this assertion saying that now he is more interested in '…go[ing] for a professional phone…' that will help him '…in work…'. Note that at this point, the discussion on 3G is focused on only one of its features -video calls, which Lakmal had referred to in the context of talking to his girlfriend. However, as the discussion continued, he pointed out some other features of 3G such as faster access to e-mail and Internet. The following occurred immediately after that:

Moderator	The others, are the others, you didn't, you were not interested in it? Or you think it's not useful at all?
Sahan (M)	The new, the professional phones are 3G enabled. Faster browsing. So if you want to access Internet, e-mail you'll be using 3G the 3G network. Not for video
Moderator	So when you get a new phone?
Sahan (M)	When I get a new handset I'll

Having been reminded that 3G also has facilities that are useful for work such as e-mail access, Sahan modifies his earlier dismissal of it. However, he qualifies his modified opinion

by pointing out that '…professional phones are 3G enabled…' and that he would like to have it only for work purposes (he had previously mentioned that he is 'finding the need' for e-mail access at work), and not for video calling. These two excerpts together, with previous assertions of having '…passed the age…' of desiring the latest features indicate that Sahan perceives certain practices associated with the phone as the behaviours of a less mature age. These he sees as no longer suitable for him, since he is embarking on a professional life. Now he wants to use the phone for work and plans to acquire a handset with features that will be useful for that purpose. Interestingly, while rejecting some behaviours as belonging to his 'youth', Sahan was enthusiastic about practices such as changing the ringtone to reflect his 'mood' - something expressly named by senior managers as a practice of 'kids'. This indicates the 'transitional' nature of the stage in life that these youth are in, and its implications for phone use.

In summarising all the findings, it is evident that different patterns of using a product could feature in consumers' construction of identity as a form of demarcating one's identity from those of 'others'. Further, consumers also manage multiple identities by varying the consumption pattern of the same product, either to maintain two conflicting identities at the same time, or to transition from one identity to another.

Discussion

The practices of identity construction through different patterns of consumption, or how one consumes a product, correspond fairly closely to how previous literature has discussed identity construction through the consumption of different consumption items, or what one consumes.

Differentiating Between Identities

Differentiating between identities takes various forms of inclusion and exclusion (Hall, 2000, Yamada, 2009) that highlight similarities and differences between different identities. The construction of self (inclusion) vs. the other (exclusion) took three forms in this study: first is the identification of certain patterns of consumption as related to a particular identity. This was seen in relation to the executive, youth and technophile identities. Second is the identification of certain usage patterns as unique to a given identity. This too was seen in relation to the above three identities, although it wasn't very prominent in constructing the executive identity. Third is dissociating oneself from certain patterns of consumption as irrelevant or even inappropriate for an important identity. This was seen only in relation to the executive identity.

The first two forms are quite common in the literature relating to the use of different products that symbolise certain identities. For example, the symbolic associations of brands, as well as colours and forms of products with different identities were noted in the literature review (Belk 1988, Fortunati & Hebdige 1988/2000, Cianchi 2006, Jantzen, et al. 2006). The inclusion and exclusion though different usage patterns, although not in the context of identity, has also been discussed (Holt 1995). Therefore, similar to different products symbolising different identities, different *patterns of consumption* also seem to symbolise different identities. What is often implied in the in symbolic consumption of products, but not explicitly discussed is that in the identity work related to consumption, '…what we do not want to consume is often as … important as *what we desire…"* (Wilk 1997, p. 175, emphasis added). It appears that this is also true for *how* one consumes, when considering the third form of inclusion-exclusion practices. In other words, the consumption patterns one does not want to engage in are also symbolic of one's identity.

The technophile identity can also be discussed in relation to Bourdieu's (1984) argument that refined 'taste' in consumption can signal 'distinction' between consumers. In the case of technophiles, although inclusion and exclusion are based on the pattern of consumption, the basis of distinction is superior technological knowledge. This, they claim, enables them to use technologically complex features that others cannot. This usage pattern takes a form of what Holt (2000, p. 241) calls 'connoisseurship', where some consumers accentuate certain aspects of a consumption object that are ignored by others in order to express a personal style, even if the object itself is widely consumed. Through the expression of stylistic individuality, such consumers display their superior knowledge regarding the product category. For example, one consumer in Holt's (2000) study speaks enthusiastically about the vegetable dye that makes a rug beautiful. In a similar fashion, the technophiles in this study display their superior technological knowledge through consumption practices that involve technologically complex features that the average mobile telephone user does not use. Thus, in the case of technophiles, it is not the usage practices per se that construct the distinction between self and the other. In a manner similar to how 'taste' differentials in consuming cultural objects such as paintings are used to signal levels of aesthetic knowledge (Bourdieu 1984), different usage practices are used to signal superior technological knowledge.

Managing Multiple Identities

The different strategies of managing multiple identities introduced by Ahuvia (2005) can be used to discuss the practices identified in this study. The practice of 'juggling identities' occurs where senior managers manipulate different social functions of the phone to construct

a 'family member' or 'fun-loving' identity while at work, without disrupting the 'executive' identity. This is similar to what Ahuvia (2005, p.181) calls 'synthesising', which is a strategy used '…when an object or consumption activity successfully combines the previously conflicting aspects of the consumer's identity in a way that comes reasonably close to giving the consumer the best of both worlds…' This is precisely what managers do when they use the phone to switch between the 'executive' identity and the 'family member' or 'fun-loving' identity. They are attempting to assume one of the latter two identities without disrupting that of the executive, thereby having 'the best of both worlds'. However, Ahuvia (2005) relates synthesising to consumption situations where *objects* simultaneously symbolise two conflicting identities: for example, collecting vintage cigarette cases that symbolise both decorative femininity and self-assured feminist figures of the post-1960s. In such situations there is no change in the manner of consuming the object; rather, it carries two symbolic meanings simultaneously. This study shows that 'juggling' identities involves *varying the usage practice* at appropriate moments. It is this *synthesising practice* rather than *symbolic* synthesis that helps to manage multiple identities simultaneously.

The practice of 'transitioning' cannot be fitted comfortably into any one of the categories proposed by Ahuvia (2005); it appears to be a combination of two strategies - 'demarcating' and 'synthesising' (Ahuvia, 2005, p, 181). Demarcating occurs when selective consumption (i.e. consuming some objects and rejecting others) is used to accentuate a preferred identity out of two conflicting alternatives. For example, Ahuvia (2005) speaks of one of his research participants who desired to be a composer but had to settle for the less risky career of a business woman. The consumption objects she claims to 'love' emphasise the former and downplay the latter, thereby 'demarcating' between the *desired* identity of a composer and the *rejected* business woman identity. Similarly the NUMC youths' practices of 'transitioning' indicate that they are beginning to *reject* (through phasing out) some of the entertainment-related phone uses which they see as practices of a 'youth' and not compatible with the professional identity they are beginning to build; at the same time, they are adopting new business related practices more in line with the *desired* future identity of an executive. Through this dual process of phasing out some practices and adopting new ones they are temporally 'demarcating' the boundary between the older identity of 'youth' and the new desired identity of 'future executive'. However, in this process there are also indications of synthesising because phasing out is not a complete rejection. Some (in fact, many) of the phone uses of these participants still relate to a 'youth' identity, although such practices are gradually being phased out in favour of new 'business-related' ones. Since they engage in both types of practices at present, to some extent these youth are having 'the best of both worlds', and hence, synthesising.

The transitioning practice is a strategy adopted in a particular type of multiple identity management, namely, managing the identity conflict occurring at a 'liminal' stage of life (Turner 1969/2002, p. 359). Similar to Turner's (1969/2002, p. 359) description, the NUMC youth in this study are in a 'betwixt and between' position in life where they are neither executives yet nor the youth they used to be, since they are now embarking on a working life. This kind of liminal stage is an ambiguous state and is considered as a position that provides an individual with few tools to construct one's identity because it is stage where one 'passes through a cultural realm that has few or none of the attributes of the past or coming state' (Turner 1969/2002, p. 359). However, the youth in this study deploy different usage patterns of the phone associated with *both* the past and the coming states in order to negotiate the liminal stage. Thus, rather than being bereft of any cultural means of constructing an identity for themselves, they are using consumption patterns to integrate parts of both the past and the future identities to manage the transition. Given the above discussion, it appears that rather than attempting to categorise this consumption practice under the different categories proposed by Ahuvia (2005), who does not refer to liminal identities, 'transitioning' can be considered a newly identified strategy used by consumers in managing multiple identities.

In summary, it can be concluded that the findings of this study can be theorised, by and large, through concepts available in relation to identity work through consumption. However, at least one pattern of multiple identity management by consumers requires a new concept –'transitioning', which combines the explanations given in some available concepts.

Conclusion

This study addressed a previously identified weakness of research on consumption-identity relations, which have been blamed for reducing the complexities of objects in use to the mere symbolic meanings they embody (Slater & Miller 2007). In so doing, this research examined how varying consumption patterns of a single product could feature in consumer identity construction. The findings of the study have implications for both marketing practice and theory, and also opens avenues for further indepth study of 'products in use.'

Implications & Further Study

From a practical perspective, the findings of this study have several implications for advertising. Advertisements often depict the identities of their users, and in some cases, especially in the advertisements of mobile telephones, depicting different identities in relation to different usage patterns can also been seen (Wijetunga, 2010). However, this study indicates that consumers utilise diverse usage patterns to manage multiple identities

in diverse ways. Marketers could make use of these practices in crafting their advertising messages, for example, by highlighting the usefulness of being able to perform diverse social functions with the phone, and thereby manage different identities in one's life.

The use of the phone in transitioning from one identity to another has implications for mobile service providers. They could utilise a strategy of branding varied service features along the concept of 'customer equity', which refers to the lifetime value of a customer across the brands of a company rather than 'brand equity', which is the customer's assessment of a single brand's intangible qualities (Rust, Zeithaml & Lemon 2004, p. 113). By focusing on customer equity, service providers can develop a range of service feature brands with narrowly defined brand images with a view to captur the shifting usage patterns and preferences over time with different brands, thereby developing long-term service relationships with consumers (Rust et al. 2004). In doing this, especially in relation to transitioning into adulthood, it is possible to use narratives of 'rites of passage'. The literature indicates that using some products such as high- heeled shoes for women, signal the move from childhood to adulthood (Belk 2003). A variant of this theme could be used in presenting different service features as becoming more important as you move into adulthood.

In terms of theory, this study contributes to the large body of literature on the use of consumption for identity construction.. It demonstrates that varying patterns of consumption of the same object are implicated in complex ways in consumers' identity construction processes. However, the specific patterns of how meanings related to identity are constructed within social relations need to be further examined. For example, doing various things to and with the mobile telephone was identified as a key social activity in constructing a youth identity; however, there remains a need to study in-depth how the meaning making takes place within specific social relations among young users.

Although such further examinations are required, this study establishes clearly that not only what one consumes, but also how one consumes can play a role in consumer identity construction.

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The Impact of Situational and Demographic Factors on Ethical Perceptions of Earnings Management Practices among Professionals

Roshan Ajward

Abstract

Earnings management has re-emerged as a contemporary topic particularly during and in the aftermath of the global financial crisis. In this backdrop, the two main objectives of this study were to examine whether situational factors, (i.e., nature, direction, materiality and intention of earnings management practices), and selected demographic features (i.e., gender, age, sector, employment status, tenure, educational qualifications, and professional qualifications) have an impact on the ethical perceptions of earnings management practices of professionals. For this purpose, 90 professionals from the accounting and auditing disciplines were selected and a questionnaire consisting of thirteen scenarios on earnings management administered among them. The findings of the study showed that the ethical perceptions of professionals differ according to the nature, direction, materiality and intention of the earnings manipulations involved. Further, overall, it was revealed that their ethical perceptions are not impacted by the selected demographic factors. These findings shed light on an important topic (i.e., perceptions of earnings management practices) that has not yet been examined adequately in the local context.

Keywords: earnings management, demographic factors, perceptions of professionals.

Introduction

The extant literature does not provide a global definition of the concept of 'earnings management'. However, the common definition given by Ahadiat and Hefzi (2012) indicates that earnings management could be considered a manipulative intentional act with a specific objective in mind that could include regulatory, market and contracting incentives. However,

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research also indicates that earnings management could be considered acceptable if the earnings management practices are considered proper and reasonable for an entity that is well managed and if they provide value to shareholders (Parfet 2000). It is also well understood that ethical conduct is directly linked with ethical business practices including the avoidance of questionable earnings management practices.

In the recent financial crisis and corporate scandals, the role of the ethical conduct of professionals could be questioned and challenged especially in regard to manipulations of earnings. Copeland (2005) emphasizes that actual issues of accounting and auditing stem from the shortcomings of the character and ethical code of professionals who do not follow the correct courses of action despite the harmful consequences. However, researchers such as Jooste (2011) argue that although certain earnings management practices followed by practitioners are not illegal, they could be questionable on ethical grounds. Thus, earnings management and perceptions of professionals of such practices have reemerged as important contemporary issues.

On the other hand, research indicates that such ethical perceptions are impacted by several other factors including the demographic characteristics of individuals (Geiger & O'Connell 1999, Deshpande 1997). However, the evidence drawn by such research is not conclusive, and in certain instances, is contradictory. For instance, in their notable study, Clikeman et al. (2001) found that gender and national origin played no significant role in the perceptions of earnings management while Deshpande (1997) found that gender and work experience did have a major influence on such perceptions. Thus, this study attempts to explore this unsettled issue in the Sri Lankan context as a contribution to the empirical and theoretical literature on the subject. The researcher also notes the lack of local studies on this subject. Most of the existing studies on the perception of earnings management have been done in developed economies, and the findings of this study shed light on both empirical and theatrical insights in a developing country. It is particularly important to examine whether opportunistic behavior is influenced by situational factors that favour a teleological theoretical viewpoint or a deontological viewpoint. Thus, the two main objectives of this research are to examine the impact of situational factors - nature, direction, materiality and intention of earnings management practices- on the perceptions of professionals in regard to earnings manipulations (hereafter referred to as situational factors), and then to examine the impact of selected demographic factors (i.e., gender, age, sector, employment status, tenure, educational and professional qualifications (hereafter referred to as demographic factors) on the ethical perceptions of professionals of earnings management practices in the Sri Lankan context.

This study is organized as follows: The next section elaborates on the available literature that discusses what is meant by earnings management, the impact of situational and demographic factors on the ethical perceptions of professionals, while deriving the research hypotheses tested in this study. This is followed by the methodology adopted in testing the formulated hypotheses. Findings are presented in the next section followed by a discussion leading to conclusions and future research directions.

Literature Review

Jooste (2011) states that the practice of earnings management had been in practice for many years, and the literature provides many definitions of earnings management. Healy and Wahlen (1999) explain that earnings management takes place when the judgment of managers is used in financial reporting and in transaction structuring to manipulate the financial statements to either mislead certain stakeholders about the economic performance of the entity or to influence the outcomes of the contracts that rely on financial accounting information. Analyzing this definition, Jooste (2011) explains that there are both good and bad sides to earnings management, where misleading stakeholders is considered to be bad while making financial statements more informative is considered to be good. Belkaoui (2004) also maintains that different definitions of earnings management attempt to suggest that this concept means an intervention by management.

Situational Factors and the Perception of Earnings Management

Clikeman et al. (2000) indicate that situational factors such as nature, direction, materiality and intention of earnings management practices impact on the perceptions regarding earnings manipulations. Based on their findings, they indicate that the type (i.e., nature) of manipulation defined as accounting manipulation (alteration of existing accounting records) or operating manipulation (timing the transactions in specific periods, which is also known as real earnings management) has an impact on earnings management perceptions, with the participants indicating it was less ethical to engage in accounting manipulation as against real earnings management. Their findings indicate that although both types may be ethically questionable, the participants perceive that accounting manipulation is ethically more troubling. Next, regarding the direction of manipulation, the findings of Clikeman et al. indicate that participants considered it ethically questionable to report income as increasing as against income reducing thereby favouring the direction of earnings manipulation. Further, in terms of the materiality of the earnings manipulation involved, the findings of Clikeman et al. indicate that participants perceived it more ethically questionable if larger manipulations are made as against smaller manipulations. On the other hand, in terms of the intention

of the manipulation, their findings indicate that participants favoured manipulations with 'good' intentions (such as managing earnings to facilitate funding of an important product development project) as against manipulative intentions (such as managing earnings to achieve a budgeted profit target of a division). These situational factors are also examined by Merchant and Rockness (1994) with similar results. The main theme underlying these empirical studies is that opportunistic behaviour overrides ethical behavior (Wesley & Ndofor, 2013). In this respect, teleological theories such as utilitarianism and consequentialism and deontological theories make significantly different propositions on the 'correct' course of action resulting in consensus (Ferrell & Gresham 1985, Hunt & Vitell 1986). Based on these theoretical arguments and empirical findings, the following hypothesis (stated in its alternative form) is developed and tested for the Sri Lankan context:

H1: There is a significant difference in the perceptions of the ethical acceptability of earnings management practices based on situational factors (i.e., nature, direction, materiality and intention of earnings management practices).

Demographical Factors and the Perception of Earnings Management

Jooste (2011) argues that although not all earnings management practices could be considered as illegal, ethical questions remain. Merchant and Rockness (1994) highlight that individuals who follow these practices will be acting in an unacceptable manner if their own moral code condones such actions. Thus, engagement in earnings management practices has an ethical dimension to be considered.

The research indicates that idealists and relativists view management of earnings differently: idealists believe earnings management to be unethical while relativists consider it to be ethical (Elias, 2002; Greenfield, Jr. et al., 2007; Forsyth, 1982). Greenfield, Jr. et al. (2007) found a significant relationship between the ethical orientation of an individual and decision-making while in the same study establishing that individuals with a higher level of professional commitment are prone to less earnings management and opportunistic behavior. Thus, it is apparent that the ethical orientation of an individual is influenced by personal characteristics. Keller et al. (2007) are of the view that individual characteristics such as the gender, level of education, experience and religious beliefs influence ethical perceptions significantly. Confirming these findings, Elias (2004) also finds that gender, job title and age could be considered important factors that impact on the perception of earnings management. In respect of earnings management perceptions, the study conducted by Bruns and Merchant (1990) is considered to be the earliest (Jooste, 2011). They prepared a questionnaire covering

13 earnings management practices. Rosenzweig and Fischer (1994) in their study indicate that professionals with more years of experience and more responsibility considered earnings management practices less severely than professionals with lesser experience and of a lower job status. Clikeman et al. (2001) examined students' perceptions and concluded that gender and national origin show no significant differences. Contrary to this finding, Deshpande (1997), examining business managers, found that ethical perspectives are different in terms of gender and work experience. Furthermore, although not directly related to earnings management, studies such as by Sweeney (1995), Cohen et.al. (1998), Eaton and Giacomino (2001) indicate that females have a higher level of moral development than their male counterparts.

An interesting study conducted by Fischer and Rosenzweig (1995) using undergraduates, practicing accountants and MBA students indicates that accounting practitioners judged manipulative accounting practices pertaining to operations to be of lesser ethical significance than others.

In the above discussion, it is noted that in terms of demographic factors, the ethical perceptions of earnings management practices of accounting professionals at best are mixed and inconclusive. Thus, the following hypothesis is formulated and tested in its alternative form pertaining to the Sri Lankan context pertaining to this study.

H2: There is a significant difference in the perceptions of the ethical acceptability of earnings management practices based on selected demographic characteristics (i.e., gender, age, sector, employment status, tenure, educational qualifications, and professional qualifications).

The next section discusses the research methodology used in testing the above hypotheses.

Research Methodology

This section elaborates on the research approach, the population and sample, the survey instrument, and the analysis strategy.

