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The impact of Brand Trust, Love and Passion on Positive Word of Mouth

Dr. Muhammad Zeeshan^{*1}, Mishal Nafees², & Bilal Mustafa³

^{1,2,3}UCP Business School, University of Central Punjab, Lahore, Pakistan

Abstract. Brands try to initiate and build strong relationships with their customers in order to overcome the rising local and international competition in apparel and other industries. Previous research suggests that brand addiction is one of the most significant ways through which consumer engage with brands. Meanwhile, it is a sort of consumer-brand relationship by which brands could enable themselves to build and sustain strong long-term relationships in order to get competitive edge over other business rivalries in the market. The purpose of this study is to demonstrate the relationship of brand addiction with some of its possible antecedents and outcomes. In order to address the research problem, data have been collected from a convenience sample in apparel industry of Pakistan. Multiple regression analysis has been used in order to analyze the results. Findings suggest that brand trust is positively correlated with brand addiction whereas brand love and brand passion do have positive impact on brand addiction that will lead to generate positive word of mouth. Moreover, this research contributes in the existing literature of marketing, as well as provides favorable insight to the practitioners and marketers.

1 Introduction

Brand addiction is one of the significant ways by which buyer engross with brands (Fajer and Schouten, 1995). Addictive behavior is emerged in shopping, playing, pornography, plastic surgery, overeating, dietetic supplement procedure and others (Murphy et al., 2014). A neoteric research (Loessl et al., 2008) highlights that handy relationships between brand and consumers may lead consumers toward brand addiction, meanwhile studies also provide evidences that the bounded relationships of consumer with specific brand activate the consumers brain area called Insula and this area is liable of addictive behavior such as addiction of nicotine (Klaas et al., 2005) and addiction of alcohol (Myrick et al., 2007).

Brands play a significant and central role in humans consumption behavior as well as define their lives (Ahuvia, 2005; Wallendorf and Arnould, 1988). Some consumers might be engaged into true vogue of some brands because tight relationship attaches consumers with their selected brands (Fournier, 1998). Associations amongst customers and brands such as brand identification (Escalas and Bettman, 2003) and brand trust (Hess, 1995) arise as cores to many branding studies (Albert et al., 2013) and influencing concepts such as brand attachment (Park et al., 2006), brand passion (Swimberghe et al., 2014) and brand love (Carroll and Ahuvia, 2006) also have impact on consumer behavior (Albert et al., 2013). Among addic-

tive behaviors of consumers toward different brands, most of the research emphasizes on compulsive buying behavior (Cui et al., 2018). However, the phenomena of customer brand associations include variety of emotions from unintentional emotions to passionate love that ultimately leads to addictive enthusiasm (Fournier, 1998).

As addictive behavior has different results from those of ordinary consumption behavior (O'Guinn and Faber, 1989). This phenomenon of brand addiction remains new and there is need to explore the relationship of brand addiction with different types of consumer-brand relationships such as brand trust, brand loyalty, brand liking, brand passion, brand attachment, and others (Cui et al., 2018). Meanwhile, to provide the in depth insight of the relationship of consumer and brand, there is need to elucidate that how the phenomenon of brand addiction would function in its integrated framework with some of its antecedents as well as some of positive consequences that may involve other important factors (Cui et al., 2018) such as word of mouth and others. So this study is responding to the contemporary calls for future research into addictive behaviors of the consumers (Cui et al., 2018) by highlighting the impact of some of the consumers emotional states such as brand trust, brand love, brand passion on their addictive behavior toward particular brand. In addition to it, this study also highlighted the impact of brand addition on other behavioral aspects such as word of mouth in order to strengthen the literature of consumer-brand relationship in marketing.

*Corresponding author.
Email: drzeeshan@ucp.edu.pk

This paper begins with reviewing the previous literature on different consumer brand relationships as well as different variables and addictive activities in regards to address the significant problems. The following section narrates the procedure of data gathering, methodology and methodological technique, data analysis and interpretation of the results. Lastly, the discussion, conclusion, limitations and future research sections have been discussed.

