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Impacts of Firms' characteristics on training evaluation in Pakistanicall-centres - a quantitative approach.

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Resume

Call centers are rapidly growing in Pakistan, providingemerging employment opportunities. Extensive training and intensive monitoring strategies are typically used in call centers over the world. The objective of our study is to investigate training evaluation practices in Pakistan based on our model adapted from the TKM- Training Kirkpatrick Modelfour levels plus an ROI variable – and the role of organization's size and type (in-house vs subcontractor) while controlling for the effect of training duration. We chose to focus on Entry Level Professional Training (ELPT). The data was collected from 90 call-centers from three cities (Lahore, Islamabad and Karachi) thanks to 262 valid questionnaires. Our results show that the effect of organizations' size significant for all levels of the TKM with some specificity.

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Firms' characteristics: impacts on call-centers training evaluation in Pakistan - a quantitative approach.

Resume

Call centers are rapidly growing in Pakistan, they provide emerging employment opportunities. In these organizations, extensive training and intensive monitoring strategies are used. The objective of our study is to investigate the impact of the independent variables "size of the organization" and type (in-house vs subcontractor) on the continuous dependent variable "training evaluation practices" while controlling for the effect of training duration. We chose to focus on the "Entry Level Professional Training" (ELPT) and use the four levels of The TKM-Kirkpatrick Model plus an ROI dependant variable. The data is collected from 262 valid questionnaires from 90 different call-centers from three cities (Lahore, Islamabad and Karachi). Our results show that the effect of the "size of the organization" is significant for all levels of evaluation with some specificity.

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Introduction

With the dominance of service sector, call centers have observed a rapid growth and attracted attention of politicians, policy makers and academics (Callaghan & Thompson, 2002; Lanciano-Morandat *et al.*2009), noteworthy of this interest is the worldwide research project that led to *The Global call center report* (Holman, 2007).Call centers serve a broad range of customers in all industry sectors and offer a wide range of services from very simple to quite complex (Caïazzo, 2004). The sector is an important source of employment: according to Holman (2007),more than 8 million people are employed in call centers across 17 industrialized and industrializing countries, incl. 4 millions in 60 000 US-call centers.Some governments invest significant efforts toattract and retain call centers despite the general perception that call centers have a high propensity to relocate in areas that have the lowest labor costs (Xavier et Tremblay, 2012).To successfully attract call-centers, Pakistan boasts skilled workforce of 110,000 English-speaking IT professionals, a lower wage (around 30% below India) and a lower turn-over rates (20%, about half of those in India, according to PSEB-information, consulted January 2014). In Pakistan, the call-center sector is still young, as an indicator, the average age of call-centers is below 5 years (similar to the average call-center age in industrializing countries like India, Poland or South Korea) compared to a high of 14 years in the US (Holman, 2007).

Located north of India, Pakistan, the 6th most populated country in the world (174.1 million residents with a 5.2% reported unemployment rate), has not been studied for *The Global call center report* (Holman, 2007).
We wish to fill that gap. Call centers are flat organizations, typically employing50 workers (equivalent full-time), managers comprising only 12% of the workforce.Call centers differ based on characteristics like age, size, type(in-house or subcontractor), location, markets (inbound *vs* outbound services, domestic or international markets – 78% of call- centers primarily handle inbound calls). Previous research has not paid significant attention to examine the influence of these characteristics on various workforce management practices like selection, staffing and compensation strategies, work design, performance management and collective representation.
Major differencesappear in liberal *vs* industrialized-coordinated economies *vs* industrializing countries.Industrializing countries have a significantly higher proportion of subcontractors (India: 80%, or Brazil: 53%) - but this is also true in Spain: 50%. By contrast, the US and Israel have a high proportion of in-house call-centers (83% and 88% respectively).Over 60% of call centers in industrializing countries primarily recruit college educated people, a high proportion for what is considered to be a "low skill" job (the contrary is true in major industrialized countries). Acommon feature in industrializing countries is the predominance of male workforce (55% in India, more in Pakistan) – while in all industrialized countriesthe frontline workforce is predominantly female (69%). Labor represents a smaller portionof total costs in call centers of industrializing countries (typically 57%, in contrast to 70% in industrialized countries where the costs of turnover are particularly high).A majority of these centers report operations 24hours /7 days a week.