Research Approach, Population and Sample

For the purpose of this research, a positivistic research paradigm with a quantitative approach was used, which is deemed appropriate for achieving the research objectives and is based on the extant literature (Clikeman et al., 2000; Bruns and Merchant, 1990; Elias, 2002; Kaplan, 2001; Clikeman and Henning, 2000).

The population of this study constituted working professionals in Sri Lanka with professional or/and academic qualifications in accounting or/and finance and employed in the accounting and auditing fields. Based on a random sampling strategy, 100 accounting professionals working in the audit and non-audit sectors were given the questionnaires and 90 completed questionnaires were finally selected for the purpose of analysis.

The Survey Instrument

As explained above, the survey instrument used in this study was a questionnaire consisting of two sections. The first section consisted of questions on demographic factors of gender, age, industry sector, employment status, tenure, educational qualifications and professional qualifications. The second section contained thirteen earnings management scenarios adopted from Clikeman et al. (2000). The scenarios were originally developed by Bruns and Merchant (1990) and subsequently used by Merchant and Rockness (1994) and Fischer and Rosenzweig (1995) to study the perceptions of accountants of the ethics involved in earnings management.

These scenarios contain earnings management practices and the respondents were expected to rate them in terms of the severity of ethical acceptability ranging from ethical practice to totally unethical practice. Accordingly, the professionals responded to each scenario by utilizing a 5-point Likert scale ranging from 1 for 'ethical' to 5 for 'totally unethical'. It should be noted that higher scores reflect higher degrees of ethical unacceptability. The questionnaire was refined on the basis of expert comments received from two experts in the field and pilot testing.

Analysis Strategy

As the analytical strategy for examining both the influence of situational factors (i.e., nature, direction, materiality and intention of earnings management practices) and demographic factors (i.e., gender, age, sector, employment status, tenure, educational qualifications, and professional qualifications) on the ethical perceptions of earnings management of

professionals in the accounting discipline, independent sample t-tests and One-way ANOVA analysis, which is based on the dominant research strategy used in the extant literature (Clikeman et al., 2000; Merchant & Rockness, 1994), were used.

Furthermore, the non-parametric versions of these tests, i.e., Mann Whitney U-test and Kruskal Wallis test, were used as additional robustness tests.

Analysis and Results

This section elaborates on the sample characteristics, results of the analysis of earnings management scenarios, and the findings in respect of the impact of situational and demographic factors on earnings management.

Sample Characteristics

The sample characteristics pertaining to the sample are given in Table 1. It is observed that 53% of the professionals were males while 47% were females, the majority of whom were in the age range of 20-30 years. The professionals ranged in age from 23 to 58 years with a median age of 28 and a mean age of 30.37 years (not tabulated).

Among the professionals 55.6% were from the non-audit sector and 40% from the audit sector. The sample consisted of mostly middle level managers amounting to 49% of the 90 professionals selected; on the other hand, top level managers amounted to 15.6%, the lower level managers to 23.3%, and operational level managers to 21.1% of the total sample.

Table 1: Descriptive Statistics

Demographic Variables	Categories	N	%
1. Gender	Male	48	53.3
	Female	42	46.7
	Total	**90**	**100.0**
2. Age	20-30 years	65	72.2
	31-40 years	15	16.7
	41-50 years	6	6.7
	51-60years	4	4.4
	Total	**90**	**100.0**
3. Sector	Audit	36	40.0
	Non-audit	50	55.6
	Other	4	4.4
	Total	**90**	**100.0**
4. Employment Status	Top level Management	14	15.6
	Middle level Management	36	40.0
	Lower level Management	21	23.3
	Operational level staff	19	21.1
	Total	**90**	**100.0**
5. Tenure	<=2 years	30	39.5
	3-5 years	23	30.3
	6-8 years	9	11.8
	9-15 years	4	5.3
	>=16 years	10	13.2
	Total	**76**	**100.0**
6. Educational Qualification	General Certificate of Education (Ordinary Level)	0	0
	General Certificate of Education (Advanced Level)	15	16.7
	Diploma in Accounting/Finance	16	17.8
	First Degree in Accounting/ Finance	50	55.6
	Postgraduate diploma	7	7.8
	PhD	2	2.2
	Total	**90**	**100.0**
7. Professional qualifications*	No Professional Qualifications	1	1.1
	CMA	4	4.4
	CA Sri Lanka	50	55.6
	CIMA	13	14.4
	ACCA	3	3.3
	Banking	5	5.6
	Multiple Qualifications	14	15.6
	Total	**90**	**100.0**

*CMA: The Certified Management Accountants of Sri Lanka; CA Sri Lanka: The Institute of Chartered Accountants of Sri Lanka; CIMA: The Chartered Institute of Management Accountants; ACCA: The Association of Chartered Certified Accountants and Banking: Banking examinations conducted by the Institute of Bankers in Sri Lanka.

Source: Constructed by author

In terms of tenure, the majority of professionals had less than two years after their first academic/ professional qualification (39.5%). The majority (55.6%) of the respondents had a first degree in Accounting or Finance, while 17.8% had a diploma in Accounting or Finance.

The majority of professionals had a part or full professional qualification (i.e., at least had completed the second stage of the qualification) from the Institute of Chartered Accountants of Sri Lanka (CA Sri Lanka), which as a percentage was 55.6% and most of them were fully qualified members (not tabulated). Also, 15.6% of the sample had at least two professional qualifications and 14.4% of members had completed at least the second stage of the CIMA qualification.

Analysis of Earnings Management Scenarios

The section on research methodology stated that the questionnaire consisted of 13 scenarios that contained different earnings management scenarios. The mean (mean) and standard deviation (SD) values of the responses obtained for these scenarios are presented in Table 2.

Scenario 7b (work done but not invoiced with the value of Rs. 500,000) had the highest mean value of 3.7 (between a minor infraction to serious interaction) while the lowest mean value 1.91 (i.e., a questionable practice) was observed for Scenario 1 (advancement of a painting job to the current period with the value of Rs. 150,000). It is noted that the responses for Scenario 4b had the lowest agreement among the participants (SD: 1.174), while Scenario 2a had the highest agreement among the participants (SD: .842).

Table 2: Mean Responses to Earnings Management Scenarios

Scenarios	N	Mean	SD
1. Advancement of the painting of the headquarters building in 2012 that is due for 2013. (Rs. 150,000)	90	1.91	.870
2a. The expenses were postponed from February and March until April in order to make the first quarter target. (Rs. 150,000) (Rs. 150,000)	90	2.86	.842
2b. The expenses were postponed from November and December until January in order to make the annual target. (Rs. 150,000)	90	2.97	.988
3. The General Manager [GM] ordered that office supplies be recorded after the year end. (Rs. 3000)	90	2.81	1.080
4a. The GM decided to implement a sales programme offering liberal payment terms to secure sales in advance.	90	2.84	1.070
4b. The GM ordered the manufacturing sector to work overtime in December in order to ship everything by the end of the year.	90	2.24	1.174
4c. The GM sold some excess assets and realized a profit of Rs 40,000.	90	2.20	1.073
5a. The GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012. (Rs. 60,000)	90	3.03	1.033
5b. The GM ordered his Controller to develop a rationale for increasing the reserves for inventory obsolescence although being confident that they could be sold at the full price at a later date. (Rs. 700,000)	90	3.51	.915
6a. The GM ordered the reduction of the reserves for inventory obsolescence to facilitate the continuance of some product development projects that might have been delayed due to budget constraints. (Rs. 210,000)	90	2.58	.971
6b. The GM ordered the reduction of the reserves for inventory obsolescence to facilitate meeting budgeted profit targets. (Rs. 210,000)	90	3.06	.998
7a. The GM called a consultancy firm partner and asked for a postponement to the next year on sending the payment invoice for the work done this year. (Rs 30,000)	90	2.76	.987
7b. The GM called a consultancy firm partner and asked for a postponement to the next year on sending the payment invoice for the work done this year. (Rs 500,000)	90	3.70	.905

*$p<.10$; **$p<.05$; *** $p<.01$

Source: Author's construction

The Impact of Situational Factors on Perceptions of Earnings Management

This section presents the results of the t-test that examined the differences arising from selected situational factors (i.e., nature, direction, materiality and intention of earnings management practices) in the earnings management perceptions of accounting professionals.

Type of Manipulation

As indicated in the literature survey, Clikeman et al. (2000) state that earnings could be managed either by adjusting accounting records (manipulative accounting) or by advancing or postponing real activities (manipulating operations), and explain that manipulative accounting is considered to be comparatively the more severe ethical violation. Scenarios 3, 5a, 5b, 6a, 6b, 7a and 7b are accounting manipulations while Scenarios 1, 2a, 2b, 4a, 4b and 4c are operating manipulations. The mean values of the responses of these two categories of scenarios (i.e., accounting manipulations and operating manipulations) are depicted in Table 3 together with the t-test results that show whether the perceptions of the accounting professionals differ statistically significantly between these two categories.

Table 3: Accounting Manipulation and Operating Manipulation

Manipulation	N	Mean	SD	Mean Difference
Accounting manipulations	90	3.073	.508	0.206***
Operating manipulations	90	2.867	.598	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Based on the paired sample t-test, there is a statistically significant difference (p<.01) between the professionals' perception of accounting manipulations and operating manipulations; the professionals consider that comparatively accounting manipulations are more serious ethical violations. This finding is consistent with the findings of Clikeman et al. (2000) and Merchant and Rockness (1994).

Direction of Manipulation

In regard to the direction of the manipulation, Clikeman et al. (2000) explain that Scenarios 1 and 2b are quite equal except that Scenario 1 reduces the present period income whereas Scenario 2b involves increasing such income.

Table 4: Increasing and Decreasing Current Earnings

Manipulation	N	Mean	SD	Mean Difference
Reducing the current income (Scenario 1)	90	1.810	.086	-1.100***
Increasing the current income (Scenario 2b)	90	2.910	.114	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

The results of the paired-sample t-test shown in Table 4 indicates that the mean difference between the responses for Scenario 1 and 2b are statistically significantly different, and the professionals perceive that increasing current income is more objectionable than reducing the current income, which is also consistent with the findings of Clikeman et al. (2000).

Materiality of Manipulation

The result of the paired sample t-test that compares the professionals' perception of the postponement of an expense that is material and not so material is shown in Table 5, and the result indicates that there is a statistically significant difference between them. Consistent with the findings of Clikeman et al. (2000), the findings in Table 5 indicate that professionals perceive the material postponement of recording a liability to be comparatively a more serious ethical issue.

Table 5: Materiality of Earnings Manipulation

Manipulation	N	Mean	SD	Mean Difference
Postponement of a not so material payment Rs. 30,000 (Scenario 7a)	90	2.760	.987	-0.960***
Postponement of a material payment Rs. 500,000 (Scenario 7b)	90	3.720	.862	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Motives of Earnings Manipulation

It is noted that Scenarios 6a and 6b are quite similar except for the intention of the professionals in managing earnings. The paired sample t-test results depicted in Table 6 indicate that when the manipulation involves good motives the professionals perceive that it is comparatively ethically acceptable with such difference in perceptions being statistically significant. This finding too is consistent with that of Clikeman et al. (2000).

Table 6: Intention of Earnings Manipulation

Manipulation	N	Mean	SD	Mean Difference
Reducing the inventory obsolescence reserve to facilitate some product development projects (Scenario 6a)	90	2.59	.982	-0.480***
Reducing the inventory obsolescence reserve to facilitate meeting budgeted profit targets (Scenario 6b)	90	3.07	1.003	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

The Impact of Demographic Factors on Perceptions of Earnings Management

This section presents the t-test and one-way ANOVA results that examine the differences in earnings management perceptions of accounting professionals based on their selected demographic characteristics (i.e., gender, age, sector, employment status, tenure, educational qualifications, and professional qualifications).

Gender

Table 7 gives the t-test analysis, which examines whether male and female professionals differ in their perceptions of the 13 scenarios. Except for Scenario 2b (the expenses were postponed from November and December until January in order to meet the annual target), there is no statistically significant difference (p>.10) between male and female professionals in regard to the other scenarios. In Scenario 2b, male professionals earned higher scores than female professionals, which is a quite interesting finding.

Table 7: t-Test Results Based on Gender

Manipulation		N	Mean	SD	Mean Difference
2b. The expenses were postponed from November and December until January in order to meet the annual target.	Male	48	3.229	0.928	0.682***
	Female	42	2.548	1.131	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Age

The One-way ANOVA analysis done to examine the differences among the four age groups (20-30 years; 31-40 years; 41-50 years; and 51-60 years) selected is presented in Table 8. In Scenarios 2a (i.e., the expenses were postponed from February and March until April in order to make the first quarter target (Rs. 150,000)), in 4a (i.e., the General Manager [GM] decided to implement a sales programme offering liberal payment terms to secure sales in advance), in 5a (the GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012. (Rs. 60,000)), and in 6a. (the GM ordering the reduction of the reserve for inventory obsolescence to facilitate the continuance of some product development projects that might have been delayed due to budget constraints (Rs. 210,000)), there are statistically significant ($p<.10$) differences among the age groups. Further, in general, professionals of the higher age groups have earned higher scores compared to the younger age groups in these scenarios. However, for other scenarios, no statistically significant differences were noted among the age groups of the selected sample.

Table 8: One-way ANOVA Results Based on Age

Manipulation		N	Mean	SD	F-statistic
2a. The expenses were postponed from February and March until April in order to make the first quarter target. (Rs. 150,000)	20-30 years	65	2.91	.931	2.853**
	31-40 years	15	2.20	.775	
	41-50 years	6	3.00	0.000	
	51-60years	4	3.00	.816	
4a. The GM decided to implement a sales programme offering liberal payment terms to secure sales in advance.	20-30 years	65	2.74	1.094	2.613*
	31-40 years	15	3.27	1.100	
	41-50 years	6	1.83	.753	
	51-60years	4	2.75	.957	
5a. The GM ordered his Controller to prepay some expenses and book them in 2013 instead of in 2012. (Rs. 60,000)	20-30 years	65	3.15	.988	5.586***
	31-40 years	15	2.20	.775	
	41-50 years	6	3.33	1.033	
	51-60years	4	4.00	1.155	
6a. The GM ordered the reduction of the reserve for inventory obsolescence to facilitate the continuance of some product development projects that might have been delayed due to budget constraints. (Rs. 210,000)	20-30 years	65	2.42	.917	2.977**
	31-40 years	15	2.93	1.100	
	41-50 years	6	3.00	.632	
	51-60years	4	3.50	1.291	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Industry Sector

In examining the differences among audit, non-audit and other sectors in respect of the 13 scenarios, the One-way ANOVA results are depicted in Table 9. Except for Scenario 5a (i.e., the GM ordered his Controller to prepay some expenses and book them in 2013 instead of 2012 (Rs. 60,000)) and 7b (i.e., the GM called a consultancy firm partner and asked for a postponement to the next year for sending the payment invoice for the work done this year. (Rs 500,000)), for all other 11 scenarios, no statistically significant (p>.10) differences among industry sector groups were observed. It is also interesting to note that the in the responses for Scenarios 5a and 7b, professionals from audit firms had got higher scores (indicating that the issues are more ethically troubling) than the professionals from non-audit and other sectors.

Table 9: One-way ANOVA Results Based on Industry Sector

Manipulation			N	Mean	SD	F-statistic
5a.	The GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012. (Rs. 60,000)	Audit	36	3.31	.951	2.779*
		Non-Audit	50	2.92	1.085	
		Other	4	2.25	.500	
7b.	The GM called a consultancy firm partner and asked for a postponement to the next year on sending the payment invoice for the work done this year. (Rs. 500,000)	Audit	36	4.08	.692	6.708***
		Non-Audit	50	3.52	.909	
		Other	4	3.00	0.000	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Employee Status

The One-way ANOVA analysis done to assess the difference between the different employee levels (top management, middle management, lower management and operational staff) in terms of the 13 scenarios are indicated in Table 10. It is noted that 11 scenarios had no statistically significant (p>.10) difference among these employee levels in terms of the accounting professional perceptions of earnings management, and only Scenario 1 (i.e., advancement of the painting of the headquarters building in 2012 that is due for 2013 (Rs. 150,000)) and 2b (i.e., the expenses were postponed from November and December until January in order to make the annual target (Rs. 150,000)) reveal overall differences. Within these two scenarios, it is quite interesting to note that the operational staff members had obtained higher scores (indicating greater concern for the ethical issues) in comparison to professionals in the top, middle and lower management levels.

Table 10: One-way ANOVA Results Based on Employee Status

Manipulation		N	Mean	SD	F-value
1. Advancement of the painting of the headquarters building in 2012 that is due for 2013. (Rs. 150,000)	Top Mgt.	14	2.07	.829	2.584*
	Middle Mgt.	36	1.56	.773	
	Lower Mgt.	21	1.81	.750	
	Operational staff	19	2.11	.875	
2b. The expenses were postponed from November and December until January in order to make the annual target. (Rs. 150,000)	Top Mgt.	14	2.71	.914	2.661*
	Middle Mgt.	36	3.00	1.014	
	Lower Mgt.	21	2.48	1.289	
	Operational staff	19	3.37	.895	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Tenure

The fifth demographic factor selected was the tenure and the One-way ANOVA results obtained to examine the differences among the selected tenure ranges in terms of the 13 scenarios are depicted in Table 11. It is observed that Scenarios 5a (i.e., the GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012 (Rs. 60,000)), 6a (i.e., the GM ordering the reduction of the reserve for inventory obsolesce to facilitate the continuance of some product development projects that might have been delayed due to budget constraints (Rs. 210,000)) and 6b (The GM ordered the reduction of the reserve for inventory obsolescence to facilitate meeting budgeted profit targets (Rs. 210,000)) have statistically significant differences among the tenure categories. However, the other 10 scenarios do not show a statistically significant difference (p>.10) among the tenure groups concerned. For Scenarios 5a, 6a and 6b, it is generally noted that higher scores (depicting greater concern for the ethical issues presented) were gained by professionals with a longer tenure in their respective organizations.

Table 11: One-way ANOVA Results Based on Tenure

Manipulation		N	Mean	SD	F-value
5a. The GM ordered his Controller to prepay some expenses and book them in 2013 instead of 2012. (Rs. 60,000)	<=2 years	30	3.37	1.033	0.058*
	3-5 years	23	2.78	.795	
	6-8 years	9	2.56	.527	
	9-15 years	4	2.75	.957	
	>=16 years	10	3.40	1.174	
6a. The GM ordered the reduction of the reserve for inventory obsolescence to facilitate the continuance of some product development projects that might have been delayed due to budget constraints. (Rs. 210,000)	<=2 years	30	2.40	.894	0.010**
	3-5 years	23	2.30	.926	
	6-8 years	9	2.78	.972	
	9-15 years	4	3.50	1.291	
	>=16 years	10	3.40	1.075	
6b. The GM ordered the reduction of the reserve for inventory obsolescence to facilitate meeting budgeted profit targets. (Rs. 210,000)	<=2 years	30	2.77	.971	0.035**
	3-5 years	23	2.87	.968	
	6-8 years	9	2.56	.882	
	9-15 years	4	4.00	1.155	
	>=16 years	10	3.50	.850	

**p<.10; **p<.05; *** p<.01*

Source: Author's construction

Educational Qualifications

The differences among the educational qualification categories (General Certificate of Education - Advanced Level, Diploma in Accounting/Finance, First Degree in Accounting/ Finance, Postgraduate Diploma and PhD categories) in terms of the 13 scenarios were tested using the One-way ANOVA analysis and the results are shown in Table 12. The perceptions of earnings management of accounting professionals pertaining to educational categories for Scenarios 2a (i.e., the expenses were postponed from February and March until April in order to make the first quarter target (Rs. 150,000)), 2b (i.e., the expenses were postponed from November and December until January in order to meet the annual target. (Rs. 150,000)), 5a (the GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012 (Rs. 60,000)) and 7b (The GM called a consultancy firm partner and asked for a postponement to the next year for sending the payment invoice for the work done this year (Rs 500,000)), were noted to be statistically significantly different ($p<.10$). However, no clear pattern was observed to indicate that professionals with higher educational qualifications had obtained higher scores. Furthermore, the educational categories for all other 9 scenarios were not found to be statistically significantly different ($p>.10$).