2 Literature Review

2.1 Brand Addiction

Customarily, addictive behaviors are pertaining to the drugs and alcohol addictions (American Psychiatric Association, 2000). As in a recent study, [Fournier and Alvarez \(2013\)](#) highlight some negative characteristics of consumers addictive relationships with particular brands by reasoning from [Hirschman \(1992\)](#) on drugs and alcoholic addicts. To draw ties between the phenomena of addiction of alcohol, drugs with brand addiction seeks theoretical and empirical support, which is insufficient in present literature ([Cui et al., 2018](#)). Similarly, previous studies identified that the word addiction should not be associate entirely with the drugs or narcotics because since associating this term exclusively to narcotics or drugs create an artificial dichotomy that narrate the term with the similar condition, when narcotics or drugs are not included ([Alexander, 2014](#)). Indeed, the term addiction should be comprehended beyond the territories of substance abuse ([Paulus and Stewart, 2014](#)). Similarly, any source which could be responsible and capable of stimulating an individual, could become addictive ([Alavi et al., 2012](#)).

Brand addiction can be defined as a customers psychological condition that relates to a self-branding consortium apparent in everyday life as well as includes positive gratification and affectivity with a peculiar brand and persistent desire of possessing the products/services of that particular brand, which could be identified by eleven useful features such as acquisitiveness, follow up, dependence hoarding, fascination, , lack of self-control, support, outward inspiration, resistance to substitutes, diligence within affordability and thought occupancy ([Mrad and Cui, 2017](#)). In other words, an individual/consumers positive efforts to satisfy him/her-self through constant acquisition of the products or services of a particular brand as well as being identified by this specific brand could be known as a state of brand addiction.

It is crucial to note that the above eleven features of brand addiction are derived from consumers experience with particular brands that differentiate the concept of brand addiction from the concepts of substance abuse, as well as from other pathological addictive be-

haviors, however in broader context the concept of brand addiction is added in the category of addiction, besides results of a previous study by ([Mrad and Cui, 2017](#)) on Brand Addiction did not suggest any harmful consequences. However, the concept of brand addiction is overlapping with the concept of compulsive buying and it looks reasonable to design a holistic view of brand addiction with in the typologies of consumer-brand relationships, a salient difference between brand addiction and uncontrollable purchasing is that, compulsive buying is concentrated on the common expenditure and consumption whereas brand addiction specifically emphasizes on a specific brand ([Mrad and Cui, 2017](#)). Similarly some speculations of researchers were also identified that addiction to brand does exist ([Park et al., 2006](#); [Reimann et al., 2012](#)). Moreover many researchers could factually identify the consumers addictive behaviors toward different brands and could build distinctive theoretical models in the area of publicizing, behavioral addiction, psychiatry and consumers behavior or psychology by using the notion of brand addiction ([Mrad and Cui, 2017](#)). Table 1 outlines the definitions of the main constructs.

2.2 Brand Trust

Brand trust has been observed as an essential in many of the researches conducted earlier ([Doney and Cannon, 1997](#); [Moorman et al., 1992](#)). [Chaudhuri and Holbrook \(2001\)](#) described brand trust as the willingness of the average consumer to rely on the ability of the brand to perform its stated function. whereas brand trust also offers a greater lens by which a firm can scrutinize and evaluate the customer behavioral comebacks. Brand trust contains five constitutes; first, brand trust includes customer readiness or willingness to make him/herself at steak, by relying on the assurance of the worth of the particular brand. Second, it is distinct with the sense of self-assurance and safety. Third, Brand trust includes common expectation as trust can't prevail without the probability of error. Fourth, brand trust is a constitute of positive results and lastly, brand trust needs to create a frame of mind with the brand regarded as consistent, dependable, trustworthy ([Doney and Cannon, 1997](#)).

[Doney and Cannon \(1997\)](#) also emphasized that Trust is specifically pertinent to circumstances of improbability, for example amongst the different brands when superior and inferior differences occur, especially the trust factor reduces the improbability in the setting where customer senses are vulnerable because customer can stand with the brand they trust. Brand trust is theorized as prominent feature in any company's progress ([Morgan and Hunt, 1994](#)). Further, [Doney and Cannon \(1997\)](#) stated as brand trust rises later customer's assessment of firm's assistance. For example, when a firm provides assurance to the customer with

Table 1: Constructs and Definitions

| Constructs | Definitions |
|-------------------------|---|
| Brand Addiction: | An individual consumers psychological state that pertains to a self-brand relationship manifested in daily life and involving positive affectivity and gratification with a particular brand and constant urges for possessing the brands products/services (Mrad and Cui, 2017). |
| Brand Love: | The degree of passionate emotional attachment a satisfied consumer has for a particular trade name (Carroll and Ahuvia, 2006) p. 81). |
| Brand Trust: | The willingness of the average consumer to rely on the ability of the brand to perform its stated function (Chaudhuri and Holbrook, 2001) p. 82). |
| Word of Mouth: | Word of mouth Communication (WOM) or by word of mouth communication is a communication process for the provision of advice either individually or in groups for a product or service that aims to provide personal information. (Keller, 2007). |
| Brand Passion: | A strong emotional connection to a brand that people value, find important, desire to own and/or use, incorporate into their identity, and invest resources in over a period of time |