Call-center investments in training are an important supplement to selection strategies because job skills and requirements are often based on firmspecificproducts andprocesses. Few countries have developed public training courses or certification procedures forcall center workers - even in Germany, Austria, or Denmark known for their apprenticeship systems, the occupation is so new that training systems have not been developed or institutionalized. Thus, employers need to provide initial training in specific products, software systems and technical processes, and sales or customer interaction skills.Call centers belong to such industries where extensive training and intensive monitoring strategies are used to cope with various workforce challenges like influence of Information and Communication Technologies on skill demands (Sieben, De Grip, Longen, & Sorenson, 2009), high turnover (30 to 45%). Call Centre Agents (CCAs) need certain competencies and professional attitude to perform complex job tasks (White, 2005). According to Global Call Center Report (2007), on average, new call center agents receive entry level professional training of 15 days. Organizations which emphasize more on training and development interventions have

developed relatively systematic planning, implementation and evaluation processes as compared to their counterparts. These organizations pay significant attention towards evaluation in order to assess the impact of training and development interventions on individual and organizational performance (Flesher, 2007).

The objective of this research is the effect of call center characteristics on evaluation of initial training that is provided to new call center agents in Pakistan. The objective of this study is to fill the existing research gap by investigating the influence of call centers'size and type (inhouse*vs.* subcontractor) on training evaluation practices. It is also the first research focused on call centers in Pakistan.

After introducing the specificities of Pakistanese call-centers, we shall first present the literature review and theoretical framework adopted from The Kirkpatrick Model of training evaluation (TKM). That section concludes with our three hypothesis regarding the impact of Size, Type and a combination of both on training evaluation of entry-level-professionals (ELP). We then proceed to our quantitative research methodology based on a quantitative approach and two-way analysis of covariance (ANCOVA).In the final three sections, we present our results, a discussion of our findings and conclude with managerial implications and a future research agenda.

1- 1- Literature Review and the theoretical framework

1.1 - The Kirkpatrick Model (TKM)

This study is based on The Kirkpatrick Model (TKM). Kirkpatrick's ideas were first published in 1959 in a series of articles in the US Training and Development Journal, put together with corporate examples in his 1994 book *Evaluating Training Programs*.It is also recognized as the "four levels model". Most training and development evaluation begins with TKM (Medsker& Roberts, 1992) and the TKM model islater enriched by several evaluation frameworks (Bates, 2004)[1]. This model is the most frequently applied. Research using the TKM includesin US financial services industry (Gomez, 2003), in the USA (Twitchell*et al.*, 2000), but also in industrializing countries, in Taiwanese in high-tech companies (Lien*et al.*, 2007) and in Indian call centers (Yadapadithaya, 2001).

Kirkpatrick's four levels are designed as a sequence of ways to evaluate training programs:
- **Level 1- Reaction-**Degree of satisfaction participantsshow about the training.
- **Level 2-Learning-** To what degree participants acquired the intended knowledge, skills, and attitudes - this evaluation occurs during the training in the form of either a knowledge demonstration or a test.
- **Level 3- On-The-Job-Behaviour**-Transfer of knowledge, skills, and/or attitudes to the job.
- **Level 4-Results-** the final results (monetary, performance-based, etc.) that occurred because of attendance and participation in a training program and subsequent reinforcement.

J.J. Phillips (1996, 1997) argued for the addition of a **fifth level** "Return on Investment" (ROI), which is about comparing the fourth level of the standard model to the overall costs of training. On the other hand, Watkins and Kaufman (1998) contended that ROI is essentially a level-four type of evaluation since it is still internal to the organization and that a fifth level of evaluation should focus on the impact of the organization

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[1]Reid Bates (2004) notes that TKM stresses the need to assess training, distinguishing between learning and behaviour to improve learning transfer process. TKM is also the seed from which other evaluation models germinated. The three reasons for the TKM popularity are (1) a straightforward system or language for training outcomes and analysis of the objectives' achievement for training professionals to understand training evaluation in a systematic way; (2) a help to training professionalsto describe the results in business terms in order to become a business partner and active contributor to organizational success; (3) a way of simplifying the complex process of evaluation as it does not stress upon pre-course measures, it reduces the number of variables to be concerned about by focusing on outcome only; and it eliminates the complex network of factors interacting with training process.

on external clients and society. As Gomez (2003), we decided to includeROI as a fifth level to represent the interest of top management.