Table 12: One-way ANOVA Results Based on Educational Qualifications

Manipulation		N	Mean	SD	F-value
2a. The expenses were postponed from February and March until April in order to make the first quarter target. (Rs. 150,000)	GCE A/L	15	2.68	.488	2.667**
	Diploma in Acc./Fin.	16	3.00	.966	
	First degree in Acc./Fin.	50	2.88	.918	
	Post graduate diploma	7	2.57	.976	
	PhD	2	1.00	0.000	
2b. The expenses were postponed from November and December until January in order to make the annual target (Rs. 150,000)	GCE A/L	15	2.87	.915	2.139*
	Diploma in Acc./Fin.	16	2.75	1.065	
	First degree in Acc./Fin.	50	3.08	1.104	
	Post graduate diploma	7	2.71	.951	
	PhD	2	1.00	0.000	
5a. The GM ordered his controller to prepay some expenses and book them in 2013 instead of 2012 (Rs. 60,000)	GCE A/L	15	2.27	.704	4.435***
	Diploma in Acc./Fin.	16	2.88	.806	
	First degree in Acc./Fin.	50	3.32	.999	
	Post graduate diploma	7	3.43	1.512	
	PhD	2	2.00	0.000	
7b. The GM called a consultancy firm partner and asked for a postponement to the next year for sending the payment invoice for the work done this year (Rs 500,000)	GCE A/L	15	3.60	.507	3.089**
	Diploma in Acc./Fin.	16	3.19	1.223	
	First degree in Acc./Fin.	50	3.96	.727	
	Post graduate diploma	7	3.43	.976	
	PhD	2	4.00	0.000	

**p<.10; **p<.05; *** p<.01*

Source: Authors construction

Professional Qualifications

The results of the analysis of the differences among different professional qualifications are presented in Table 13. It is observed that professional qualification categories have a statistically significant difference for scenarios 4c (i.e., the GM sold some excess assets and realized profit of Rs 40,000.) and 7a (i.e., The GM called a consultancy firm partner and asked for a postponement to the next year for sending the payment invoice for the work done this year (Rs 30,000)). Furthermore, no consistent pattern was observed to indicate that professionals with certain professional qualifications had got higher scores for these two scenarios. For the other 11 scenarios, no statistically significant differences (p>.10) were observed among the professional qualification categories.

Table 13: One-way ANOVA Results Based on Professional Qualifications

Manipulation			N	Mean	SD	F-value
4c.	The GM sold some excess assets and realized profit of Rs 40,000.	No Pro. Qualifications	1	2.00		2.255**
		CMA	4	1.00	0.000	
		CA Sri Lanka	50	2.02	1.020	
		CIMA	13	1.85	.801	
		ACCA	3	3.67	1.155	
		Banking	5	1.80	1.095	
		Multiple Qualifications	14	1.93	.997	
7a.	The GM called a consultancy firm partner and asked for a postponement to the next year for sending the payment invoice for the work done this year (Rs 30,000)	No Pro. Qualifications	1	2.00		2.142*
		CMA	4	2.25	1.258	
		CA Sri Lanka	50	2.68	.957	
		CIMA	13	2.62	.506	
		ACCA	3	3.00	1.732	
		Banking	5	2.20	.837	
		Multiple Qualifications	14	3.50	1.019	

**p<.10; **p<.05; ***p<.01*

Source: Author's construction

This section presented the results obtained by performing a t-test and One-way ANOVA analyses, and the next section presents conclusions accompanied with related discussion.[1]

Conclusion

One of the main concerns raised in the contemporary accounting field is the ethical behavior of professional accountants, and in this backdrop, earnings management has reemerged as an important factor during and after the recent global financial crisis. The intentional manipulation of corporate financial information to achieve an explicit objective is generally considered as earnings management and ethical acceptability could be questionable in most instances. Although different studies had examined the factors impacting on the perceptions of accounting professionals regarding their ethical decisions on managing earnings, the evidence is mixed and not conclusive. Furthermore, the researcher observed a lack of studies done in the Sri Lankan context on this important dimension. Accordingly, the two main

[1] The non-parametric versions of the independent sample t-test, i.e., the Mann Whitney U-tests and One-way ANOVA analysis, i.e., the Kruskal Wallis tests were performed and qualitatively similar conclusions were noted for the seven demographic factors analyzed under this section.

objectives of this study were to examine the impact of situational factors and the impact of demographic characteristics, respectively, on accounting professionals' perceptions of the ethical acceptability of earnings management.

In order to achieve the above research objective, t-tests and One-way ANOVA tests were done to examine the differences between and among the different situational factors and demographic variables in terms of thirteen selected earnings management scenarios, which were adopted from Clikeman et al. (2000). A questionnaire was administered among working accounting professionals and 90 usable questionnaires were secured.

In terms of descriptive statistics pertaining to the 13 scenarios, the highest mean score (indicating the highest ethical concern) was for Scenario 7b (work done but not invoiced with the value of Rs. 500,000) of the value of 3.7 (between a minor infraction to serious interaction) while the lowest mean value of 1.91 (i.e., a questionable practice) was observed for Scenario 1 (advancement of a painting job to the current period with the value of Rs. 150,000). In terms of the first objective of this study in examining the situational factors impacting on the accounting professionals' perception of earnings management practices (also indicated under hypothesis H1), when the professionals' perception of accounting manipulations and operating manipulations were considered, it was found that professionals considered that comparatively accounting manipulations to be more serious ethical violations. Further, in terms of the direction of earnings management, the findings indicated that the professionals perceived that increasing current income is more objectionable than reducing current income. On the other hand, where materiality of the particular item was concerned, it was found that the professionals perceived the manipulations involving material items to be a comparatively more serious ethical issue than those involving not so material items. Finally, when the motive of earnings management was considered, it was found that when professionals had good motives, they perceived that it was comparatively ethically more acceptable than other motives. These findings were consistent with the findings of Clikeman et al. (2000) and Merchant and Rockness (1994).

In terms of the second objective of the study, which was to examine the impact of demographic characteristics of accounting professionals on the earnings management practices (also indicated under hypothesis H1), overall, the findings of One-way ANOVA and independent sample t-test results indicated that there was no significant difference in the perception of the ethicality of earnings management based on the professionals' demographic characteristics of gender, age, sector, employment status, tenure, educational qualifications, and professional qualifications. This finding is supported in the extant literature discussed

before that suggests the absence of definitive evidence of the impact of demographic factors on ethical perceptions of professionals. However, under specific scenarios certain differences were observed. Under gender, for Scenario 2b, it is observed that male professionals earned higher scores than female professionals, which is a quite interesting finding. In terms of age, categories under Scenarios 2a, 4a, 5a, and 6a were found to be statistically significantly different, and it was also s noted that higher age groups earned higher scores compared to younger age groups under these scenarios. In the industry sector, groups under Scenarios 5a and 7b were found to be statistically significantly different, and professionals from audit firms had shown higher scores than professionals from non-audit and other sectors. The One-way ANOVA analysis done for employee status showed that employee categories for Scenario 1 and Scenarios 2b had statistically significant differences, and it was noted that operational staff members had earned higher scores in comparison to the professionals in the top, middle and lower management levels. Next, in terms of tenure, the results indicated that tenure categories for Scenarios 5a, 6a, and 6b were different on a statistically significant basis, and it was noted that higher scores were obtained by professionals with longer tenure in their respective organizations. Under educational qualifications, Scenarios 2a, 2b, 5a and 7b were noted to be different among different educational groups, but a clear pattern was not observed to indicate that professionals with higher educational qualifications had earned higher scores. The results for professional qualifications showed that groups for Scenarios 4c and 7a were different on a statistically significant basis. However, no consistent pattern was observed to indicate that professionals with certain professional qualifications had higher scores for these two scenarios. Based on these findings, it could be finally concluded that despite having some impact under certain selected scenarios, overall, the demographic factors of the professionals did not have a consistent and systematic impact on the ethical perception of earnings management. These findings shed light on an important topic (i.e., perceptions of earnings management practices) that has not been yet examined adequately in the local context.

Implications and Future Directions

The findings of this study are expected to have significant policy implications, particularly in terms of academic and professional accounting education and training. The findings relating to the situational factors indicated that Sri Lankan professionals considered operating manipulations to be relatively less unethical than accounting manipulations. However, it should be noted that both are quite unethical, and in certain instances, operating manipulations could have relatively dire consequences on the entity's future. The emphasis placed on accounting education and training is that if accounting standards are followed and complied with (thus avoiding accounting manipulation), there would be no issue, and such

accounting education and training do not emphasize that operating earnings management is indeed equally unethical. Furthermore, academic and professional accounting education and training should emphasize that despite the materiality, intention and direction of unethical practices, any unethical practice should be seen from the same perspective. Accordingly, the findings of this study are expected to provide insights for policy makers into the academic and professional accounting education and training in professional ethics.

For future research, it is suggested that other factors that may influence the ethical perceptions of the professionals in terms of earnings management be used as this study considered only selected situational and demographic factors.

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Not So Silent: How Social Support is Given and Received in Dealing with Sexual Harassment in Sri Lankan Work-Places

Arosha S. Adikaram

Abstract

The aim of this paper is to explore how silence, secrecy and censorship related to sexual harassment are fragmented through dialogue and information sharing among social networks, leading to different types of social support given and received. In-depth interviews with 40 respondents and focus group discussions with four groups were carried out under the qualitative research approach. The theory of social support was employed as the theoretical basis of the study. The findings indicated that through dialogue and information sharing related to sexual harassment within social networks of friends, family, co-workers and sometimes superiors, women gain and give emotional, informational, instrumental and appraisal support, emphasizing the many instances when the issue becomes open, non-privatized, and social. Stemming from these findings, implications for managers in terms of using social support as a means of dealing with sexual harassment in organizations are discussed.

Keywords: silence, sexual harassment, social networks, social support, Sri Lanka.

Introduction

Even after decades of intensive research, rigorous public debate and extensive interventions, sexual harassment continues to persist at workplaces. Sri Lanka, being the first Asian country to address the issue through government legislation, considers sexual harassment to be a criminal offence under the Penal Code (Amendment) No. 22 of 1995, where sexual harassment is defined as:

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> …Whoever, by assault or use of criminal force, sexually harasses another person by the use of words or actions, causes sexual annoyance or harassment to such other persons, commits the offence of sexual harassment…

The Act further states that

> …Unwelcome sexual advances by words or actions used by a person in authority in a work place, or any other place, shall constitute the offence of sexual harassment…

In addition to these legal interventions at a macro level, companies and various other institutions such as women's organizations too have taken various steps including introduction of guidelines, policies and procedures to address the issue. Yet, while sexual harassment is considered a serious social issue throughout the world and is addressed in the public domain through these various legislations, policies and procedures, the issue is also consistently treated as individual (Fitzgerald & Ormerod 1993), personal or private (Weeks et al. 1986, Clair 1993) and surrounded by secrecy (Clair 1993, Fitzgerald & Ormerod 1993).

There are conflicting prior findings indicating how victims are silent about their experiences on one hand, and how they seek support from social sources and networks such as friends, family and coworkers, breaking this silence on the other hand. Yet, little attention has been given to these non-formal methods of dealing with sexual harassment in research (McDonald, Graham & Martin 2010). Similarly, prior research also highlights the importance of breaking this silence surrounding sexual harassment and the role of social support for it. As research highlight, lack of support not only leads to silence, but also to other negative consequences such as suicide (Wijayatilake & Zachariya 2000). In this backdrop, I attempt to explore how this silence is broken by women at workplaces in instances of sexual harassment, and how they employ social networks to gain and give social support. For this purpose, I turn to the theory of social support, using it as the theoretical basis for understanding this intricate phenomenon.

In the following sections, I will first expound more on how and when silence, secrecy and censorship take place with regard to sexual harassment. Then I will provide an overview of the theory of social support setting the foundation for the analysis of findings and discussion. I will next explain the research approach employed and the data collection and analysis methods followed by the presentation of findings. Finally, the paper ends with the discussion and conclusion, limitations of the study, implications for managers and directions for further research.

Silence, Secrecy and Censorship in Sexual Harassment

The issue of secrecy and silence is identified to be central in sexual harassment and is manifested in various ways (Clair 1993, King 1995, Rudman, Borgida & Robertson 1995, Peirce, Rosen & Hiller 1997, McDonald et al. 2010). Certain cultures such as the Sri Lankan culture, expect women to be silent on matters of sexuality including sexual harassment, treating the issue a taboo (Tambiah 1996, Ng & Othamn 2002, Sapana Pradhan-Malla 2005, Adikaram 2014, Adikaram In press). Women are conditioned to show sexual ignorance and innocence (Tambiah 1996, Adikaram 2014), whereby they do not talk about matters related to sex and sexuality in the open (Foucault 1990, Adikaram In press). As researchers indicate there exists a 'sexual silence' (Shupe et al. 2002) '…that makes it difficult to discuss sexual issues in public…' (Sigal et al. 2005, p. 211). Accoridng to Foucault (1990), open discussion about sexual matters and sexuality is forebidden, leading to women forcing upon themselves decency of expression and censoring of certain vocabulary. In this context, it is said that women suffer in silence, maintaining secrecy and not sharing their experiences even with friends, let alone the authorities (Wijeytilake & Zachariya 2000, Ng & Othamn 2002, Sapana Pradhan-Malla 2005, McDonald et al. 2010).

On the other hand, the very nature of the issue is said to promote secrecy and silence. It is shown how sexual harassment mainly takes place behind closed doors (Kirby 1995), or in secluded places out of the public eye, on one-to-one contexts without witnesses (McDonald et al. 2010), and operated through censorship (McDonald et al. 2010). Perpetrators also build and secure secrecy about their behaviours contributing to this silence surrounding the issue (Cense & Brackenridge 2001, Marks, Mountjoy & Marcus 2012).

At the same time, self-blame (De Judicibus & McCabe 2001, Ng & Othamn 2002) and victim-blame (Ng & Othamn 2002, Diekmann et al. 2013, Jang & Lee 2013,) would also render women silent about their experiences, believing that they brought the harassment upon themselves by the way they dressed or behaved (Reese & Lindenberge 1997, Ng & Othamn 2002, Adikaram 2014). 'Victims are ashamed or embarrassed about what happened to them and prefer to keep quiet about it, often also because they are afraid of being labelled as either 'loose' women or 'frigid' women who cannot take a joke' (Haspels et al. 2001, p. 36). Further, vulnerability, whether financial or positional, too can lead to silence among victims of sexual harassment. 'Lacking even minimal job security, temporary workers have a compelling economic interest in maintaining their silence in the face of harassment, rendering them both extremely vulnerable to sexual harassment and powerless to combat it' (Chamberlain et al. 2008, p. 267).

Yet, conversely, a plethora of research also indicate how women seek social support, breaking this silence and secrecy by involving the family, friends or co-workers (Hotteling 1991, Gutek & Koss 1993, Fitzgerald, Swan & Fischer 1995, Schneider, Swan & Fitzgerald, 1997, Wijayatilake & Zachariya 2000, Haspels et al. 2001, McDonald 2012). Nevertheless these studies appear to only scratch the surface of the concept of social support as a means of handling and coping with sexual harassment (Hotteling 1991, Gutek & Koss 1993, Fitzgerald, Swan, & Fischer 1995, Haspels et al. 2001). Handy (2006) says '…women do far more than simply support other women who are suffering individual harassment. They may also respond collectively to both individually targeted and systemic harassment, developing a range of collective strategies for containing or eliminating unwelcome behaviour'. (p. 4). Yet, these different ways and means of gaining and giving support has not been sufficiently explored in previous studies.

At the same time, past research has also shown the many negative outcomes of social support and why women are reluctant to seek social support. It is said that when social support is sought, women are berated for their experiences of sexual harassment (Wijayatilake & Zachariya 2000, Haspels et al. 2001) or conflicts arise with family members and friends (Skjorshammer & Hofoss cited in Bowling & Beehr 2006). Research also indicates how victims may not confide in co-workers, perceiving it as more risky, that they will not be believed, are advised not to take action (Bingham & Scherer 1993), or fear the negative perceptions of others (Chaiyavej & Morash 2009).

With these conflicting viewpoints, perceptions and findings, the aim of this paper is to explore how silence and secrecy related to sexual harassment is fragmented through social networks and social support and the different ways and means in which social support is provided for or obtained by women in different instances of sexual harassment. This knowledge will add to an insufficiently studied area in sexual harassment. Even though sexual harassment researchers have addressed social support received by victims in handling and coping with the issue, the concept of support has not been explored adequately or in depth. To my knowledge, there does not exist any research exploring this particular phenomena comprehensively. While studies on sexual harassment have used the term and the concept of social support, they have only vaguely addressed the issue (e.g. Cortina & Wasti 2005, Bowling & Beehr 2006, McDonald et al. 2012) without sufficiently indicating the different dimensions of social support, the different ways it is manifested and the outcomes of such social support related to sexual harassment.

Yet, with sexual harassment persisting in organizations even with numerous government, organizational and individual interventions, there is a need to investigate how social support can be employed to combat the issue. This is specially needed when there has been increased attention and effort to break this silence related to sexual harassment (Sapana Pradhan-Malla 2005). Further, the need for studies to explore conversation among women (and men) about their experiences and talks of sexual harassment too has been highlighted (Dougherty 1999). It is also said that in order to understand sexual harassment in all its complexity and to subsequently take appropriate and effective steps, management needs to understand how interactions and relationships at work contribute to sexual harassment.

Theoretical Lens – Theory of Social Support

Social support is founded within theories such as the social exchange theory, social comparison theory, and social competence theory (Langford et al. 1997). Social support is considered to be a multifaceted and complex concept with numerous definitions provided by researchers and theoreticians (Hupcey, 1998). Social support is commonly defined as '…the social resources that persons perceive to be available or that are actually provided to them by nonprofessionals in the context of both formal support groups and informal helping relationships…' (Gottlieb & Bergen 2010, p. 512).

The concept is studied in different disciplines such as health, psychology (Leavy 1983, Cohen & Wills 1985, Barrera 1986, Thoits 1986, Simoni, Frick & Huang 2006, Heaphy & Dutton 2008) and organizational studies (Brough & Frame 2004, Heaphy & Dutton 2008). Under organizational studies, social support has been commonly discussed in research related to international assignments (Copeland & Norell 2002), job stress, work-life balance (Md-Sidin, Sambasivan, & Ismail 2010) and job satisfaction (Brough & Pears 2005). Social support is predominantly found to have a direct or indirect impact on stress or stressor-strain relationships (House 1981, Cohen & Wills 1985, Lakey & Cohen 2000, Beehr & McGrath cited in Brough & Frame 2004) and is identified to play a major role in alleviating occupational stress and health related problems (House 1981). Sexual harassment being identified as a source of stress and an issue of workplace health and well-being, the suitability of employing social support theory to understand the issue is clear.

Social support literature generally speaks about spouse/partner, children, other relatives, close friends, co-workers, supervisors, church, community or neighborhood, professionals or service providers and special groups as the sources of support (Cohen & Wills 1985, Cooke et al. 1988, Wasti & Cortina 2002, Brough & Frame 2004, Cortina & Wasti 2005, Bowling

& Beehr 2006). Further, different scholars have identified differnet types of social support (House 1981, Cooke et al. 1988). House (1981), one of the earliest writers on the concept, presents four types of supportive behaviours, which later scholars of social support have also commonly accepted. They are a) emotional support (involving caring, trust and empathy) b) instrumental support (involving helping others) c) informational support (involving providing information which can provide a solution to a problem), and d) apprasial support (involving information provided to help others to evaluate personal performance). In addition to these four, various researchers have suggested other types of social support such as esteem support and network support (Cooke et al. 1988). However, the current study employs the four types of support (emotional, instrumental, informational and appraisal support) presented by House (1981) in exploring the interactions and support women receive in cases of sexual harassment.