loyalty, security, trustworthiness, for their brands, it automatically creates the sense of brand trust. So by this it can be depicted that brand trust is established and shaped with straight experience of the customer with brand. Brand trust is also examiner as an extensive way that takes place because of customer belief and thoughtfulness customer experiences related to that brand store (Chaudhuri and Holbrook, 2001). Ganesan (1994) and Selnes (1998) stated that overall satisfaction, in evaluating the consumption knowledge with any particular brand creates the brand trust.

Many researchers have examined that Brand trust also points towards loyalty and this took place by the reason of brand trust capacity of generating vastly esteemed bond (Elena and Jose, 2001). Brand Loyalty is a share of repeated procedure of cherished and prominent relationship that is created from brand trust (Chaudhuri and Holbrook, 2001). There is a lot of support in the literature that brand trust is a great factor of creating brand loyalty (Wu, 2010). Iglesias et al. (2011) also supported the impact of brand trust in creating brand loyalty.

Literature suggests that (Keh et al., 2007; Shimp and Madden, 1988) brand trust leads to brand loyalty, which is a behavioral stage; similarly brand addiction is an intense mode of behavior that enhances the concept of understanding usual customer behaviors (O'Guinn and Faber, 1989); so as brand trust is directly linked to brand loyalty, similarly, it could be directly related to the brand addiction. Based on the literature review the following hypothesis has been developed:

H_1 : Brand trust has a positive impact on brand Addic-

tion.

2.3 Brand love

Brand love is a new marketing concept which supports to elucidate and forecast variation in desired post consumption attitude between gratified customers. It is an expressive and obsessive relationship which exists between a pleased customer and the brand (Carroll and Ahuvia, 2006). Shimp and Madden (1988) theorized eight types of customer-object connection build on tripartite consideration of relational love defined by the research (O'Guinn and Faber, 1989). The gears of customer object (e.g. brand) connection is defined by Shimp and Madden (1988) as, judgment yearning, guarantee liking basically are the corresponding item to affection, desire and verdict or assurance apparatuses of relational love affiliation in turn as designated by (Carroll and Ahuvia, 2006). Many researchers are focusing on both expressiveness and obsession while describing the brand love. It was exposed by a study conducted by Whang et al. (2004) that customer can pledge himself/ herself with expressive, passionate and obsessive love with any brand which can take them to erotic affection with the brand for longer time duration. Keh et al. (2007); Shimp and Madden (1988) related loyalty with love that leads to brand love to brand loyalty (Carroll and Ahuvia, 2006). Love with the brand leads its customer towards the feeling of satisfaction as mentioned by the previous studies such as Thomson et al. (2005) described that post consumption satisfaction probably leads to heartwarming affection with the brand for a longer period of time.

Brand Experience also leads to brand love as Lee (1977) revealed that "love is an attitude" which explains that brand love is also an attitude heading for brand over a period. Brand love is extremely touchy in nature (Carroll and Ahuvia, 2006) by this it was narrated that satisfactory brand perspicacity may take its customer to loving the brand for a great period. Customer delighters also leads the customer towards brand love, if a customer is thrilled with any brand so there is a likelihood that, it leads to grow its emotional linkage with that particular brand (de Almeida and Nique, 2005). Similarly, another researcher explained that when a customer is delighted, he/she expresses the great level of pleasure and astonishment with that brand (Kumar, 1996). Albert et al. (2013) found brand loves 11 dimensions which are as follow : long term relationship, pleasure ,remembrances, passion , attractiveness , matchlessness , self-congruity dreams ,beauty , satisfaction , trust , willingness' to pay. As many researchers mention that brand love leads to brand loyalty which is a behavioral aspect (Keh et al., 2007; Shimp and Madden, 1988), similarly brand addiction is an intense mode of behavior that enhances the concept of understanding usual customer behaviors (O'Guinn and Faber, 1989) so as brand love is directly related to brand loyalty which is a behavioral stage, so this study proposes that brand love could also be related to the brand addiction. So on the bases of literature hypothesis was developed that:

H₂: Brand love has a positive impact on brand Addiction.