Since different training and development interventions are treated differently (Redshaw, 2000), authors have focused on initial training by referring it as 'Entry Level Professional Training (ELPT).' ELPT is distinct from other ongoing trainings inside call centers as it aims at both generic and specific skills of agents (like communication skills, product knowledge, uses of technology etc.)

1-2 Employer size: its implications for training and HRM

Employersize affects business strategy, organizational culture and management practices, in particular human resource management practices (Budhwar& Sparrow, 2002; Jurquet et Schott, 2013; Mintzberg, 1979; Mahé de Boislandelle, 1998;Tayeb, 1987). Still, Haber and Lamas (1988) argued that workers with given characteristics receive equal amount of training irrespective of size of firm at which they work. If large firms engage in more specific training while small firms engage inmore general training, on balance the total amount of training is similar in both groups of firms.

Other researchers advocate that, as a firm grows, its practices becomes more formalized (Mintzberg, 1979; Storey*et al.*, 2010), HR-practices develop, including how it recruits, trains, proposes higher starting wages and wages growth(Barron*et al.*,1987)and these HR-practices are linked toinnovative performance (Kruglianskas*et al.*2009). In a study on American and Canadian firms, Barron (1987) found that training programs are more prevalent among large firms than small ones. He predicted that large employers invest more on screening job applicants and on providing training to their employees because they face larger monitoring costs they wish to economize. Concrete evidence supporting the influence of firm size on training evaluation practices has only one application in the USA, in the financial service firms of different sizes, where Gomez (2003) reported a direct influence of size on differenttraining evaluation for each level of 'TKM' including 'ROI'. Therefore, we hypothesize that training evaluation also differs in call centers of different size along the following hypothesis:

H1: As employer size increases evaluation becomes more intensive for Entry level professional training (ELPT) for each five TKM level.

1-3 Subcontractor vs In-House: its implications for training and HRM

Industrializing countries have a significantly higher proportion of subcontractors (India: 80%, or Brazil: 53%) - but this is also true in Spain: 50%. By contrast, the US and Israel have a high proportion of in-house call-centers (83% and 88% respectively).According to The Global call center report (Holman, 2007), subcontractors do not differ significantly from and inhouse centers in their adoption of call center technologies or in their use of sophisticated selection tests, or performance based pay. Still, in-house or subcontractorcall center present highly differentiated management practices inall the 17 countries studied Holman (2007), in Germany (Weinkopf, 2009), even Doelgast (2009) indicates that this characteristic, apart from national context and collective bargaining, partially explains differences in job quality:

- Subcontractors are newer market entrants and more likely toserve the international market;
- Subcontractors are larger in size: the typical size of a subcontractor is 77, compared to 41 employees for inhouse centers
- Subcontractors are more likely to focus exclusively onsales and outbound calls (types of services offered),

- Subcontractors are significantly less likely to use permanent, fulltime staff or to invest in new hire training, also this is not proven for industrializing countries.
- Subcontractors invest significantly less in the initial training of new hires: while the typical subcontractor provides 14 days of initial training, the typical inhousecenter provides 20 days.
- Subcontractors pay lower wages (18% lower wages than inhouse centers, as cost cutting pressure is higher compared to in-house call centers (Batt, Doellgast, & Kwon 2005), and are less likely to be covered by union contracts.
- Subcontractors offer lower discretion jobs.
- Subcontractors have higher levels of performance monitoring: occurring weekly, as opposed to monthly in inhousecenters(Grugulis, Vincent, and Hebson 2003 and Doelgast, Holtgrewe and Deery 2009).Walsh and Deery (2006) and Schönauer (2008) explained that Client Companies force subcontractors to follow strict performance standards and to keep a consistent check by monitoring agents themselves in order to ensure that their standards are followed.
- Subcontractors have higher turnover rates (25% on average, compared to 19% among inhouse centers).