Being a complex discipline of study, social support research explores numerous areas such as sources of support, types of support provided, perceptions of support and social networks (Hupcey 1998). In this study, I concentrate on the sources of support and the types of support provided. Social support is also studied under different theoretical perspectives such as stress and coping perspective, social constructionist perspective and relationship perspective (Lakey & Cohen 2000). I study the stress and coping perspective where it is said that social support reduces stressful life events through either the supportive actions of others or the belief that support is available (Lakey & Cohen 2000). Even though antecedents of social support as well as consequences of social support have also gained attention in social support theory (Hupcey 1998, Langford et al. 1997), the current study focuses on social support only and does not delve deeper into antecedents (social networks, social embeddedness or social climate) nor the outcomes of social support such as health and psychological well-being of women.

Methodology

Information for this article was drawn from a study which explored how the meaning of the notion "sexual harassment at the workplace" was constructed using the constructivist grounded theory strategy of inquiry of Kathy Charmaz (2003, 2005). The respondents of the present article were 40 individuals, with whom in-depth, person-to-person interviews were carried out, and 22 respondents who participated in four focus group discussions consisting of four to five respondents each. The respondents of the in-depth interviews were selected using the purposive sampling technique at the initial coding stage and theoretical sampling during the selective coding stage of data collection and analysis (Charmaz 2003, 2005).

The respondents were approached using the snowball technique. They were all women 27 Sinhalese, seven Tamils and six Muslims. Thirty-three of the respondents were in the age group 20–35, while seven were above 35 years of age. Ten of the respondents were married and 30 respondents were unmarried. All the respondents hail from middle class families and hold clerical, executive or lower managerial level positions in their organizations.

The respondents of the focus group consisted of five married women and 17 unmarried women, 19 of whom were in the age group of 20–35 and three respondents above 35 years. Similar to the interview respondents, the focus group respondents too were from middle class families and hold clerical, executive or lower managerial level positions. Focus group respondents too were selected purposefully (Khan & Manderson 1992), based on the pre-existing social networks: friends or co-workers. This purposeful selection was done to specifically explore the social interaction, dialogue and information sharing that takes place among social networks. Focus groups were specifically useful in understanding and capturing how social support actually takes place in interactions within social networks.

An average of one and a half hours was spent on each in-depth interview and one hour was spent on each focus group discussion. The interviews and focus group discussions were transcribed verbatim and qualitatively analysed through a meticulous process of coding and categorizing using the social support theory constructs as the theoretical lens. Data analysis through initial coding started with the first few interviews and then subsequent selective coding and categorizing was carried out based on the analysis thus far. Priori codes based on the main types of support under social support theory were first identified (House 1981) and then these constructs were expounded through the other codes and categories, both inductive and priori.

Findings

In-depth interviews and focus group discussions provided ample evidence to show that even though generally sexual harassment is treated with secrecy and silence, women do talk about sexual harassment in public, in terms of their own experiences and experiences of others as well as about other aspects of sexual harassment such as possible perpetrators. Through the discussions that takes place within various social networks, information is shared and social support is given and received. Further, contrary to prior findings that the most common response to sexual harassment is ignorance and silence, the respondents of the study indicated numerous instances that they do engage in other assertive forms of reaction by seeking support and aid from social networks. Overall, the analysis expounded numerous instances,

sources and ways social support occurs in cases of sexual harassment. These findings are analyzed and explained below under the main types of social support of House (1981).

Emotional Support

Support involving providing love, care, empathy and trust is known as 'emotional support' (House 1981). It was apparent that the respondents in the study generally discussed their experiences of sexually harassment with selected networks, seeking and giving empathy, caring and trust, and emotional support.

Respondents of two of the focus group discussions were close friends. Focus group 1 (FG 1) consisted of friends who were also working together in the same institution and focus group 2 (FG 2) consisted of friends who were working in different organizations. During these two focus group discussions it was apparent that many of the experiences of a sexual nature that they revealed to me were also known to each other, indicating they had discussed those experiences among themselves before. In many instances they reminded each other of the various experiences they had had.

FG 1:

Kimali: Yes. He (a perpetrator of sexually harassing behaviours) normally selects people from time to time to tell these things and to bestow his attention. Remember Mangala, how he used to single you out

Mangala: *Yes, once he came often to my office room…*

Sansala: *That must have been very uncomfortable…*

Kimali: *And I asked Mangala 'why he is coming to meet you now'*

Mangala: *Yes, yes. 'You look very innocent and all' he would say.*

Similar to the above discussion, there were a number of other instances where the respondents revived each other's memories, indicating their knowledge of each other's experiences. When asked, the respondents promptly agreed that they discussed these instances very regularly among friends.

FG 2

Interviewer:	*Do you talk about these things among you all?...*
Waruni and Thanu:	*Yes, yes.*
Thushari:	*Always.*
Hasini:	*A lot.*
Malka:	*Definitely.*

However, it was seen that with emotional support, women appear to be more cautious and selective about whom they share the information with and hence they tend to confide mainly in close friends. Similar findings were seen in previous studies where it is said that the type and the nature of support will depend on the type of relationship; whether there are close relationships or casual acquaintances or whether the relationships are strong or weak (Gottlieb & Bergen 2010).

FG 1

Interviewer:	*How do you talk about these among yourselves?*
Mangala:	*Not with everybody*
Kimali:	*Yes. Yes. Only us and some other friends…*
Sharika:	*like…tell what happened. So that they can be careful…*

The interactions and the support were different in the two other focus groups (FG 4 & 5), where the respondents were not all close friends. In these focus groups the respondents were peers working together (FG 4) and boarders sharing the same boarding house (FG 5), where the respondents were mainly just acquaintances. In these two focus group discussions they did not indicate any knowledge of other respondents' experiences or sharing of experiences as in FG 1 and 2.

As Dhammi (32 year old, married clerk in a financial institute) stated, women might be fearing that the information they share with others not so close to them can be used against them later on to harm them. Hence they only share certain information with close friends or people they deeply trust.

> Another thing is…you shouldn't…this is a mistake a lot of ladies make…they tell others about their personal life. Whether it is to another female or a male, it is not good to say everything to others. It is ok to tell somebody very close

> and very trustworthy about your sorrows and all, but you shouldn't tell outside males or females those things. Without our knowing such things can affect us. Those are things that I learned.

Melani (32 year old, unmarried clerk working for a private organization) narrated an experience of a friend of hers, where the friend's boss had tried to force her into an affair. While Melani and her friend had had a good relationship where they generally share their experiences and problems, the friend has not shared this experience with Melani fearing being reprimanded by Melani.

> I am the one who would always advise her. 'Don't do this don't do that' like that. So somehow, she didn't tell me about this incident fearing that I would scold her and it was only on the day that she left her place of work by getting a transfer that she told me. Then only she told me that the boss invited her like that. 'I didn't tell you fearing you would scold me or get into a fight,' she said.

Women are also said to not confide about their experiences with others, even with their family, due to fear of condemnation or criticism, fearing that others will think negatively of them (Haspels et al. 2001, Chaiyavej & Morash 2009), fearing that they will not be believed (Bingham & Scherer 1993) due to shame and/or fear (McDonald et al. 2010) or fearing that such sharing of information can lead to conflict with family members and friends (Skjorshammer & Hofoss 1999, cited in Bowling & Beehr 2006). The respondents in the current study also indicated similar reasons such as fear of reprisal and lack of trust for not sharing information and not seeking empathatic support in cases of sexual harassment from everybody they associate with. All in all, the respondents appeared to be very selective in sharing the most sensitive or personal experinces and in seeking empathetic support.

However, even if not close friends, females appear to share certain information about their experiences of a sexual nature and also about perpetrators of those behaviours, when there are very few females in the organization. For example, in several individual interviews which were conducted among females working in the same organization, it was revealed that they had shared information related to their experiences or perpetrators even though they were not very close friends like in FG 1 and FG 2. Dilani (38 years old and a Junior Executive Assistant) and Tharaka (22 year old, unmarried. trainee), work in a branch of a private bank where there are only about 4 females. Although they were not close friends, they indicated knowledge about each other's experiences of sexual harassment that had taken place in the bank.

Similarly, Tharanga (23 year old, unmarried, clerk) and Nadhini (27 years old, unmarried, executive) are also minority women workers in their branch who knew about each other's experiences although they too were not so close friends. Hence, while emotional support is intentionally sought from close friends, the information about instances of sexual harassment and related incidents is also shared (maybe not with the intention of gaining emotional support, but maybe with the intention of warning others) in certain instances with a few others (like other female co-workers who are a minority in a work setting). This might be due to the social security network they have or the feeling of kinship in these minority contexts.

More information about empathetic support given and received by friends indicated that overall it is mainly the *female friends* the respondents referred to in the matter of empathetic support in cases of sexual harassment; they said that they were always comfortable with female friends rather than male friends.

Aysha (25-year-old, unmarried, Muslim respondent working for a private educational institute):

> I am more comfortable with female friends. And I share everything with them.

Similarly, stating how she does not trust male friends, Cathy (25 year old, unmarried Web designer working for an IT company) said,

> The way I see it, men don't get close to you unless they want something. They can be close friends…I have many experiences like that… I know for sure…. It has happened to me. Even those very good friends, at least, will ask to start an affair with you after sometime.

This too indicates how trust plays a role in deciding from whom to seek support.

There were also a few instances where respondents had sought empathetic support from family members such as parents or husbands. Niranji (34-year-old married executive working for a financial institute) talked of how she shared an experience of a harassing nature with her husband, seeking empathetic support. A colleague at work had started talking to Niranji about his personal life and how he does not have a good relationship with his wife.

> Then you feel that he is telling you all these because he wants something from you. He was a senior officer in the office. He was coming to me sort of with these talks and I told this to my husband and then told this person not to tell me those. It stopped after that.

Here, Niranji does not appear to have wanted information support in the form of advice, or influential support in the form of the husband getting involved in settling the situation or appraisal support in affirming that the situation was sexual harassment. Rather, it appears that she had wanted empathetic understanding and emotional support as she did not mention about the husband getting involved in the situation other than to listen to her.

While the respondents did not mention specific instances where they had shared their experiences of sexual harassment with other family members, almost all the respondents stated how they shared everything with their mothers and many of them had mothers whom they treated as friends. As Prasanna (unmarried, 22-year-old banking assistant) said:

> I am a girl ne…so there is a lot of things that I tell mother. Then mother would go and tell father.

Only Rupika (36 year- old married teacher working in a government school) and Samy (23 year-old Electronics Engineer working for an IT company) said how they always go to their father seeking help.

> Rupika:
>
> I generally confide in my father not my mother. Because mother always criticizes us. But father is not like that; he would listen to you and give you good advice without always criticizing.
>
> Samy:
>
> He has this easygoing personality.

In sum, it can be stated that respondents talk about and share their experiences of sexual harassment with social networks seeking and providing empathy, care and compassion. Respondents appear to be rather selective about with whom they share this information and mainly appear to consider close female friends, and in certain instances family members such as husbands, mothers and fathers, as their network of emotional support.

Informational Support

According to House (1981), informational support is the provision of information to a person, which the person can use in coping with personal and environmental problems. As House (1981) further emphasizes, this information is not in itself direct help provided as in the case of instrumental support, but rather it is the information that people can use to help

themselves. Similarly, respondents of the current study also engaged in giving and receiving informational support by sharing different information, advice and caution related to sexual harassment.

Respondents commonly shared with others their own experiences of sexually harassing behaviours and also about known flirts (office Romeos) in the organization and their behaviours, with the intention of advising and cautioning others. This sharing of information was mostly with friends, co-workers and in rare instances with family members. Looking at the type of information that respondents provide it is clear that this information is supportive of women in making decisions about whom to interact with, how to behave with others and how to be careful about certain people in the organization.

Malani, (42 year old unmarried clerk of a government corporation) stated how she provided informational support to her colleagues so that they could protect themselves from the same perpetrators.

> Though I have faced incidents like these (sexually harassing situations), I never keep them a secret. I tell others that something like this has happened to me. Sometimes I even tell the name of the person. I tell them be careful, that he made a proposal like this.

Malani does not appear to be seeking emotional support (where she is expecting empathy and care) by narrating her experiences to other women, but, rather she is trying to provide information to them so that they can be careful of certain people and protect themselves. However, while providing this informational support, Malani is uncertain how the others will perceive her and her character.

> They say 'really…did he say something like that?' But sometimes it is like this…they don't have what they say in their hearts. I don't know whether they think about me in a bad manner also like… 'She too goes with them (perpetrators) willingly, laughing and smiling'... I don't know whether they think like that.

This uncertainty of how the advice or support will be considered is one reason why women generally do not seek social support (Bingham & Scherer 1993, Wijayatilake & Zachariya 2000, Haspels et al. 2001, Chaiyavej & Morash 2009). Despite this uncertaintly women appear to be sharing infromation in order to caution and advise others.

Saumya (a 33-year-old married woman working as a development officer in a private financial institution) also stated how she advised her subordinates so that they could protect themselves.

> I have about five people working under me. Four of them are girls. So I tell them also. 'He is like that. That one is like this'. I always tell them to be careful… I always tell them to come and tell me if something happens to them. Some of them are really very innocent… So I think the responsibility lies with me totally. If something were to happen to them I have to be responsible. So I try to protect them as much as possible. I always advise them about these things.

Here Saumya is providing informational support to her colleagues out of a sense of responsibility and kinship rather than friendship while she is cautions the subordinates about certain people.

Similarly Dhammi advises her friends:

> Even now I advise the sisters (younger girls) in my hostel, this is how you should behave in front of males. Sometimes they may tell you something with a double meaning. But 'you' have to ignore them, pretend that you didn't understand it. Then they too would ignore it. If you go behind them saying you didn't understand it you can really get 'baited'.

Even though there does not appear to be total openness as with friends, in FG 4, the respondents stated how they talk about popular flirts and their behaviours in the organization when they get-together at work (mainly during lunch).

FG 4

Rasika: *Yes. We discuss them in public sometimes.*

Namali: *At lunch mainly. We have a good laugh sometimes.*

However, Rasika of FG 4 also stated in another instance how she does not like to share certain things in the open. Hence, more information was gathered about FG 4, which indicated these conversations they had (during breaks and lunch) were mainly about popular flirts and also when they were certain that they would not be reprimanded for these discussions. In other instances they did not discuss these in the open fearing reprisals if the perpetrators

got to know that their behaviours were discussed. They did not appear to share their own experiences of sexual harassment with their co-workers at all. As also discussed above under emotional support, it is apparent that among friends sharing personal experiences of sexual harassment is open and common, while among those who are not friends such sharing is not common. Overall, information sharing is selective, where trust about each other appears to play an important role.

This informational support is also seen to exist for new female employees who join an organization. For instance, Pamela, (a 26-year-old, unmarried clerk working for a government educational institution) stated:

> The other female clerk told me to be careful of certain lecturers. She said that she has had a lot of problems. She said that some lecturers come on to her. She said to mind my own business and wait and then it would be ok. She said that when she was working on the computer they come too near and brush against her when working with her.

Thushy, a 32-year-old married accountant working for a private company reminisced about her experiences, when she first joined the company a few years back:

> I was advised not to go to the stores alone where labourers were working. I was told that the stores were not a good place for a girl to go alone.

But as FG 2 below indicates, generally there are certain characteristics of the new employees that are looked into before the warning. For example, the existing employees would warn the newcomers if they are thought to be innocent, not aware of the flirts' intentions or when the newcomers become friends.

FG 2

Interviewer:	*With whom do you discuss these different incidents and people? With everybody or …*
Waruni and Thanu:	*No, no, not with everybody. Only with friends.*
Malka:	*Only with department people. They told me about different people when I joined and told me to be careful.*
Thushari:	*Not only for friendship. When they feel that she is innocent they tell.*

Hasini: *Certain people are very popular. Everybody knows. The first day at my job, my manager told me about various people. My manger is a female. She told me to keep my distance with certain people…*

Tulakshi: *Because she is a female.*

Previous studies have identified support receivers' characteristics such as personality and age as well as the situation such as expectations and demands of work and family, as playing a role in the acceptance and provision of support (Shinn, Lehmann & Wong 1984, Hupcey 1998). It is also said that more support is given if the situation is not a result of the recipient's action but is a direct result of the recipients action (Hupcey 1998). While the current findings did not indicate the precise factors identified in previous studies, it did indicate how the charachteristics of women and the siatuational factors (whether the situation is a result of the victim) contribute to the provision of infomational support.

There were also very few instances where the superiors too had provided informational support by mainly advising the respondents about how to interact with males or how to be careful of certain people.

Daya, who is a 50-year-old teacher working in a private educational institute, stated how her principal advised her about protecting herself.

> The principal had advised me about interacting with males and all.

Saumya also mentioned how one of her superiors provided informational support to her about sexual harassment when she first joined her current organization.

> When I was new, he once asked me to come to his office room and told me, 'Saumya, you know I don't talk to everybody, but I need to tell you this. There is a group of people here who don't know how to behave. Their whole family lives have been messed up by their behaviours. So you have to be careful in dealing with these people and you have to protect yourself. Identify these people and interact with them accordingly. Don't go to be too friendly with people. Keep your distance from them and keep to your limits. There are lots of filthy people here. Be careful..

In many of the instances recounted by respondents, the source of informational support has been women friends, women co-workers, or women superiors. Yet, the above instance

indicates how a male superior in the office had provided informational support to respondents, so that they could protect themselves against sexual harassment. Similarly there were a very few instances where the male co-workers too had provided informational support to women at work.

Nimmi (29-year-old unmarried lecturer in a government university):

> When we first joined, XX sir said that we should behave like this (how to behave in the work setting), that this place is like this…

In addition to this informational support received and given among friends and co-workers, some respondents stated how even their family members provided them informational support by advising them about certain people at work, even though they do not work in the same office. These family members get to know about these colleagues through what the respondents tell them or by meeting them at different events (e.g. office gatherings, trips, get-togethers). Through these interactions or information they have about certain people at work, they advise respondents against these people. Such advice from husbands appears to be rather frequent. This finding is consistent with Gottlieb and Bergens (2010) assertions that it is common for men to provide advice and recommendations to their wives, when wives reveal an emotionally disturbing experience.

Sarani (34- year-old, married senior executive working in a private bank) mentioned how her husband would advise her against certain people she worked with:

> My husband also sometimes tell me to be careful of certain people, when he knows them or they sometimes get the feel, so then he tells me.

Also, unlike for emotional support discussed above, informational support received by parents was more general and was more about protecting themselves and their virtues as women in society rather than against specific people or acts related to sexual harassment at the workplace.

Whether this informational support received by respondents was actually effective, i.e., whether the respondents made use of the informational support they received, was also explored. In many instances the respondents had protected themselves against these perpetrators by being careful with them when dealing with them or by avoiding or minimizing their dealings with these perpetrators after the informational support. (This is discussed in detail under appraisal support).

Yet, there were also instances narrated by respondents where informational support was either not believed by the recipient or where it had led to negative outcomes for the support givers.

Shyamalee (34-year-old married banking executive):

> Sometimes we don't know whether it (the advice given against certain people) is true. Some might spread these stories about people for revenge.

Nimmi stated of an instance where the informational support given had created issues for her:

> Once, it really blew out and now it has become a problem. Once we told another peer (girl) to be careful of this person and she had gone and told him and now it has become a problem.