The jobs in subcontractor centers tend to be of lower complexity and to offer lower earnings to both workers and managers. These attributes are consistent with a cost focused business strategy.This pattern is quite similar across countries. It is also inkeeping with the fact that client firms typically outsource the more transactional, less complexwork to subcontractors; and one indicator of job complexity is the time on the job it takes for anewly hired employee to be fully competent. Subcontractors tend to be under greater cost pressures than inhousecenters and the quality ofjobs and pay is lower.

Existing literature does not provide any empirical difference in training evaluation practices among subcontractors and in-house call centers. We relied on previous research findings to build an H2-hypotheis that states:

H2: At subcontracting call centers, Entry level professional training (ELPT) is evaluated more intensively for each TKM-level (as compared to in-house call centers).

Since we previously hypothesized that size and type of call centers,independentlyexplain differences in training evaluation. A third hypothesis includes the possibility that these two independent variables interact to explain differences in training evaluation.

H3: Size and type of call centers (in-house or not) interact and collectively affect entry level professional training(ELPT) evaluation for each TKM-level.

2- Research Methodology

2-1 Data Collection

Call centers in Pakistan are legally bound to register to the *Pakistan Software Export Board* (PSEB) and the *Pakistan Telecommunication Authority* (PTA) regularly blocksIP addresses of call centers using VoIP services that have not obtaineda license and a registration number through the PSEB[2].
The PSEB supported this research by providing a list of all registered call centers in Pakistan and a recommendation letter in order to ensure cooperation from respondents. Data is collected through a survey

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[2] See the news - http://propakistani.pk/2008/06/18/40000-call-centers-goes-down-in-pakistan/

questionnaire sent to the owner of the call centerand to managers involved in training of the newly hired agents (either as trainer, quality assurance professional, team leader, HR person). Agents themselves were not surveyed because they lack information and interpretation of training evaluation.Instead of using a random sampling, a purposive sampling (or judgmental sampling)allowed us to target 90 Call-Centers from three cities Lahore, Islamabad and Karachi[3]. Following the Global call center report (Holman, 2007), the majority of centers are in-house rather than outsourced operations and are relatively small in scale and scope.

Data is collected from 262 respondents:
- 180 from in-house and 82 from subcontractor call centers 182 respondents from small, 50 from medium size and 30 from large call centers.

2-2 Survey and Measures

We adapted a survey from Twitchell*et al.* (1997) Gomez (2003), both investigated technical training evaluation practices in the United States, the later with a focus on the financial service industries. The original survey is based on the four levels of 'TKM' (Reaction, Learning, On-the-Job Behavior, Results) to which we added ROI as Phillips suggested (1997).Our survey consisted of seven sections.

Table 1 - Survey to 90 Pakistanese call centers

Section 1	aimed at collecting general information (like in-house/subcontractor, ….campaign (inbound/outbound/both), area of operation (domestic/international), sector, and size (number of employees), and information about respondent like job title, total training experience and gender etc.
Section 2	contained questions about entry-level professional training: - The first question is 'What is the extent to which your organization provides training to each new-hired call center agent?' The responses were gathered on 6 point rating scale. - Further information about duration (number of days) of entry level professional training is also collected.
Section 3	is related to Level 1- Reaction. Q1-'What is the extent to which post training satisfaction of new call center agents is determined in your call center?' Q2- 'What is the extent to which each of the following methods is used in order to determine post training satisfaction of new call center agents in your call center?' It consisted of two methods 'Action plan' and 'Research Questionnaire'. The responses related to each method were obtained on 6 point rating scale. Pilot study revealed one more item *Verbal feedback* that is also added in this section.
Section 4	is related to Level 2- Learning. It gathered responses for 9 items
Section 5	is related to Level 3- On-the-Job behavior. It gathered responses for 13 items
Section 6	is related to Level 4- Results. Original questionnaire contained 6 items for 'Results.' Based on literature review and pilot study, we integrated turnover of agents, impact on quality of service, increased sales, satisfaction of customer and satisfaction of client organization. Hence, 'Results' consisted of 11 items.
Section 7	is related to Level 5 - Return on Investment. It gathered responses for 8 items

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[3] This is used primarily when there is a limited number of people that have expertise in the area being researched. The advantage of nonprobability sampling is its lower cost compared to probability sampling. However, one can say much less on the basis of a nonprobability sample than on the basis of a probability sample.

Construct validity of scale is set by Twitch et al. (1998) during development phase of the scale. Further, we conducted pilot test and made variations as reported above. We also performed confirmatory factor analysis, using AMOS 17.0 to test for validity of measures in our research context.

One item of 'Reaction', four items of 'Learning', 7 items of 'Behavior', three items of 'Results' and three items of 'ROI' were excluded. After excluding these items, results of CFA demonstrated adequate fit of measurement model (Chi-square= 1101.5, p = 0.000; CMIN/df = 2.667, CFI = 0.924; TLI = 0.914, RMSEA = 0.080).

Cronbach alpha is calculated in order to assess reliability of scale. Cronbach alpha values for independent scales were: 'Reaction = 0.79', 'Learning = 0.84', 'Behavior = 0.94', 'Results = 0.92' and 'ROI = 0.96.' Convergent and discriminant validity of the scale is also determined through CFA (Table 1).

2-3 Independent, Dependent and Control Variables

Two independent variables 'type' and 'size' were introduced in this study.
- Type is a categorical variable that can take on exactly two values: 'In-House' or 'Subcontractor' – therefore it is termed a *binary variable*.
- Size definethe number of employees in a call center, we defined it as a categorical variablewith three values:
    o 'Small' ranging from 5-50 employees,
    o 'Medium' ranging from 51 to 300 employees,
    o 'Large' ranging from 301 employeesand above.

'Training Evaluation' is introduced as dependent variables in the study, a latent variable obtained by computing the mean of all variables in the data set.

We use an **Analysis of covariance** (ANCOVA) *-covariance being a measure of how much two variables change together and how strong the relationship is between them*. ANCOVA is a general linear model which blends an Analysis of variance (ANOVA) and regression.
- Analysis of variance (ANOVA) is a collection of statistical models used to analyze the differences between group means and their associated procedures (such as "variation" among and between groups), developed by R.A. Fisher. In ANOVA setting, the observed variance in a particular variable is partitioned into components attributable to different sources of variation. ANOVA is performed on 'Reaction', 'Learning', 'Behavior', 'Results' and 'Return on Investment'. These were also measured by computing mean of items related with each level.
- ANCOVA evaluates whether population means of a dependent variable (DV) are equal across levels of a categorical independent variable (IV), while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV). We introduced 'Duration' of entry level professional training as control variable due to lack of evidence about influence of the Training duration on intensity of training evaluation practices. Training duration is measured as 'number of training days' on continuous scale. Therefore, when performing ANCOVA, the DV means are adjusted to what they would be if all groups were equal on the CV.

3- Results of Two-Way ANCOVA

This study investigated the impact of two categorical independent variables (size and type) on a continuous dependent variable while controlling for the effect of 'Training Duration'. Therefore, 2 by 2 between-group analysis of covariance is conducted to assess the difference in training evaluation practices at each level of 'TKM' including 'Reaction', 'Learning', 'On-The-Job Behavior', 'Results' and 'Return on Investment (ROI)'.

Preliminary checks were conducted to ensure that there is no violation of the assumption of normality, linearity, homogeneity of variances, homogeneity of regression sloped and reliable measurement of covariate.

2 by 2 between-group analysis of covariance is performed one by one for each dependent variable.

Insert Table 1 Here

3-1 Employer size: implications for training evaluation

Themain effect of the independent variable 'size' is significant for all levels of the training evaluation, including:
- Reaction ($F (2, 255) = 19.807$, $p = 0.000$, eta = 0.134);
- 'Learning ($F (1, 255) = 14.065$, $p = 0.000$, eta squared = 0.099);
- 'Behavior ($F (2, 255) = 22.818$, $p = 0.000$, eta squared = 0.152)';
- 'Results ($F (2, 255) = 7.946$, $p = 0.005$, eta squared = 0.030) and
- 'ROI ($F (2, 255) = 42.544$, $p = 0.000$, eta squared = 0.250).'