Bowling and Beehr (2006), citing Skjorshammer and Hofoss, state how social support can lead to conflicts with family members and friends. Yet, here, informational support had not led to conflicts within the support networks, but rather conflicts had occurred outside this network with others, indicating negative effects that can arise due to informational support. As Shinn, Lehmann and Wong (1984) state the well-intended support had 'backfired'.

Interviews and focus group discussions also indicated how this informational support had actually led to women making decisions as in instrumental support and appraised certain experiences leading to appraisal support as well. (This is discussed below in more detail under instrumental and appraisal support).

In summary, it was seen how social interactions at work is a source of information for women about what happens in organizations in terms of sexual harassment, norms about sexual harassment and sexual behaviours, whom to be careful of and how to protect themselves. This leads to informational support helping respondents protect themselves and deal with sexual harassment instances at the workplace.

Instrumental Support

Instrumental support involves protective behaviour through the provision of tangible (such as financial aid) and intangible (help them do their work, take care of them) acts that directly assist others in need (House 1981). Instrumental support too was seen to be present in different forms for respondents in the current study with regard to sexual harassment. In some instances friends, co-workers or family appeared to provide instrumental support,

especially to deal with the experiences, at the request of the victim or sometimes with the support givers own volition.

Nilukshi (28-year-old, married, bank employee) mentioned how her female colleagues were harassed and how she stood up for them. As she stated,

> …They (other females in her department) are afraid. Mainly because they are not confirmed, they won't speak up. So when I couldn't bear it up any longer I went and told the manager…

Here it is apparent how Nilukahi had taken it upon herself to protect and help the younger and junior colleagues and hence provided instrumental support. Kumudi (23-year-old, unmarried, junior executive of a financial institution) also recounted instances where she had obtained instrumental support from her co-workers.

> And I came and told this 'aiya' (older male co-worker). He was my executive. I was his coordinator. He told me, 'Nangi (younger sister) the only advice I would give you is not to show embarrassment in front of any man. If you have to say something just tell it straightaway. If you show embarrassment you will never be able to get your work done and they would make fun of you too. That really got in to my mind.

A few other respondents stated how they had got the support of co-workers or friends working in the company when they were asked to stay after working hours to finish some work and when they suspected ulterior motives for these requests made by superiors. In these instances they got a friend or a co-worker to stay after work with them to finish the work, so that they were not alone.

Shyamalee stated:

> I somehow get another person also to stay with me.

Similar methods employed by victims in dealing with sexual harassment are mentioned by Dansky and Kilpatrick (1997), where bringing a friend to a meeting to avoid harassment is highlighted.

McDonald et al. (2010) talks about corroboration in the face of sexual harassment, where victims would seek support also from co-workers who had experienced similar behaviours or witnesses. Seeking support from witnesses was seen when the victims sought formal

redress, rather than informal redress. However, the respondents in the present study did not reveal instances where they had specifically sought co-workers who had experienced similar behaviour or witneeses to such behaviour. Rather, they expressed seeking support generally from co-workers.

Tanya's (23-year-old banking trainee) experiences indicate how her co-workers had encouraged her to make formal complaints regarding her experiences of sexual harassment:

> They (other co-workers) have said to complain.

It is also interesting to note that when previous studies have indicated how victims are discouraged by others from taking action against harassment, the above statement of Tanya indicates an instance where she had been actually encouraged to seek formal redress. In another instance, Rupika stated how when the boss had attempted to kiss her and embrace her forcibly, her husband had advised her to call the police. It was Rupika who refused as she did not want to create more issues.

In another instance, Rupika stated how she had sought support from her husband to ensure that she did not face unwanted sexual behaviours. Rupika said that she got her husband to accompany her when she had to visit certain government organizations to get things done related to her job (such as transfers, leave matters, etc.).

> When you go to meet them (certain people with the proclivity to harass, government officials) with your husband they do not behave like that (in a sexually harassing manner). In these instances I always take my husband with me. Then everything is ok.

Demonstrating another instance where instrumental support was provided, Saumya shared her experiences at an earlier workplace, where she had perceived her superior's behaviour towards her as harassing, and after several incidents, the superior had bellowed at her. Saumya had immediately called one of her brothers and related the incident. He had immediately come to her aid.

> He came near the hotel, he couldn't come inside... and said 'You come out, you resign from the place. But don't come without doing anything. You come out only after striking him'

Saumya's fiancé too had been working in the same workplace during this time and while Saumya had not sought help from him regarding this matter, he too had got involved in the incident at one time when the superior had bad mouthed Saumya in front of him.

> After this incident he had asked my fiancé to come and started to tell him 'Your girlfriend has a very bad mouth….' And then my fiancé who is a technician there, had taken out a tool from his pocket and had held it to his neck and told him 'don't say another word or else I will kill you' and he had just kept quiet.

With the support of family and her partner, Saumya was able to deal with the issue. Whether this support was effective or not cannot be directly established but Saumya perceived this support she got as positive.

It was also seen that when respondents went mainly to mothers and female friends for emotional support, they sought the aid of fathers or male siblings when they needed instrumental support.

Jane (26-year-old, unmarried, IT project manager):

> I specially think security-wise we need a man's support and we cannot have that alone in the environment we have right now. So it is always good to have a male behind you.

Kalpi (26-year-old, unmarried insurance agent, working for an insurance company):

> Having a brother means we don't have to fear for anything. There has to be a male sibling in a family. Even if he doesn't do anything he has to be there. We won't have to be frightened of anything then.

Many of the instances of instrumental support the respondents related involved co-workers and family members. However, it is said that social support from friends helps the victims more than the support from family (Livingston 1982 cited in Pina & Gannon 2012). Yet, this fact was not revealed in the current study.

Social support is identified in sexual harassment research as an assertive response (Magley 2002) and also as the most common coping mechanism in certain cultures such as Hong Kong (Chan, Tang, & Chan 1999). However, it is also said that family and friends may withdraw from social support if the culprit failed to take action to end the harassment or due to fear of retaliation by the company (Rospenda, Richman, & Shannon 2006). Nevertheless,

the respondents of the study did not indicate instances where the family members or even co-workers had refused to help or had withdrawn from helping the respondents in the face of sexual harassment.

Appraisal Support

Another supportive behaviour evident from the interviews and focus group discussions was sharing of information leading to self-evaluation, appraisal and reappraisal of situations and information. House (1981) and other scholars of social support, term this supportive behaviour as 'appraisal behaviour'.

It was thus seen how respondents' understanding and judgement of the concept of sexual harassment, their own experiences as well as their reactions to sexual harassment were either confirmed or altered due to different sources of information they received from others. Bingham (1994) and later other scholors too have emphasized the creation and shaping of knowledge and understanding of sexual harassment through communciation (Dougherty 1999, Miranda & Saunders 2003, Denissen 2010) and how social support shape women's definitions of sexual harassment (Handy 2006). As Dougherty (1999) affirms, 'Although most men and most women are not personally involved in a harassing situation, they still actively construct what it means to be sexually harassed. As a result, the social construction of sexual harassment occurs not only during talk about sexually harassing experiences but also during talk about the possibility of sexually harassing experiences' (p. 438).

Focus group discussions specifically showed the manner in which the respondents reacted to others' comments, drew on others' beliefs, asked questions and built on others' ideas, and ultimately altered their appraisals of and understanding of sexual harassment.

The respondents started to remember many incidents of a harassing nature as they went deep into the discussions. Sometimes, even the incidents they did not think of as sexual harassment earlier were later related as such, when others narrated a similar incident. For example, those who stated that sexual harassment for them was more serious acts of a sexual nature at the beginning of the discussion, later went on to explain how even various other less serious behaviours of a sexual nature could make a person uncomfortable or feel harassed. Thushari was one such respondent who was under the impression that sexual harassment at the workplace was more quid pro quo harassment (threatening negative consequences or promising benefits in exchange for sexual favours). But then later on, when others started narrating different experiences they had had and had made them uncomfortable, she too started identifying other behaviours such as touching, pinching, and comments as harassing.

It is found in sexual harassment research that when people are cued or when they become aware of the issue, they tend to identify more behaviours as sexual harassment (Jaschik-Herman & Fisk 1995, Brewis 2001, Wiener et al. 2005, Pickerill, Jackson, & Newman 2006). Being cued or gaining awareness about the issue through listening to others and through discussions related to sexual harassment can be the reason why respondents of the focus group started appraising what sexual harassment actually meant.

This conversation which took place in FG 2 clearly signifies how the meaning was co-constructed by the respondents:

Thushari:	*We always keep things (experiences of a sexual nature) in the back of our head without bringing them to the open.*
Hasini:	*I didn't think that there were such things in my office. But only when I started talking about them did I find out that they are real.*
Thanu:	*Yes. Like that incident… (referring to an incident they discussed previously during the focus group). I completely forgot about it until we started talking about them.*
Waruni:	*Can't we take overloading you with work as sexual harassment?...*
Thushari:	*What do you mean?*
Waruni:	*Like giving more work. Like an unbearable work load.*
Hasina:	*Is it sexual harassment? I am not very sure.*
Waruni:	*I don't know. For me, yes. Like if you are given the work of a male. The work only a male can do being given to a female. I think, is sexual harassment.*
Thushari:	*You mean giving a man's work to a woman?*
Waruni:	*Yes.*
Thushari:	*Well… then maybe it is. But I think if you are given more work because you didn't agree to something he said, then maybe.*

Similarly, it was seen how respondents also appraised or reappraised the behaviour of certain people (office flirts/ office Romeos), when they were warned about these people earlier by others such as co-workers (This was discussed in detail under informational support). After been warned respondents started seeing the behaviours of such people as harassing, where

the same behaviour might not have been seen as harassing if not for the warning or the discussions that took place regarding the person.

FG 2

Thanu: *...I didn't take any notice of these (some unwanted attention she experienced). Then some said that he talks about me a lot and for me to be careful. Then I was very stern with him and avoided him…*

Thushari: *..Yes. When I first joined the others told me not to deal with a particular male teacher… Then I deliberately kept my distance from him.*

As respondents hear more stories about the said person, they appraised their experiences as sexual harassment. In another instance at the FG 2, Thanu stated:

> ...We talk about that man always. We hear different past stories about him. People tell different stories. And now we are all very careful of him.

FG 1 also talked about a known flirt in their organization and how even normal behaviour of this person is now considered as harassing after getting to know about his manners.

Mangala: *Now it would be sexual harassment, even if X (harasser) asked us to come to his room for some office work.*

Sansala: *Once we had to go to him to collect money for something. We were so scared to go into his room like we (Sansala and Kimali) were holding hands tightly in front of the room almost shivering.*

Kimali: *Yes. even before going into the room.*

This revelation too clearly indicated how the behaviour of certain people would be appraised as sexual harassment based on discussions about the person within the social networks.

Sometimes respondents, such as Kalpi, had sought appraisal support from others about how they had handled instances of sexual harassment. Kalpi, who had a customer making suggestive comments and unwanted invitations to go out with her to finalize a business deal, had refused his invitations and had lost the deal. Kalpi had sought appraisal support from her mother as well as superiors where they had confirmed Kalpi's reactions. This made Kalpi more confident about herself and her reactions.

Kalpi:

> I told him that we don't have to go there to sign a deal and that we can do it in the company and I refused. When I told this to Amma she told me not to go, like she is really scared of those. Anyway, when I refused he said that he would cancel the deal. And I told him fine! I then told this to my manager and even he agreed that it is not the thing to do.

This is also known as the affirmative support Kahn and Antonucci, 1980 (as cited by Langford et al. 1997) refer to under appraisal support. Affirmative support is the expression that affirms the appropriateness of an act or statement made by another.

It is noteworthy how research that has explored the appraisal of sexual harassment instances or sexual conduct have failed to consider this social support in the form of information giving and receiving leading to evaluation and re-evaluation of situations (Fitzgerald et al. 1997, Langhout et al. 2005). Generally these earlier studies have considered different factors such as frequency of the conduct, intensity of a conduct, prior experiences, perpetrator characteristics, victim's personality and organizational context as effecting how a individual would appraise a sexual conduct. Yet, the discussions above indicates how appraisal support too would play a role in this appraisal, evaluation (Berdahl & Aquino 2009), judgment (O'Connor et al. 2004), or perceptions and attitudes towards sexual harassment (Barr 1993, Dougherty et al.1996, Foulis & McCabe 1997, Bursik & Gefter 2011) or a situation.

Conclusion

While previous studies have indicated how sexual harassment is an individualized experience which isolates the victim (Clair, 1993 as cited in Dougherty 1999), it was seen how the respondents of the present study frequently engaged in social interaction and dialogue related to sexual harassment thus making it non-individualized. Through these interactions and dialogues which take place with different social networks, women receive and give social support.

Mainly women were found to seek or gain support from family members (such as parents, siblings, and husbands), partners, friends, co-workers and/or supervisors. Primarily women would share information related to their experiences with friends and family, seeking and receiving empathy and care, leading to emotional support. With regard to emotional support, women do not appear to approach co-workers much. Women also provide informational support by providing advice, guidance, suggestions, or useful information about sexual

harassment and mainly cautioning and advising others about such instances and specific people to be careful of. This appears to be the most common and frequent type of support among the respondents. Friends and co-workers were found to be providing informational support more, with primarily women being the most common source of support. Instrumental support was found to be received predominantly from family, friends and co-workers. Finally, through these interactions, women appraise and evaluate their experiences of sexual harassment as well as re-define their understanding of sexual harassment in certain instances, which is known as appraisal support. These social interactions and support help women overcome their sense of powerlessness and anxiety in the face of sexual harassment and cope with sexual harassment more effectively.

As also shown by House (1981), these different types of social supports were not always exclusive, and were occasionally interrelated and connected. For example, there were instances where informational support such as advice and cautioning about flirts in the organizations received by respondents also led them to appraise their experiences and interactions with these individuals differently.

Further, even though prior research presents how women can be criticized or scolded for their experinces of sexual harassment (Wijayatilake & Zachariya 2000, Haspels et al. 2001), the current study did not indicate respondents facing such situations when seeking social support. This can be due to respondents carefully (knowlingly or unknowingly) choosing whom to share information with or seek support from, depending on the situation and the type of support needed. It was seen how friends and family members were mainly supportive without being condemnatory. Moreover, the fact that in certain instances, such as with informational support, the opportunity to be critical or condemnatory was less, as it was mainly about advice and cautioning women to protect themselves. In addition, advising and cautioning others can also be a machanism women employ to project themselves as virtuous and respectable (Adikaram 2014).

Further, it was noted that although social support can be given for a variety of reasons such as social obligation and future reciprocity (Hupcey 1998), the current study did not indicate instances where the support providers had provided support grudgingly as an obligation or where the recipient did not feel positive about the support. Respondents actually appeared to give and receive these various types of support happily and voluntarily, especially informational support and appraisal support.

These findings are somewhat contrary to the findings on attitudes towards sexual harassment in collectivist cultures or non-western cultures (Sigal et al. 2005) such as Sri Lanka. It is also said that in collectivist cultures public discussions of sexual harassment are rare (Sigal et al. 2005) and that people are more ready to accuse the victim and hold her more responsibile the victim for the harassment that had occurred. Collectivist cultures are also said to be concerned more about preserving harmony in society and to value the needs of society rather than individual rights. Hence, with these attitudes and perceptions, it is found that in collectivist cultures people tend to provide less support and understanding to victims of sexual harassment. Further, prior studies have indicated how observers tend to blame the victim and excuse the harasser for sexual harassment due to their internalized societal perceptions about proper dress for women, and male superiority in society (Ng & Othman 2002, Adikaram 2014). However, contrary to these earlier findings, the current study indicated how people do tend to support victims and women prone to sexual harassment in numerous ways by showing empathy, understanding and sharing helpful information. Further, maybe due to this very collectivist culture, women and sometimes men appear to create a safety net for others through frequent and common advice and cautioning about flirts and situations of sexual harassmsnet in organizations. In conclusion, it can be seen how social support theory contributes to a deeper understanding of the manner women typically seek support and aid of various types from different social networks.

Limitations of the Study

Although I was able to explore many instances of how silence and secrecy related to sexual harassment at workpalces are broken. Due to the very nature of the issue and the cultural norms that discourage women from openly discussing such issues in the open (Sigal et al. 2005, Adikaram In press), the respodnents might have selectively shared their experiences and perceptions. Moreover, the respondents did not reveal many instances where they were condemned or criticized for sharing information or seeking social support. This too can be due to the respondents selectively sharing information, in order to project an image of respectability or uprightness.

Implications for Managers

While social support in its multiple forms will not be the only or the main panacea for sexual harassment, it certainly can be used as a means of handling sexual harassment amidst the failures of many other strategies employed to combat the issue. or at least to eliminate stress as a result of sexual harassment.

As the research indicates, if the social supports are effective, it removes the need for more formal support (House 1981). In a context where more formal strategies such as implementation of policies and legislation not having the expected outcome (McDonald et al. 2010), organizations should explore the possibilities of promoting social support in organizations as a strategy for combating and dealing with sexual harassment. The importance of social support can be highlighted in company training programmes on sexual harassment '…by acknowledging that employees can both exercise concern for the workgroup and respond assertively to sexual harassment and by engaging coworkers and supervisors in providing support…' (Chaiyavej & Morash 2009, p. 79). Organizations should also empower women to handle sexual harassment by developing and maintaining social support systems. Further, organizations must explore how social support can be increased (Demirtas, Ozdevecioglu & Capar 2015).

Organizations should also consider other sources of social support for women employees. While the current study did not indicate respodnents approaching other sources such as trade unions and counsellors for support in instaces of sexual harassmnet, companies can explore the possibility of popularising these other sources of social support as well, as women may not be seeking these other sources due to lack of access (Wear, Aultman & Borgers 2007) or awarenss.

Future Research

Furture research should continue to examine this concept of social support in sexual harassment by studying other types of social support women receive as well as the costs and benefits of social support and their negative impact. Moreover, studies can investigate the specific contexts and personal charachteristics of the receipients of social support as well as how women decide whether support is given or received.

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Application of Six Sigma Methodology in Glazing and Printing Processes: The Case of Lanka Wall Tiles PLC

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Abstract

Six Sigma is a data-driven process of thinking to create new knowledge and skills for business process improvement. It is a buzz word in the business community today as Six Sigma thinking has gained widespread popularity as a part of business process improvement methodology. This paper presents the results of applying Six Sigma methodology at Lanka Wall Tiles PLC in the areas of glazing and printing operations. The company in its process re-engineering project identified glazing and printing operations as the main processes in which defects occur regularly. In order to address the issue of production defects a five-step DMAIC framework, viz. Define, Measure, Analyze, Improve and Control, was applied. In the define stage, the size of the problem was gauged after mapping the process by means of the SIPOC (Supplier, Input, Process, Outputs, Customer) model. In the measurement and data analysis stages, a set of carefully chosen statistical methods and problem solving techniques of Six Sigma system were applied to uncover the sources of variations (SOV). Data was collected from both the past records of production and by observation of the process for a period of 21 days. Data analysis was done using tools and techniques such as quality function deployment (QFD), control charts, cross tabulation, cause and effect diagrams and Pareto charts. A detailed analysis of the data revealed the major sources of variations for which homegrown solutions were found and implemented by the project team at the improvement stage. A cautious application of DMAIC over a period of two months resulted in a gradual and steady reduction of defects by a significant 3.3 percent giving rise to savings of approximately LKR 3.36 million per month for the company. It further revealed that the methodical and systematic application of the Six Sigma system using the thinking process of DMAIC enabled the team to identify sources of variations that had been undetected for a long period of time. The success of the experiment paves the way for further studies as well as the application of Six Sigma methodology in the manufacturing environments of all production units of the company.