Except for 'Results (eta = 0.030)', size has a strong effect on all variables.

If main effect of size is significant for all levels of training evaluation, still values of adjusted mean given in Table 2 show a particular structure:
- trainingevaluation practices become more intensive between small and medium size call centers. In large call centers, these practices become less intensive.
  (See column 3 of Table 2 : adjusted mean value of 'Reaction' is
    o 4.267 for small call centers,
    o 3.609 for medium and
    o 3.537 for large call centers.

Hence, Hypothesis 1isonly partially supported as statistical findings describe that training evaluation inside call center becomes more intensive from small to medium size call centers but that these practices become less intensive in large call centres.

Hypothesis 1: As employer size increases evaluation becomes more intensive for Entry level professional training (ELPT) for each five TKM level

Insert Table 2 Here

3-2 'Type of call center' (in-house vs subcontractor): implications for training evaluation

The main effect of the independent variable 'type of call center' is significant for the first four levels of the training evaluation:
- Reaction ($F (1, 255) = 4.886$, $p = 0.028$, eta = 0.019);
- 'Learning ($F (1, 255) = 6.412$, $p = 0.012$, eta squared = 0.025);
- 'Behavior ($F (2, 255) = 22.818$, $p = 0.000$, eta squared = 0.152)
- 'Results ($F (1, 255) = 7.946$, $p = 0.005$, eta squared = 0.030).

The main effect of the 'type of call center'is insignificant for:
- dependent variable 'ROI (($F (1, 255) = 42.544$, $p = 0.000$, eta squared = 0.002).'

Despite significant main effects for the first four levels of the training evaluation, statistical results do not supportour hypothesis H2.

H2: At subcontracting call centers, Entry level professional training (ELPT) is evaluated more intensively for each TKM-level (as compared to in-house call centers).

Particularly, the adjusted mean values of all dependent variables portray that mean values for in-house call centers are relatively greater than mean values for subcontractor call centers (Table 2). Thus our hypothesis that evaluation is more intensive inside subcontractors as compared to in-house call centers is not supported.

3-3 Interaction Effect of 'Size and Type'on Training Evaluation

After controlling for 'TD', interaction effects of 'type and size'are significant for:
- 'Reaction $(F (2, 255) = 19.807, p = 0.000, eta = 0.041)$',
- 'Learning $(F (2, 255) = 4.180, p = 0.016, eta squared = 0.032$' and
- 'Behavior $(F (2, 255) = 3.999, p = 0.020, eta squared = 0.030)$.

This interaction is insignificant for:
- Results $(F (2, 255) = 2.248, p = 0.108, eta squared = 0.017)$
- ROI Size*Type $(F (2, 255) = 2.486, p = 0.085, eta squared = 0.019)$.

Moreover, differences in values of adjusted means given in Table 2 also represent quite similar results. Hence, H3 is partially supported.

H3: Size and type of call centers (in-house or not) interact and collectively affect entry level professional training (ELPT) evaluation for each TKM-level.

3-4 Training Duration and Training Evaluation

The main effect of control variable 'Training Duration'(TD) is also significant for
- 'Reaction $(F (1, 255) = 4.839, p = 0.029, eta = 0.019)$,
- Learning $(F (1, 255) = 0.202, p = 0.654, eta squared = 0.001)$',
- Behavior $(F (2, 255) = 6.853, p = 0.009, eta squared = 0.026)$ and
- Results $(F (1, 255) = 12.259, p = 0.001, eta squared = 0.046)$.

But interaction effect of TD is insignificant for:
- ROI $(F (1, 255) = 1.274, p = 0.260, eta squared = 0.005)$.