Keywords: CTQ, DMAIC, QFD, SIPOC, Six Sigma, Sources of Variation (SOV)

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Introduction

Six Sigma is a quality improvement methodology for developing and delivering virtually perfect products and services and has gained widespread popularity in industry as a business process improvement approach. Six Sigma is defined as '… a process of business operations which makes it possible for companies to rigorously make better their basic formation…' (Harry &Schroeder 2000, p. vii). The concept of Six Sigma originated at Motorola Inc. in the USA in 1985 aimed at reducing the number of defects in operational processes. Further, it is a statistical measure of the performance of a process which implicates a goal of reducing the number of defects to 3.4 defects per million opportunities (DPMO). Six Sigma adopts a structured and systematic approach to reduce variations of a process and thereby the number of defects. Following the successful implementation of Six Sigma methodology by Motorola, a large number of companies implemented it worldwide with many success stories that are documented in numerous academic papers. Given the widespread acceptance of Six Sigma in both manufacturing and service industries it is assumed that the academia should continue to study Six Sigma in greater depth in order to understand inbuilt methodological and deployment issues, orientation of management as well as critical success factors.

The objective of this paper, which takes the form of a case study, is to present the results of applying Six Sigma methodology at Lanka Wall Tiles PLC, Sri Lanka, where the process deviations in the glazing and printing operations resulted in a higher rate of defective outputs. It is hoped that this success story would motivate companies engaged in similar operations to apply Six Sigma methodology in their organizations. Further, it is likely to encourage academia to replicate the study in other processes and service industries with a view to broad-basing the application of this methodology.

The paper is organized as follows: At the outset, a brief introduction to Lanka Wall Tiles PLC, the empirical site for the case study, is given. This is followed by a reflection on the Six Sigma methodology and the DMAIC framework. The application of the Six Sigma methodology in the glazing and printing processes via define, measure, analyze, improve and control stages is narrated followed by a documentation of results achieved and the learning points. The paper also highlights some important areas for further studies.

Empirical Site: Lanka Wall Tiles PLC

Lanka Wall Tiles PLC (LWPLC) is in the business of production and distribution of ceramic Wall Tiles in Sri Lanka. The company offers a wide range of tiles of various colours, textures, and sizes, including distinctive products such as trim tiles, decorated tiles, handmade and

hand-painted tiles. The product lines also include floor tiles, cartons and paper sacks for packing and tile grout and the mortar. LWPLC has been manufacturing and exporting high quality ceramic tiles for over twenty years from this factory's Plant A. During the last financial year (2014/15), LWPLC contributed to its employees LKR 349 million as remuneration and LKR 358 million to the state as taxes and LKR 702 million as foreign exchange earnings through exports. Further, LWPLC has provided 500 direct employment and more than 1000 as indirect employment. Moreover, LWPLC has brought state of the art technology to the development of the industry which includes: LGV (Laser Guided Vehicle) to replace man-operated forklifts and the latest Digital Printing Technology to replace traditional screen printing, etc.

Having been in the business for more than twenty years, LWPLC has emerged as the market leader and premier ceramic wall tile manufacturer in Sri Lanka. LWPLC is now a major contender in highly competitive markets, supplying quality Wall Tiles to up-market consumers both locally and internationally. The main manufacturing facility for ceramic Wall Tiles is located in Meepe, Padukka, on the outskirts of Colombo where two large plants A and B together produce tiles of 7,500 sq. per day. There is a production capacity of 4,500 sq. per day in Plant A (established in 1996) and a production capacity of 3,000 sq. per day in Plant B (established in 2011). The capacity details for plant A, where the Six Sigma methodology was conducted is given in Table 1.

Table 1: Capacities of Plant A

Type (size in mm)	SKU (No. of Designs)	Product Mix (%)
200 x 200	38	22.91
200 x 300	82	63.07
300 x 300	30	14.02
Total	**150**	**100**

Source: Lanka Wall Tiles PLC

Six Sigma Methodology

Blakeslee (1999) defines Six Sigma as a data-driven approach for analyzing the root causes of business problems and solving them while Hahn, Doganaksoy & Hoerl, R (2000), recognize it as a disciplined and statistically based approach for improving products and process quality. In initiating Six Sigma, Motorola Inc. set itself the goal of achieving 99.9997 percent defect-free production or, in other words, restricting defects to 3.4 per million items

produced per million opportunities (DPMO). Reflection on monetary gains is an essential component of Six Sigma projects as its ultimate purpose is to achieve savings by reducing the costs associated with defective production. Thus, Six Sigma applications are initiated after a thorough assessment of the positive impact of the project on the bottom line of the organizations, which kindles the interest of the management to embark on them (Brady & Allen 2006).

The literature on Six Sigma could be broadly classified into two categories: Methodology- and Management-related Approaches to Six Sigma Implementation. Brady and Allen (2006), while noting a tendency towards methodology- related approaches by writers, observe that Six Sigma implementers depend on simplified versions of statistical methods, and in the process, disregard the in-built theoretical aspects. In order to effect systematic implementation, Six Sigma implementers also employ various quality management tools and techniques with a view to finding root causes and effecting process improvement (Linderman et al. 2003). They include the Ishikawa diagram or fish bone diagram (cause and effect diagram) to find the root causes of the problem, Pareto analysis to prioritize problems, histograms to check the distribution of a process, and control charts to track the trends in a process. Zu, Fredendall and Douglas (2008) emphasize that quality management practices can be used in combination with Six Sigma to improve process performance.

The second type of literature which propagates the importance of right management orientation in Six Sigma implementation emphasizes factors such as the role of leadership, teamwork, and social dynamics. Two common management approaches in use are the define-measure-analyze-improve-control (DMAIC) framework that is used in current process improvement and the define-measure-analyze-design-verify (DMADV) framework used in product/ service design improvement (Linderman et al. 2003). It is interesting to note that both these approaches have their roots in the plan-do-check-act (PDCA) cycle of process improvement which can be traced to the pioneering work in the mid-20th century by quality guru Dr. Edward Deming. The application of these frameworks provides a structured approach to the execution of Six Sigma projects which facilitates teamwork and promotes learning and knowledge acquisition within teams (Choo, Linderman, & Schroeder 2007).

Another facet of management-related literature is the study of critical success factors (CSF), which are imperative for the successful implementation of Six Sigma projects. Chakrabarty and Tan (2007), Coronado and Antony (2002) and Goh (2002) are of the view that top-management support and commitment are critical for the success of Six Sigma projects as they require allocation of resources and deployment of cross-functional teams. Further,

they emphasize that implementation of Six Sigma needs improvement specialists, typically tagged as champions, viz. master black belts, black belts, and green belts depending on their expertise and the degree of involvement in the projects. Typically, master black belts serve as mentors, black belts as project leaders and green belts as problem solvers (Barney 2002, Schroeder et al. 2008).

DMAIC Method

The literature on Six Sigma by many writers including Chalapathi (2005 a, 2005 b, 2000 c) and Sung Park (2003) suggest that the DMAIC (define-measure-analyze-improve and control) framework with its in-built robust and structured approach could be a major success factor in ensuring better results in the Six Sigma implementation process. An outline of the scheme of work associated with the five phases of the DMAIC framework is given in the next section.

The Define stage commences with an initial understanding of the process in which major issues are observed. This is followed by making decisions on the scope and boundaries of the process where the real problems exist. This has to be substantiated with quantitative evidence gathered from the areas in question. Next, the impact on the business that will accrue from implementing Six Sigma has to be estimated followed by preparing a well-defined statement of objectives and goals. This stage also calls for mapping the processes based on the total value chain consisting of suppliers, inputs, process, outputs and customers (SIPOC) followed by the identification of critical areas. Quality Function Deployment (QFD) can be deployed for this purpose. QFD is a tool/structured approach for relating the voice of the customer to the technical requirements of the process designed to identify the *critical to quality* (CTQ) from the *voice of customer*s (VOC) and *critical to process* (CTP), *critical to inputs* (CTI) and *critical to suppliers* (CTS). Alongside, standardization of processes the appointment of a team for executing the project also takes place in this stage.

The *Measurement* stage presents the map of data collection. After identifying critical areas of the problem in the process, the measurement stage is executed by collecting data on critical areas of the operations. In the *Measurement* stage data is collected with the use of a planning sheet which identifies the critical process steps, modes of identifying defects, operational definitions, data types, method of stratification as well as the sample size. In addition, the means of process improvement are conceptualized by identifying the relevant variables.

In the *Analysis* stage data and process analysis is carried out of the sources of variations and causes. Defects are identified visually and recorded on a daily basis and the analysis is carried out by applying techniques such as Pareto analysis, Control Charts. This is followed by carrying out a cause and effect relationship analysis using the Ishikawa diagram.

The *Improvement* stage is intended to develop alternative solutions for the removal of causes identified in the analysis stage. It is important to note that ninety percent of the exercise is complete once the causes are identified and validated. Further, it is to be noted that improvement begins from the first (define) stage and continues at varying successive stages up to the control stage.

The final stage, i.e. *Control,* involves standardizing the process/es which is the key to the stabilization and sustainability the process. Further, preparing new Standard Operating Procedures (SOPs) is followed by the documentation of the new process. Also, monitoring has to be carried out on a regular basis and in accordance with a pre-determined schedule using control measures such as statistical process control methods (SPCs).

The Six Sigma Project - Lanka Wall Tiles PLC

The following sections present the sequential implementation of the cycle of DMAIC in the glazing and printing process of the tile production company. The period of the study was between October 24 to November 13, 2014 at the location of LWPLC Plant A at Meepe, Padukka. Twenty pieces were taken from the defective tiles collected at the sorting line every one hour, for 21 days consecutively. These samples were analyzed for glazing- related defects and they were tabulated under each category of defects in a data analysis sheet for further analysis.

The team consisted of Head of Finance (Champion), Factory Manager (Team Leader) and Assistant Factory Manager, Assistant Production Manager, Production Executive (Glaze Preparation), Production Executive (Glazing), and Assistant Quality Assurance Executive as team members. The complete project was implemented under the direct leadership and supervision of the Factory Manager (Team Leader), which is a partial fulfillment of the Six Sigma Black Belt Certification Programme conducted by the National Institute of Business Management (NIBM), Sri Lanka, under the guidance of the first author of this paper.

Define Stage

The define stage specifies the background, scope, financial benefits, objectives, process mapping as well as application of Quality Function Deployment.

Background

Lanka Wall Tiles Ltd. currently enjoys a share of 45 percent in an extremely competitive local market. This is in spite of the glut of low-priced imports in the local markets, the policy of the government being to impose the minimum protective tariff barriers against anti-dumping. A recent market analysis revealed that the cheapest imported products are of sizes of 200×200mm, 200×300mm and 300×300mm, which the company produces in Plant A. Management was under severe pressure to reduce the manufacturing cost of the ranges produced in plant A in order to be competitive in a highly dumped local market. Although various steps had already been taken to reduce the cost, the top management was of the view that there was enough room for further improvement by stabilizing the production process.

Scope

The study was confined to the production process in order to measure quality levels and to identify sources of variation. At the outset, it was revealed that the defective rate in Plant A stands at 8.78 percent (refer Table 3). Further, it was identified that 4.42 percent of defectives originated in the glazing and printing operations (refer Table 4). Hence, the study focused on variations in good output coming out of the glazing and printing operations in Plant A.

Table 2: Plant A-Final Product Sorting Summary, May to October, 2014

Month		May	June	July	Aug.	Sept.	Oct.	Total
Total Defects	m^2	11,141	11,936	11,556	10,581	9,902	13,063	68,179
	%	8.71	10.23	8.83	7.24	7.56	10.59	8.78

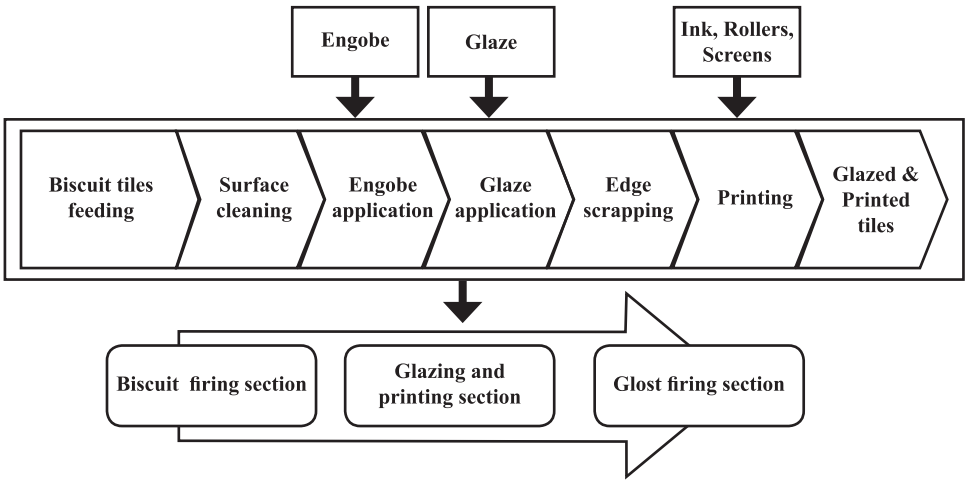
Table 3: Plant A-Final Product Sorting Summary, Glazing Section, May to October, 2014

Defect Type (Glazing Line related)	Defect Pieces (Per month average.)
Bald edge	19,659
Glaze bead	5,790
Glazed crack	5,741
Glaze scar 1	4,963
Print defect	4,893
Dent	3,291
Glaze scar 2	2,755
Boss G	2,522
Engobe hump	2,201
Hole	1,961
Colour spot	1,639
Spit out	1,614
Pin Hole	1,414
Glaze line	927
Wave	632
Edge hole	531
(A) Glazing line defects (reject pieces)	60,530
(B) Total reject pieces	120,039
(C) Glazing line related rejects (A/B)x100	50.43%
Percentage of glazing-related rejects from total production (Considering the average of 6 months)	4.42%

A further analysis of types of defects in the month of October, 2014 showed that *bald edge, glaze bead, glazed crack, print defect,* and *glaze scar -1* occupy the first four slots of defects

In order to understand the operations of glazing and printing, a process map of it was drawn, which is depicted in Figure 1. Thus, in view of the above results the glazing and printing section in the process of glaze application was selected as the scope.

Figure 1: Project Area: Glazing & Printing Process



Description of Terms

Biscuit Tile: A fired tile which represents the base input for the final product

Engobe: A glass liquid layer applied on biscuit tiles

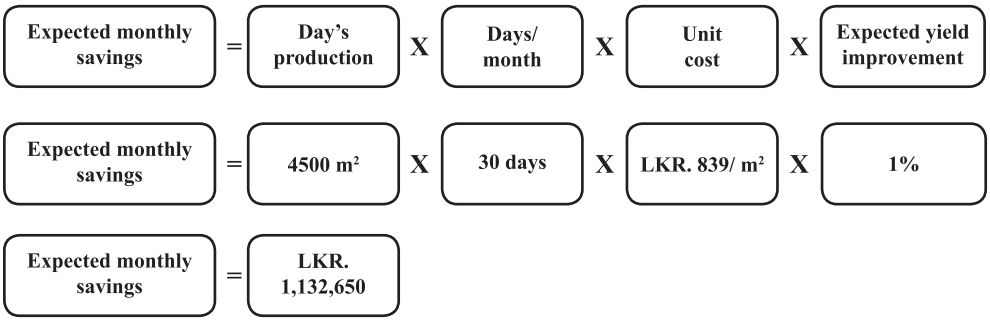
Glaze: A glass liquid layer applied on the engobe applied tiles, which produces the hard non-porous shining surface (matt or gloss) after firing.

In this process the input material is biscuit tiles while the output is glazed and printed tiles. During this process, the tiles are subjected to the fuctions, viz. surface cleaning, engobe application, glaze application, edge scraping and printing. Then the glazed tiles are transferred to the glost firing in the kiln.

Impact on the Business

The financial benefits could be counted as cash savings, improved customer satisfaction and increased market share in the long-run. The formula for cash savings is given in Figure 2.

Figure 2: Computation of Cash Savings



Project Objectives

The objective of the project was to reduce defectives by applying Six Sigma in the glazing and printing section at Lanka Wall Tiles PLC, which is a large-scale manufacturing facility in Sri Lanka. The goal of the proposed study was to reduce the defect rate of the output from the glazing and printing section by at least 3%. This was expected to be achieved through the following steps:

i. Identifying opportunities where improvements are possible;

ii. Identifying the sources of variation leading to defectives; and

iii. Recommending and adopting steps to remove the sources of variation.

Process Mapping

Chart 1 depicts the process mapping of the process under consideration, biscuit tiles feeding to glazed and printed tile based on SIPOC. Once the process mapping is completed it is necessary to identify critical areas of the process where the focus is on producing better results. In order to identify opportunities for improvement and critical areas the Quality Deployment Function was deployed as depicted in Chart 2.

Chart 1: SIPOC Model - Biscuit Firing Process

Suppliers	Inputs	Process	Output	Customers
Biscuit Kiln Section	Biscuit Tiles	Biscuit tiles feeding	Rejected Biscuits	Crushing section for recycling
		↓ (Good biscuittiles)		
Quality Assurance Department	QC Instruction Sheet	Inline - Checking		
		↓		
Glaze and Engobe preparation section	Engobe	Engobe application	Waste Engobe	Effluent Treatment Plant
		↓		
Glaze and Engobe preparation section	Glaze	Glaze application	Waste Glaze	Effluent Treatment Plant
		↓		
Engineering Department	Water	Tile edge cleaning		
		↓		
		Printing application		
Ink Preparation Section	Printing ink,	↓		
M/s. Colorobbia – Spain	Ready-made ink			
M/s. ZGC – China		Glazed and printed tiles loading to the trolleys →	Trolley with glazed and printed tiles →	Glost Kiln (2nd Firing)

Table 4: Critical Paths of the Glazing and Printing Process

Supplier Process (Internal/ External)		Business Process		Customer Process (Internal)
CTS	**CTI**	**CTP**	**CTQ**	**VOC**
Glaze Preparation Section	Engobe, glazes	Engobe and Glaze application	Correct amount of engobe and glaze on the tiles	Tiles with right glaze and Engobe weights
	Glazed title	Edge cleaning	Setting the Edge cleaning as required.	Tiles with clean edges
Glaze Preparation Section	Prepared ink /Digital ink	Printing		
M/s. Colorobbia – Spain		Loading the glazed tiles to the cars.	Registers the print without any print defect.	
M/s. ZGC – China			No damage to the glazed tiles at the time of loading	Properly loaded glazed cars (trolley)

Note: All critical areas were highlighted where action was required to improve the process and all measurements were carried out to gauge the size of the problem and to identify the sources of variations. Once the critical path is identified, the Define stage of DMAIC ends and the Measurement stage begins.

Chart 2: Basic Quality Function Deployment (QFD)

Company: Lanka Waltiles PLC																					
Strength of Relationships and Voice of Customers				Rating (company)	Biscuit Tile Inspection & Feeding	Edge Scraping	Brushing	QC Instructions (Product Brief)	Sieving Engobe	Engobe Application	Sieving Glazes	Glaze Application	Tile edge Cleaning	Flat Bed Printing Process	Roto Printing Process	Digital Printing Process	Conveyor Operation	Loading to Cars			
–	No relationship																				
●	5 - Strong																				
O	3 - Medium																				
¤	1 - Weak																				
1.	Surface free from dents			3	3	3	9	15	15	15	15	15	15		9						
					¤	¤	O	●	●	●	●	●	●		O						
2.	Tile without print defects			3																	
3.	Tile free from glaze cracks			5	25	15	-														
					●	O															
4.	Tile without (bald edge) defects			5	-	-	-	25	-	15	-	15	25	25	15	15	25	25			
								●		O		O	●	●	O	O	O	●			
5.	Even glaze surface			1	-	1	2	5	5	5	5	5	-		-	-	-	-			
								●	●	●	●	●									
6.	Surface free from holes			5	15	5	25	25	15	15	15	15	-	25	-	-	-	-			
					O	¤	●	●	O	O	O	O		●							
				Total	**43**	**23**	**34**	**70**	**35**	**50**	**35**	**50**	**40**	**65**	**39**	**30**	**40**	**25**			

Basic level QFD highlights the operations, viz. quality control, engobe, glaze and printing operations, as the most important ones (CTP) where opportunities exist for improvement. The outcomes of QFD are depicted in Chart 2. QFD helped project to identify critical to qualities (CTQ) and critical processes. (CTP). However, the above QFD has not analyzed the competitor's capability as against the company performance since the data is not available.

Once the process was established, the next step was to appoint a team from among the process owners and assign them with tasks based on their capabilities for conducting the project. Team members and their roles are identified prior to the formal study. Table 8 indicates the members of the team that was appointed and their roles.

Table 5: Team Role Matrix

Position	Category	Project Management Role	Technical Role	Technical Working Role
Head of Finance (HOF)	Champion	Approval, Review provide resources		
Factory Manager (FM)	Team Leader	Execution of the project plan.	Support the team to analyze data	Motivate the team
Assist. Factory Manager (Production) (AFM – P)	Team Members	Documentation	Support to analyze data	
Assist. Production Manager I (APM – I)		Proposing controls	Technical ideas	
Production Executive (Glaze Preparation) (PE – G/P)		Proposing controls	Technical ideas	
Production Executive (Glazing) (PE – G)		Data Analysis		
Assist. Quality Assurance Executive (AQAE)		Data collection		
National Institute of Business Management (NIBM)	Mentor	Monitoring	Technical ideas	Facilitation

Standardization of the Current Process

At the beginning of the study, it was decided to standardize the process in order to easily identify the variations in the process. Table 6 presents the current operations and proposed operations after standardization to improve the quality of the process at the Define stage.

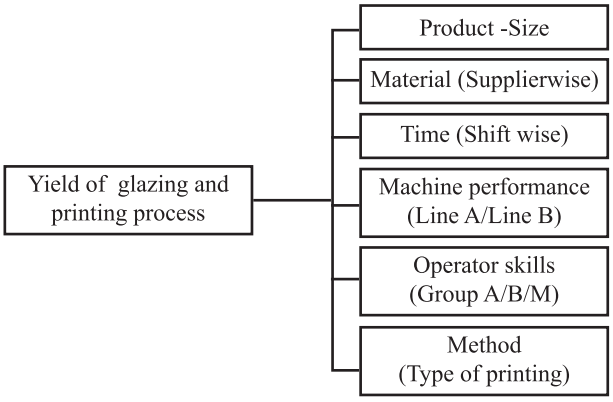
Table 6: Action Plan for Standardization of the Process

	Operation	Current Operation	Proposed Operation	Responsibility
1.	Receipt of biscuit tiles	Unskilled operator	Deploy skilled operator	Production Executive
2.	Receipt of glaze/engobe	Use glazes as and when received.	Keep 15 minutes under agitation	Production Executive
3	Glaze &engobe application	Check viscosity and density every 30 min	Check viscosity and density every 30 min	Production Executive
4.	Scraping method	Check every 4 hrs.	Check every 2 hours	Production Executive
5.	Loading method	Inform when there is a problem only	Check and regulate trolley irregularities monthly	Production Executive
6.	Conveyor maintenance	Condition report sent to Engineering Dept. before maintenance day.	Condition report sent to Engineering Dept. daily.	Production Executive

Measurement Stage

This consisted of two activities: data collection using the Planning Sheet and conceptualization of the independent variables which impact on the yield of glazing and printing processes. Figure 3 depicts the variables (Xs), which need to be improved and controlled for a better yield.

Figure 3: Conceptual Model for Process Improvement



The variables (Xs) were identified by the team based on the product knowledge and the literature.

Table 7: Planning Sheet – Measurement Stage

	Process Step	CTQ	Operational Definition	Data Type	Stratification	Sample Size
1	Biscuit Feeding	Tiles with glaze/crack	As per specification of biscuit tile inspection	Count data	Biscuit tile inspectors	20 pcs per hour (320 per/day)
2	Biscuit tile surface cleaning (Brushing)	Tiles with holes	Tiles with organic material and durst on the surface as per the sample	Count data	Conveyor operator-wise	20 pcs per hour (320 per/day)
3	Glaze edge Scraping	Tiles with bald edge defects	(a) Poor bonding properly of glazes. (b) Improper settings of edge scraping unit.	Count data	Type of tiles Conveyor operator-wise	20 pcs per hour (320 per/day)
4	Engobe Application	Tiles with engobe hump	Settling solid particles on glazed application unit	Count data	Glaze application unit (Bell)-wise	20 pcs per hour (320 per/day)
5	Glaze Application	Tiles with dents	Bubble forming in the glaze	Count data	Glaze tub-wise	20 pcs per hour (320 per/day)

Based on the Critical to Quality (CTQ) factors and their measurements, a further analysis of the data was carried out to identify sources of variation using appropriate statistical tools.

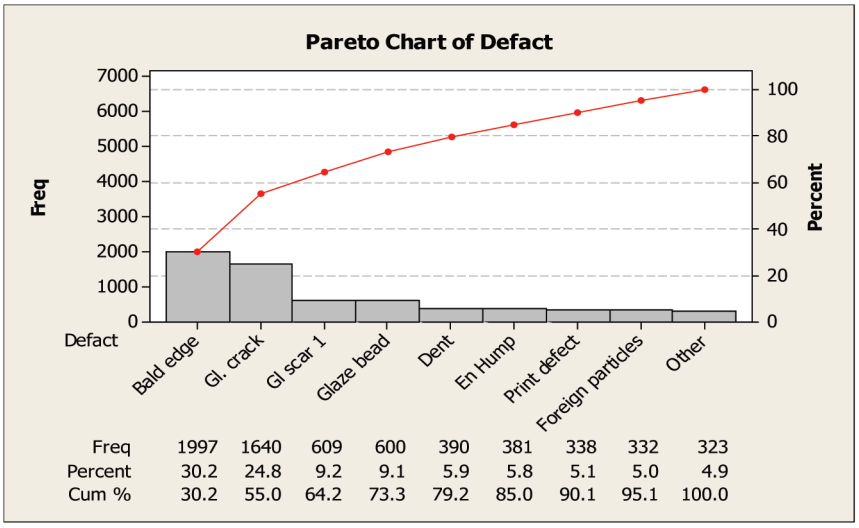
Analysis Stage

With the data in the measurement stage, a Pareto analysis (Chart 3), Control Chart analysis (Chart 4), visual observation to identify sources of variation (Figure 4), and cross tabulations of probabilities of different defects by different sources of variation (Table 11-16) were carried out. The sources of variation taken were glaze type (Table 11), different combinations (Table 12), shift (Table 13), operator group (Table 14), print type (Table 15) and glazing line type (Table 16).

Application of Pareto Analysis

The results of the Pareto analysis appear in Chart 3.

Chart 3: Pareto Analysis for Defects

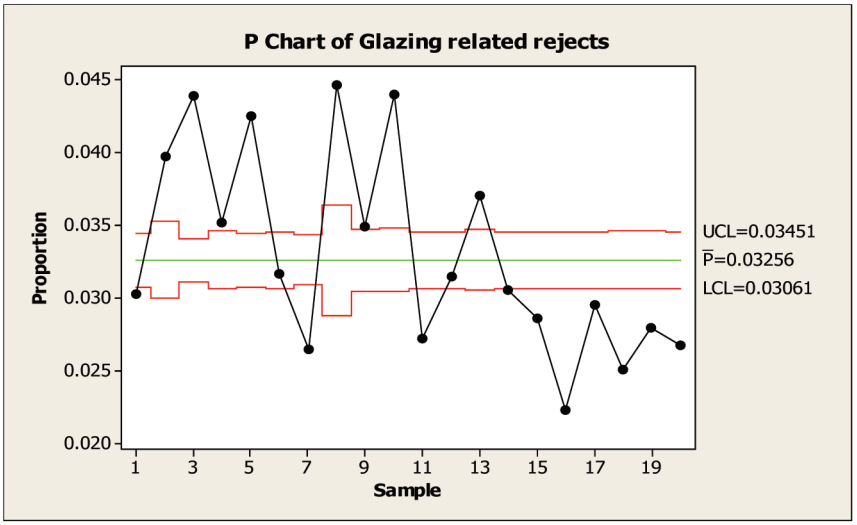


The analysis shows that bald edges, glaze cracks, glaze scars 1, glaze beads and dents accounted for 79.2 percent of the defects, the rest of the contributory factors were of less significance which accounted for the balance 19.8 percent of the defects. Hence, the focus of the study hereafter was on the first five types of defects and causes for which were identified through control charts and other statistical tools.

Application of Control Charts

Control charts measure the stability of a process and help to separate special causes from natural causes. Natural causes are made up of a large numbers of micro variations which demand a huge investment to control but the results are negligible. Hence control charts were used to identify the special variations. P-charts which are meant to attribute data help to identify special causes, which affect process stability. Chart 4 shows that there is no stability at all in daily outputs of Plant A and variations are considered to be very high with a mean rejection rate of 32 percent of the total outputs for the day.

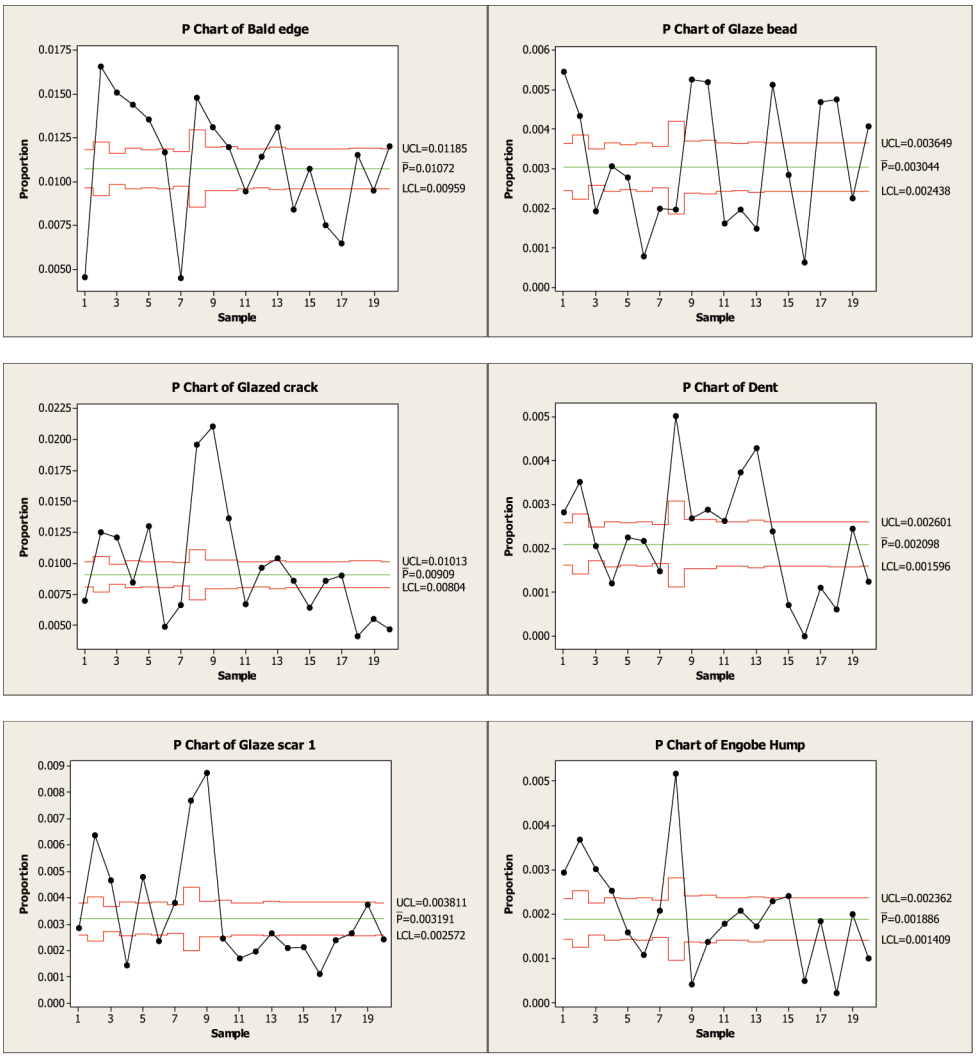
Chart 4: P-Chart Analysis of Daily Rejects



The same analysis was done for different types of defects and the results are depicted in Chart 5. It shows that all of them are not stable and statistically not in control. Hence it is necessary to identify the special causes and their variations. The analysis identified a few critical opportunities. All major defects were identified and are shown in Figure 4. The first stage of improvement is process standardization and the second stage is making the process stable by removing the sources of major variations. At a glance. it is obvious that all operations are not stable and it is evident that there is a huge variation in production.

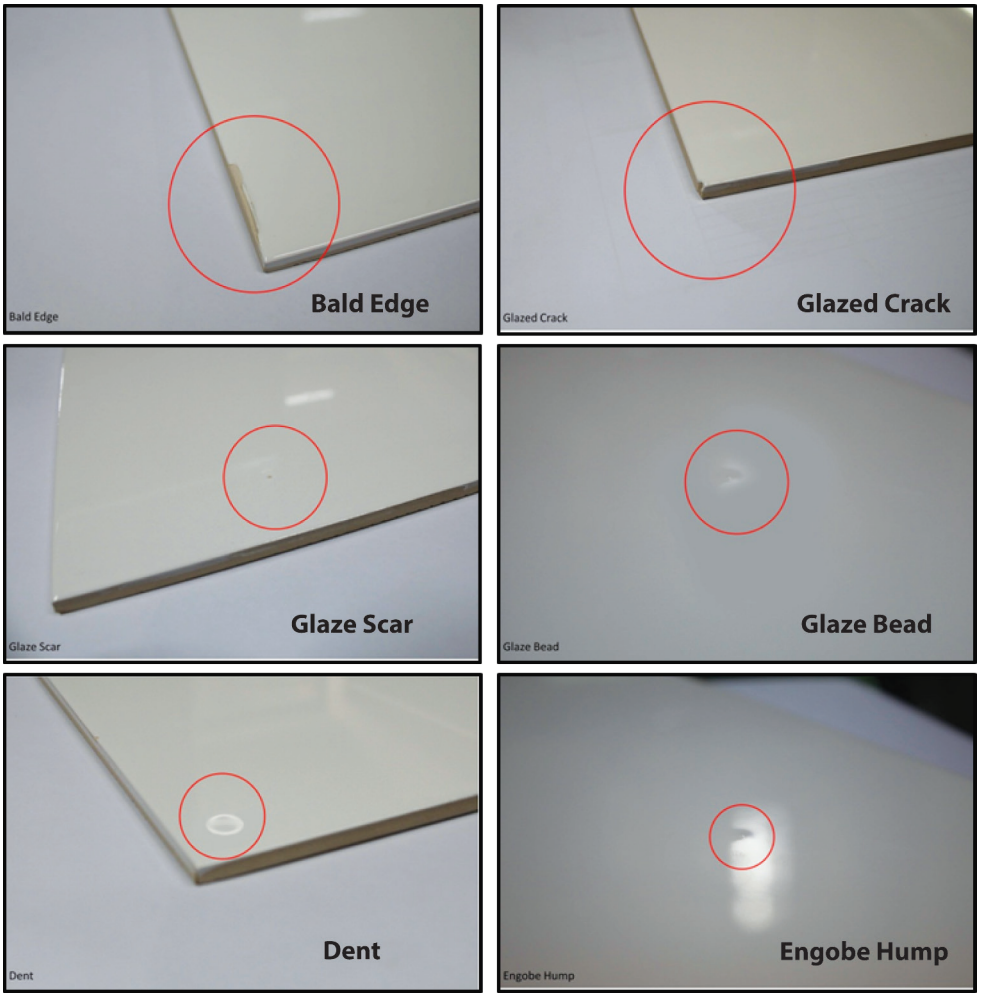
Though there are no specific patterns or trends in the charts, they indicate that all of them are not in control and there is a need to identify the major causes of the process deviation. A study was conducted to locate all out-of-control points and find out the specific reasons as to why the deviations were evident. All these causes were displayed in the cause and effect diagram as shown in Figure 5.

Chart 5: Analysis of Different Types of Defects



Visual observation helps to identify the sources of variation and actually what occurs at the time production (see Figure 4).

Figure 4: Visualization of Critical Defects



In order to analyze further, a cross tabulation was conducted for types of defects versus glaze type as shown in Table 8.

Table 8: Cross Tabulation of Probability of Defect Type vs. Glaze Type

Glaze Type	Opaque	Colorobbia- Spain	OP
		ZGC – China	OC
	Semi Opaque	Colorobbia	SO
		Colorobbia/ZGC(1:1)	SC
	Transparent	Full (T03)	FT
		Normal (T01)	NT
	Normal Matt		NM
	Digital Matt		DM

Table 9: Probability of Different Combinations of Defects

Row Labels	Sum of Bald edge	Sum of Gl. crack	Sum of Gl scar 1	Sum of Glaze bead	Sum of Dent	Sum of En Hump
CT	0.60%	0.00%	0.00%	0.33%	0.00%	0.00%
DM	1.70%	2.68%	3.12%	6.00%	0.00%	0.52%
FT	10.22%	5.43%	5.58%	2.67%	10.77%	13.12%
NM	27.09%	25.06%	16.09%	35.17%	0.77%	0.26%
NT	16.17%	17.44%	14.61%	7.67%	16.15%	12.86%
OC	13.97%	15.91%	16.09%	19.83%	19.49%	30.45%
OP	16.47%	16.65%	14.45%	15.17%	26.92%	14.44%
SC	7.41%	13.05%	23.48%	10.17%	19.74%	22.05%
SO	6.36%	3.78%	6.57%	3.00%	6.15%	6.30%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 9 shows that the glaze type had different levels and percentages of defects in the production process.

Table 10: Cross Tabulation of Probability of Defect Type vs. Shift

Shift	Morning	M
	Evening	E
	Night	N

Row Labels	Sum of Bald edge	Sum of Gl. crack	Sum of Gl scar 1	Sum of Glaze bead	Sum of Dent	Sum of En Hump
M	41.41%	36.59%	28.08%	42.83%	35.38%	33.33%
E	34.35%	32.74%	42.36%	37.67%	35.13%	37.27%
N	24.24%	30.67%	29.56%	19.50%	29.49%	29.40%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table10 indicates that shifts make a difference in the production of defects and their impact is not significant as there is no significant variation in the rates of the defects identified, from the type of shift.

Table11: Cross Tabulation of Probability of Defect Type vs. Operator Group

Operator Group	Plant A glazing line operator group	A
		B
		M

Row Labels	Sum of Bald edge	Sum of Gl. crack	Sum of Gl scar 1	Sum of Glaze bead	Sum of Dent	Sum of En Hump
A	40.11%	38.48%	36.45%	39.00%	35.13%	27.30%
B	34.10%	28.84%	30.21%	40.00%	32.05%	41.21%
M	25.79%	32.68%	33.33%	21.00%	32.82%	31.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Three different operatives' groups were defined as per the shifts attended.

Table 11 indicates that the operator group influences the production of defective items and that the impact is significant. The bald edge defect and glaze bead defect are directly associated with the employees' skill and it can be seen that Group M's skills are better than those of the others. The other defects are not associated with the skills and also there is no significant difference of defects percentages *Vis a Vis* the employee groups.