4- Discussion

Our study is the first to investigate call centers in Pakistan, with a focus on training evaluation practices. Given the fact that call-centers are still in infancy in Pakistan, we chose to concentrate the explanatory variables on the size and the type of call centers (inhouse vs subcontractor). Current literature on call centers, presented in the first section, indicate the importance these two variables of size and the type of call centers (inhouse vs subcontractors) for a number of HRM-practices, including training duration, turnover and pay-rate in developed countries. In developed countries subcontractors are significantly larger than inhouse call centers. Previous researches underlined differences between in-house and subcontractors, in terms of collective bargaining (Holman, Batt, and Holtgrewe 2007) and job quality (Doelgast, Holtgrewe and Deery, 2009). Similarly, the Global Call Center Report (2007) also showed differences in many areas including initial training duration, job discretion, monitoring and time to gain proficiency – that is why we also expected that it would be an important variable in terms of training evaluation practices.

Other variables like "age" or "market" were not discriminatory for our sample due to some specificities in Pakistan. The independent variable "age" was not discriminatory for our sample (none of the call centers was older than 5 years). So we did not consider it. Also, we could not take into consideration the market of the call-center (inbound vs outbound services, domestic or international markets) as we found only a single full-fledged inbound call center in Pakistan (Minbridge located in Lahore). Other difficulties arise : call centers, in particular subcontractors, are considered "project-based-organization", the nature of project could be either "inbound, outbound or mixed". The statistical analysis requires that inside a category/group the size of sample should be equal in order to make a comparison.Unfortunately, the outbound and mixed-type (running both inbound and outbound campaigns simultaneously) was greater as compared to the inbound call centers.This prevented us from considering the "market" as a key variable for analysis. This study could be complemented with another study in another developing country like the Philipinesin order to make a reasonable comparison. Moreover, there is also a need to explore training evaluation practices specific to the campaign type that requires a further deeper exploration.

Our study shows that call centers of different size and type (subcontractor or in-house) present similarities and differences in their training evaluation practices.
We expected that there would be no difference among call center types for the first TKM-level (Reaction) as previous surveys reported it as the most frequently applied level inside industries in India and the USA (Yadapadithaya, 2001; Gomez, 2003). But our findings are quite different from our expectations:
- in-house and subcontractor call center groups present significant differencesat the first level (Reaction) of 'TKM'.
- in-house and subcontractor call center groups present significant differences at the second level (Learning) of 'TKM'.
- Otherwise, Statistical results did not support any evidence of differences among in-house and subcontractor call center groups at any other level of training evaluation.

We expected that 'size' would be a more dominant variable explaining differences in training evaluation practices of call centers in Pakistan. Our statistical results confirmed our expectations, confirming the findings of previous studies (Storey*et al.*, 2010).However our hypothesis that as the firm size increases training evaluation practices become more intensive (Hypothesis 1) was partially rejected :

- Small subcontractor call centers check "trainee reactions" and his "on the job behavior" more intensively as compared to small inhouse call centers;

- The contrary is true for medium and large inhouse call centers that evaluate "trainee reactions and on the job behavior" more intensely as compared to medium and large subcontractors.

The statistical results of our study showed a diminishing return in use of evaluation practices to determine the reaction, evaluate learning (Level 2) and on the job behavior (Level 3) of call center agent, to determine the results (level 4) and return (Level 5) of training new call center agents. Though we found that p value (.490) for the variable size for 5th level (ROI) was insignificant however the mean values still have demonstrated diminishing return (small = 5.032, medium = 3.804, large =3.303).

Finally we also found that the interaction effect of firm size and ownership was significant for three levels i.e. Reaction (Level 1), Learning (level 2) and On the Job Behavior (Level 3) and insignificant for Results (Level 4) and ROI (level 5).However the mean values for the level 1 'Reaction', Level 2 'Learning' and Level 3 'On-The-Job Behavior' present clear differences among call center groups of different size and type.

5- Managerial Implications and future research

Pakistani entrepreneurs taking risk of investing in call center business cannot ignore the interaction effects of size and type on training evaluation practices. A significant difference is observed among call centers in Pakistan in terms of first-level 'Reaction' depending on size and type. These findings collide with statistics of Yadapadithaya (2001) who surveyed Indian organizations and described that all Indian firms evaluate training at first level 'Reaction'. Managers of medium size subcontractor call centersin Pakistan need to be conscious of the difficulties to adopt training evaluation practices from a large size in-house call center. We found that most call centers use some type of informal measures to evaluate training programs. We shall suggest that future research explores such informal measures and reasons behind the use of such measures. What distinguishes this study from previous literature on training evaluation practices is its micro level emphasis on entry level professional training.