Table 12: Cross Tabulation of Probability of Defect Type vs. Print Type

Print Type	Plain Color	P
	Digital	D
	Screen	S
	Roto	R

Row Labels	Sum of Bald edge	Sum of Gl. crack	Sum of Gl scar 1	Sum of Glaze bead	Sum of Dent	Sum of En Hump
P	7.36%	12.38%	19.38%	14.83%	15.90%	16.80%
D	34.20%	38.48%	36.95%	31.17%	48.46%	46.72%
S	13.87%	10.24%	7.55%	4.17%	17.69%	7.09%
R	44.57%	38.90%	36.12%	49.83%	17.95%	29.40%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table12 indicates that there is a variation of defects based on the type of prints, which is a significant reason for defective items.

Table13: Cross Tabulation of Probability of Defect Type vs. Glazing Line

Glazing Line	Glazing Line A	A
	Glazing Line B	B

Row Labels	Sum of Bald edge	Sum of Gl. crack	Sum of Gl scar 1	Sum of Glaze bead	Sum of Dent	Sum of En Hump
A	57.94%	55.24%	58.29%	47.00%	60.00%	44.09%
B	42.06%	44.76%	41.71%	53.00%	40.00%	55.91%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table13 indicates that there is a significant variation arising between the two different glazing production lines, which needs due attention. (Better to say Lines I and II because we talk about Plant B in the paper early on).

The final activity of the Analysis stage constituted identifying the causes of defects in the production process. This was carried out using the Ishikawa diagram through a few rounds of brainstorming sessions involving both workers and supervisory staff (refer Figure 5). The results were tabulated as depicted in Table 14.

Figure 5: Cause and Effect Diagram for Generating Defects

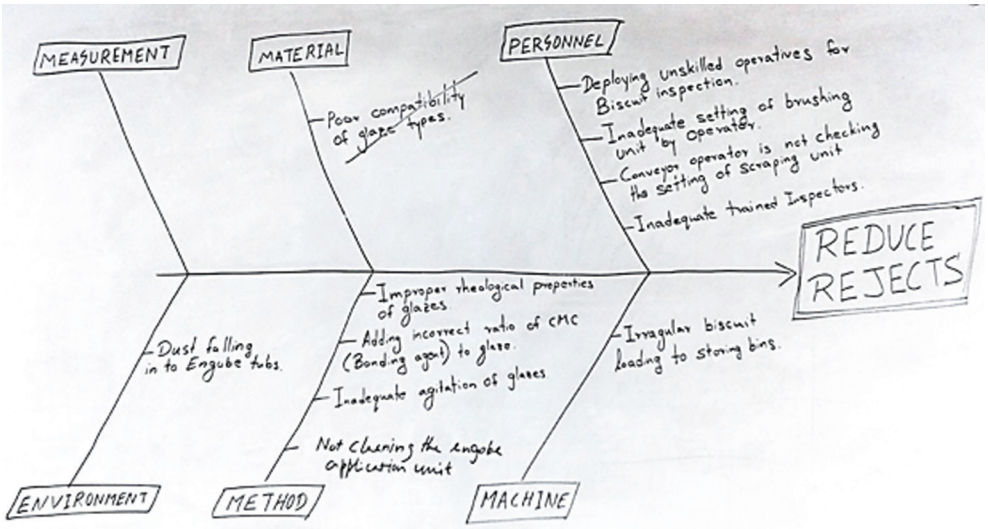


Table 14: Identification of Causes

Defect	Error in the Process	Location	Cause
Bald edge	a. Poor bonding property in glaze	Glaze preparation section	Adding the incorrect ratio of CMC (bonding agent) to the glaze.
	b. Improper settings of edge scraping unit	Scraping unit	Operator is not checking proper setting of scraping unit.
Glazed crack	Passing defective biscuit tiles to the glazing process	Biscuit feeding location	Deploying un-skilled operatives for biscuit inspection.
			Irregular biscuit loading to storage bins
Glaze scar1	Organic material and dust on the tiles.	Brushing unit fixed to clean biscuit tiles.	Inadequate setting of brushing unit by the operator.
Glaze bead	Clogging the glaze	Glaze application unit	Improper setting of rheological properties of the glaze by QAD.
Dent	Bubble formation in the glaze.	Glaze tub	In advocate agitation of the glaze.
Engobe hump	Clogging of engobe Dust falling into the engobe tub	Engobe application unit	Not cleaning the engobe application unit every shift
			Not having a lid for the engobe tubs

Improvement Stage

The following recommendations were implemented to mitigate the sources of variation. Action was taken to increase the amount of CMC (Bonding agent) added to glaze from 0.05% to 0.1% in order to reduce the bold edge defect as suggested by the Factory Manager (Team Leader). A trial conducted by the Quality Assurance Department found a 58% reduction in bald-edge defects after increasing CMC.

i. Steps were taken to train all the unskilled biscuit inspectors as suggested by the Assistant Factory Manager (Production) (Team Member) and deploy only the skilled inspectors for biscuit tile inspection to reduce the glazed crack defects. SOP was introduced for eligibility to become a Biscuit Tile Inspector by the Production Executive (Glazing) (Team Member).

ii. Steps were taken to monitor the brushing unit operation by Supervisory Assistants every four hours and to cover the glaze and engobe tub to protect falling dust into the glaze tanks.

iii. Action was taken by the Production Executive (Glazing) to clean the engobe application unit every eight hours in order to avoid particles settling on the engobe application unit (Bell) which created engobe hump defects.

iv. The process was standardized in order to ensure sustainable results as suggested by the Assistant Production Manager I.

Control Stage

The following steps were taken as measures for controlling the improved process. These were effected in full from January 2015.

i. A checklist was prepared for checking biscuit tile inspection operations.

ii. The six types of defect that were identified were displayed in a control chart in the glazing and printing section by the line management as a constant reminder for workers and supervisory staff.

iii. All the Quality Control instruction sheets (product brief) are reviewed daily by the Supervisory Assistants to ensure the reliability of the process.

iv. The quality of the glazed tiles loaded to the trolleys is monitored by the Supervisory Assistant in the glazing section in four hourly intervals.

v. All the check lists/ control charts are reviewed weekly by the supervisors and monthly by the sectional head.

vi. Carry out audits for routine operations and setting activities (change over time and shut down time) are conducted by the Sectional Head (Assistant Production Manager I) and action is taken to include this methodology as a SOP for the Glazing Lines.

Project Results

Yield, production and cost savings for the year 2015 given on a monthly basis are shown in Table 15.

Table 15: Yield Improvement and Cost Savings for 2015

Month	Average Reject Yield % (Before implementation) (May to October 2014)	Average Reject Yield % (After implementation)	Yield improvement %	Total monthly production (sq.m)	Total monthly savings (sq.m)	Average cost/ sq.m LKR (Jan 2015)	Tot savings LKR.
Jan-15	8.86	5.53	3.33	132,653	4,417	754.42	3,332,533.34
Feb-15	8.86	5.59	3.27	122,749	4,014	725.16	2,910,714.14
Mar-15	8.86	6.01	2.85	134,246	3,826	740.01	2,831,286.40
Apr-15	8.86	10.28	-1.42	34,757	0	1369.39	-
May-15	8.86	7.28	1.58	93,307	1,474	824.39	1,215,357.45
Jun-15	8.86	5.99	2.87	130,369	3,742	723.79	2,708,125.64
Jul-15	8.86	5.21	3.65	138,389	5,051	657.97	3,323,537.08
Aug-15	8.86	5.75	3.11	150,570	4,683	638.76	2,991,138.70
Sep-15	8.86	6.36	2.5	139,791	3,495	667.94	2,334,300.01
Oct-15	8.86	5.00	3.86	133,749	5,163	632.38	3,264,795.44
Nov-15	8.86	5.69	3.17	135,616	4,299	714.13	3,070,064.29
Dec-15	8.86	5.56	3.30	148,903	4,914	746.19	3,666,627.68
Total savings for the year 2015							31,648,480.17
Total Saving for the year 2015 (LKR.)							31,648,480.17
Average Saving per month (LKR.)							2,637,373.34

Note: The reason for the negative improvement in the month of April 2015, was the stoppage of the plant for annual maintenance for 22 days.

Key Learning Points

The lessons learnt through the implementation of the project are manifold. It revealed that methodical and systematic application of the Six Sigma system using the thinking process of DMAIC enabled the team to identify sources of variations which had gone undetected for a

long period of time. The following are the key lessons learnt which are worth recording for further reference and studies.

i. The importance of analyzing the data sourced from live tests without analyzing the historical data (secondary data)

ii. The importance of analyzing the complete system without attacking each defect individually as there are correlations among defects.

iii. Using Control Charts in the Glazing Lines and explaining to the operatives daily has improved the control of "situational type defects".

iv. Successful implementation of the project with the support of employees who are directly involved lead to a change in the attitude of employees to make use of data as a source of knowledge. Low cost, simple factory-born ideas were implemented by operators with the support of managers leading to respecting the knowledge workers and cooperating with them to achieve other goals of the factory as well.

v. Top management has realized the importance of the Six Sigma system and heavily invested in efforts at knowledge improvement of the employees of the entire company.

vi. There is a huge potential in the industry for Six Sigma application, if the right project and the right team are selected.

Conclusion

The study was initiated with the aim of reducing glazing defects by improving the stability and capability of the production process. It revealed that the faithful application of the DMAIC cycle was the key to producing tangible results. Further, it showed that the collection and analysis of critical data with the correct statistical tools play a vital role in creating simple but profitable solutions for the problem being investigated. Moreover, the team who managed the study played a productive role without which the results could not have been reached. Hence it is recommended that the application of Six Sigma methodology be expanded to other major processes in production as well as in services to streamline the business. Six Sigma methodologies have produced not only sustainable results in the bottom-line of many firms in Sri Lanka but have also produced Six Sigma professionals, who will take up the real challenge posed by the global business environment. In order to refine the process of Six Sigma implementation, a further study of Six Sigma methodology is recommended especially in areas such as the assessment of cost of poor quality (COPQ), rolled throughput yield, process capability index and use of control charts to stabilize the process.

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Book Review

The Stronghold of Tradition and Tensions in Juxtapositions (Exploring the Sri Lankan MOD-TRADI Consumer) by Dinuka Wijetunga, 2014, Postgraduate Institute of Management, Colombo

Reviewers: Sumanasiri Liyanage and Chamari Jayani Wijayawardane

It has been said that since the early 1980s, the world has entered a new phase with specific and identifiable characteristics. A new lexicon has been created to depict these changes. Daniel Bell (1973) used the term 'post-industrial' while Manuel Castells (2002) preferred 'information age'. However, the widely used term to portray these changes is undoubtedly 'post-modern.' Of course, there has been no consensus on what 'post-industrial', 'information phase' or 'post-modern' really means. One may even argue that this amorphousness in itself explicates post-modernity. Besides other substantial changes, one of the key changes that has been emphasized is in the 'consumptionscape' in niche markets supplanting the 'Fordist' mass market. Many writers have attempted to explain the changes that have taken place in Western societies, especially in the US, where consumerism has reached its zenith. Nonetheless, very few studies have focused on the changes in the 'consumptionscape' in Sri Lanka in the post-1977 reform period. One such attempt is Prof. Uditha Liyanage's paper titled 'The Sri Lankan post-modern consumer' published in the *Sri Lankan Journal of Management* (2009/10).

Dinuka Wijetunga's monograph, 'The Stronghold of Tradition and Tensions in Juxtapositions (Exploring the Sri Lankan MOD-TRADI Consumer)' is an attempt to 'build on Liyanage's work by making a deeper analysis of some of the subtler characteristics of the mod-tradi consumer that he hints at, but does not discuss in detail' (p. 1). Hence, she focuses on some of 'the nuances of the interplay between modern and traditional forces that are manifested in consumption behaviour' (p. 5).

Liyanage posits that the contemporary Sri Lankan consumer and society have mixed characteristics arising from the forces of traditionalisation and modernisation. According to him, traditionalisation is an outcome of the dominance, especially in the political arena, of the vernacular educated class that emerged with the nationalist political ideologies after the 1956 period. On the other hand, modernisation is a lifestyle followed by the new urban middle class especially in the post-1977 period with the introduction of the open market

economy. The confluence of the two opposing trends has given rise to post modernization as a third new trend in the consumptionscape. This explains the uniqueness of consumption behaviour in Sri Lanka. According to Liyanage, 'the key driver here is the avoidance of the possibility of being uprooted and alienated from the deep-going social programmes and processes on the one hand, and the avoidance of being stuck and old-fashioned on the other.'

Even though Liyanage has highlighted the post-modern consumer and his consumption habits, the need for further examination of some of the nuances of the idiosyncrasies of local consumption behaviour remains. The reader needs to be aware that when the 'post-modern' label is used to describe the Sri Lankan mod-tradi consumer, mere emphasis on hybridity and the confluence of the two opposite forces may not be adequate. Hence, it is of great importance that further studies be done to grasp the substance of the mod-tradi consumer in order to understand his/her character, preferences, attitudes and the patterns of thinking that affect overall consumer buying behavior. Even much deeper studies can be done on aspects such as how the buying behaviour of the mod-tradi consumers differs when they are segmented according to various factors such as gender, age, occupation, income, role and status in society. The question also remains as to how the mod-tradi business consumer affects the buying patterns in the business-to-business market. Is the mod-tradi consumer a feature only of the Sri Lankan or Asian market? Or is it a global feature?

Having located the Western consumer in his historical context, Wijetunga identifies three main characteristics of the post-modernist consumption space, namely, hyper reality, fragmentation and juxtaposition of opposites and retro-orientation. Thus, she has extended the definition of postmodernism from mere hybridity and confluence of opposite tendencies to a more complex and nuanced phenomenon. Of course, there has been no general consensus on what post-modernism entails. Its advocates as well as its critics have given multiple definitions while some critics even wonder if it is a specific phase. According to Jameson (1991), postmodernism is the cultural logic of late capitalism. It may be interesting to pose the question how post-modernity differs from its previous phase, i.e., the process of modernity. Chapter 2 of Wijetunga's monograph outlines how the Western consumer has evolved from the pre-modern to the post-modern period. The process of modernity revolutionized the way people think, behave, produce and consume as belief was being replaced by reason. It gave way to industrial society that subordinated the rural to the urban; animated power to inanimate power. As Bauderlaire once noted, 'modernity is the transient, the fleeting, the contingent; it is the one half of art, the other being the eternal and immutable' (quoted in Harvey, 1990: p. 10). Enlightenment writers having foreseen this contradiction, attempted to transcend and counteract modernity's fleeting, contingent and transient character. On the

contrary, as Harvey noted, the startling factor of post-modernity is 'its total acceptance of ephemerality, fragmentation, discontinuity, and the chaotic' (1990, p. 44). Hence, an analysis of the changes that happened in the consumption space needs to be discussed in terms of how these ephemeral, fragmented, discontinuous and fleeting characters are embedded in the new postmodern consumption style. Are those characteristics universal, or are they society and context specific?

The author opines that even though there is evidence of fragmentation, juxtaposition of opposites and retro-orientation in the consumption practices of the mod-tradi consumer in Sri Lanka, some idiosyncratic twists and country specificities may be seen in the post-1977 period. Hence, it is incorrect to state that the Sri Lankan post-modernist consumer is a mere replication of the Western post-modernist consumer. The author (p. 53) expands the thesis of Liyanage by saying that in Sri Lanka the modern and postmodern thinking patterns did not evolve gradually but were introduced from the West and were external injections into the social system. She seems to believe that the mod-tradi consumer is the product of a historical process that is in itself fraught with tension as a deeply rooted traditional value system constantly came into conflict with externally introduced modern/post-modern thinking. The retro-orientation of the Sri Lankan post-modernist consumers is thus identified as the principal driver that distinguishes them from their counterparts in the West.

In chapter three the author argues that although the Sri Lankan post-modernist consumer resembles in many respects his/her Western counterpart, 'there are other characteristics that are completely at variance' (p.26) primarily because of the different historical circumstances in which he/she has been conditioned. Since the author depends for her historical sketch on the works of other writers, the analysis in this chapter, in our opinion, lacks rigour and does not bring out the historical complexities embedded in the uneven and combined evolution of the social fabric. For example, the author unquestionably agrees that pre-modern Sri Lanka was feudal in spite of many works questioning this thesis. The author takes the reader along a journey to analyze the last years of colonization, post-independence, year 1977 and after. Eventually, after discussing tradition vs. western modern, the author (p. 36) states that the conflict between the influences of dominant Western thinking patterns (at any given time) and the Sri Lankan's strong identification with tradition has led to ambivalence about Western influences and Western consumerism. How do we explain this context-specificity? Does it imply just the presence of tradition and strong adherence to it?

The fourth chapter profiles the Sri Lankan consumptionscape as it evolved in the post-1977 period. In the first section, the author develops the concept of consumption as image creation

and tension resolution, referring to real world examples. She tends to give more importance to retro-orientation as she focuses on a clear rupture between the retro-orientation of the Western consumer and that of the Sri Lankan counterpart. While the retro-orientation of the Western post-modern consumer is guided by his/her aesthetic sense, that of the Sri Lankan mod-tradi consumer is guided by his/her sense of traditionality. Thus, the sacred and profane are the principal drivers in determining postmodern specificities between the centre and the periphery.

The last chapter presents reflections on the theoretical and managerial implications that emerge from the book. In her conclusion, the author (p. 61) states that her aim was to build on and develop the concept of the mod-tradi consumer identified by Liyanage. She states that the Sri Lankan mod-tradi consumer has many facets, some which are in conflict with each other. Thus, it makes him/her even more complex than the Western post-modern consumer. She agrees that the mod-tradi consumer is influenced by the contradictory forces of (post) modern consumerism and deep-seated traditional values and customs. The author's (p. 62) conclusion is that hyper-reality is the only characteristic of Western post-modern consumption that the mod-tradi consumer appears to display in near identical manner.

The author has entered into a terrain in which research and studies are conspicuously absent. All in all, the book is structured meticulously and written with a continuity and flow that enlightens the reader step by step through its in-depth analysis of the Sri Lankan mod-tradi consumer. Her style is free and lucid making the reader want to read more and more. The content is interesting and educative. We recommend the book especially to those who are and aspire to become marketing practitioners and students following courses related to marketing/management.

As more new research on this subject can be anticipated, it may be pertinent to flag three issues, which may enrich our understanding of the consumptionscape in the post-colonial, post-modern context. Firstly, what is meant by post-modern? Although the principal characteristics of the post-modern consumer have been portrayed in detail, post-modern is defined basically as a hybrid of traditionalization and modernization. In post-modern discourse, however, it means much more than hybridity notwithstanding the fact that there is no consensus about what it really means even among post-modern writers. The difference between modernity and post-modernity is subtle and complex and somewhat confusing. The following quote from Lyotard (1984, p.81) emphasizes this complexity: 'The postmodern would be that which, in the modern, puts forward the unpresentable in presentation itself; that which denies itself the solace of good forms, the consensus of a taste which would make

it possible to share collectively the nostalgia for the unattainable; that which searches for new presentations, not in order to enjoy them but in order to impart a stronger sense of the unpresentable'. Although consumption has become crucial in the post-modern situation, it is necessary to relate these changes to parallel changes in the sphere of production. It was said that the Fordist system of production was replaced by a post-Fordist system of production with and in response to CAD/CAM based technology.

The second issue relates to the problematic presence of the homogenized post-modern consumer. Finding a uniform or common postmodern consumer 'in a faded pair of jeans and a branded T-shirt, and the adornment of the conspicuous pirithnool may thus be problematic. Hybridity may come from different forms not only intermingling tradition and modern with respect and reverence for tradition but also making fun out of tradition. The urban nouveau-riche may emulate the Western consumer going totally against Western upper class consumers. For example, in the West, McDonald offers cheap fatty meals to lower class consumers while it has become a favorite venue of the upper class yuppies in post-colonial societies.

Thirdly, when it comes to consumptionscape, in a country like Sri Lanka there are many consumptionscapes, especially urban and rural, and maybe rural and estate. Had the author addressed these multiple issues relating them to concrete consumptionscapes in Sri Lanka, the work would have gained in value.

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