The greater emphasis of small subcontractor on determining employee reaction is favorable, however their focus on "one-the-job-behavior"compared to neglect on evaluating-the-learning could affect the performance of new entrants.

On the other hand, the lesser emphasis of medium and large subcontractor call center professionals on determining trainee's reactions could undermine the formative purpose of training evaluation particularly from the dimensions of instructor style, contents, arrangement etc. There are also some implications for professionals of both small in-house and small subcontractor call center professionals who emphasize much on the job behavior but less on learning. Because the career opportunities or incentives for agents in small call centers are less developed than in medium and large call centers, agents of these call centers may be more likely to leave due to increased level of stress. Overall the implications for managers of call centers are to create a balance between the practices used to evaluate training of new call center agents at different levels of the Kirkpatrick Model of training evaluation.

We note also that further research may introducethe inbound/outbound strategy as an independent variable. We also believe that introducing such variables may show different results. Finally, offshore call centershave just emerged in Pakistan. The firms shifting towards off-shoring of their call-centers to Pakistan, need to pay especial attention to our results. We have concluded that 'size' of call center is the most significant variable that explains differences in training evaluation practices of in-house and subcontractor call centers.Moreover, patterns of differences among call center groups of different size appearscurvilinear. Therefore further research must be conducted to analyze this pattern.Future research must be conducted to identify the reasons behind the difference in some items (only) of all latent variables based on typecharacteristic of call centers in Pakistan. For instance, there is a need to investigate why small subcontractor call centers emphasize much on on-the-job behavior of new employees as compared to the learning. In other words, future researchers must emphasize much on explanatory research as compared to descriptive study.

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List of Tables

Table 1: Test of Effects for Dependent variables

Source	df	REACTION			LEARNING			BEHAVIOR		
		F	Sig	Partial eta squared	F	Sig	Partial eta squared	F	Sig	Partial eta squared
Training Duration	1	4.839	.000	.019	.202	.654	.001	6.853	.009	.026
Type	1	4.886	.028	.019	6.412	.012	.025	22.818	.000	.152
Size	2	7.570	.001	.134	14.065	.000	.99	1.821	.178	.007
Type * Size	2	19.807	.000	.041	4.180	.016	.032	3.999	.020	.030

Source	df	RESULTS			ROI			Evaluation (global)		
	df	F	Sig	Partial eta squared	F	Sig	Partial eta squared	F	Sig	Partial eta squared
Training Duration	1	12.259	.001	.046	1.274	.260	.005	3.318	.07	.013
Type	1	7.946	.005	.030	42.544	.000	.250	2.25	.135	.009
Size	2	22.779	.000	.152	.477	.490	.002	36.8	.000	0.224
Type * Size	2	2.248	.108	.017	2.486	.085	.019	4.10	.018	0.031

Table 2: Adjusted-Means for all Levels of Evaluation

Independent Variables	Dependent Variables	Reaction	Learning	On-The-Job Behavior	Results	ROI
		Mean	Mean	Mean	Mean	Mean
Type	Inhouse	3.934	4.377	4.307	4.654	4.104
	Subcontractor	3.674	4.055	4.124	4.634	3.989
Size	small	4.267	4.642	4.801	5.087	5.032
	Medium	3.609	4.063	4.067	4.525	3.804
	Large	3.537	3.944	3.779	4.321	3.303
Type * Size	Inhouse*Small	4.186	4.595	4.698	5.027	4.958
	Inhouse*Medium	3.881	4.689	4.336	4.506	5.106
	In-house*Large	3.737	4.307	3.888	4.431	4.106
	Subcontractor*Small	4.348	3.819	4.904	5.148	3.502
	Subcontractor*Medium	3.337	4.230	3.799	4.544	3.249
	Subcontractor*Large	3.338	3.658	3.669	4.211	3.357