2.4 Brand Passion

Brand passion is defined as a state of intense longing for union with another. Reciprocated love (union with other) is associated with fulfillment and ecstasy , a state of profound physiological arousal (Hatfield and Walster, 1985). Whereas according to Baumeister and Bratslavsky (1999), passion entail the strong feeling or emotions for other person or object and these feelings are commonly specified by the physiological enthusiasm and the wish to be attached with the object or other person in multiple feelings. In addition to it a previous study defines brand passion as an emotional construct with the involvement of infatuation, obsession and excitation for a brand (Albert et al., 2013). Therefore, interrelated passion encompasses the presence of the partner in the individuals mind; meanwhile this individual romanticizes with the partner and the relationship with this partner, sensual attraction as well as desire for privilege (Hatfield, 1988). Some of the characteristic of the passion are extraneous in consumption context (Albert et al., 2013), because consumers likely do not expect full privilege from the brand (Carroll and Ahuvia, 2006); whereas, if a consumer is showing

repurchasing behavior and feel him/her-self loyal toward a specific brand, then it might be possible that he/she anticipates special treatment from that brand in the shape of discount, gifts, etc. As those customers who are committed and loyal with the brand might expect some kind of superior protocols and rewards from their partner brand (Palmatier et al., 2006).

In the context of consumption, to some extent brand passion is defined differently as it is essentially affective, immensely positive attitude towards a particular brand, which ultimately leads to psychological attachment and also affects the pertinent behavioral factors (Bauer et al., 2007) that narrate the fervor and zeal attributes of consumer-brand consortium (Keh et al., 2007) as well as highlights the aroused and deep positive feelings toward a particular brand (Thomson et al., 2005). Similarly, a passionate customer/consumer engrosses in an emotional consortium with the specific brand and feeling amiss when this brand is unavailable (Füller et al., 2008). Hence, brand passion emerges to be a deep feeling of a consumer toward a specific brand (Bauer et al., 2007; Hatfield and Walster, 1985; Keh et al., 2007; Thomson et al., 2005). Therefore, these feelings suggest that consumer is willing to make a passionate relationship with this specific brand as well as he/she feels emotional arousal by dominating and consuming this specific brand (Baumeister and Bratslavsky, 1999). As brand passion is significantly a positive attitudinal state toward a specific brand that affects the pertinent behavioral factors (Bauer et al., 2007). Dick and Basu (1994) identified that consumers psychological state in connection to the brand (brand passion) has an influence on loyalty; similarly, brand passion has a positive impact on the brand commitment (Albert et al., 2013). Concerning the ramification of brand passion, findings suggest that more a consumer values a brand more he or she is willing to pay the higher price for that brand (Aaker and Equity, 1991). Besides brand passion plays a significant role in consumers acceptance to pay a higher price for a certain brand (Bauer et al., 2007).

Similarly, a consumers excitement about or infatuation (brand passion) with a specific brand leads to spread the word of mouth about experience with this brand (Bauer et al., 2007; Füller et al., 2008). As brand addiction is an intense mode of behavior that enhance the concept of understanding usual customer behaviors (O'Guinn and Faber, 1989). As brand passion influences some of the significant behavioral constructs like willingness to pay more and word of mouth (Albert et al., 2013). Similarly, it can assume that brand passion influences brand addiction. So on the basis of previous literature this study hypothesize that:

H₃: Brand passion has a positive impact on brand addiction.

2.5 Positive Word of Mouth

Word of mouth Communication (WOM) or by word of mouth communication is a communication process for the provision of advice either individually or in groups for a product or service that aims to provide personal information (Keller, 2007). Similarly, positive and negative word of mouth could be a vital resource of any business, firm or organization because word of mouth has a numerous impact on either destruction or success of the business. It is also argued that customers are more influenced by the word of mouth rather than the advertising and marketing campaigns by the organizations, because it is considered to be more trustworthy and reliable due to given by individuals to individuals and regardless of self-interest, pulling/pushing a product of specific brand (Silverman, 1997). Additionally, some authors also argued that word of mouth plays more influential role on the behavioral decisions to purchase a particular product or specific brand than formal advertising (Bone, 1995). As word of mouth is a behavioral intention, it could be an outcome of several attitudinal and behavioral intentions such as brand trust, brand love, brand passion, brand commitment and other (Bauer et al., 2007; Carroll and Ahuvia, 2006; Dick and Basu, 1994). Similarly, positive word of mouth is also generated by the brand addictive customers or consumers in order to influence others or initiate individuals to buy and use specific brands products as they are eager to actively guard the brand products and brand image every plausible ways; meanwhile, inspire others to buy and consume similar brand to whom they are addicted (Cui et al., 2018). The findings of previous study also include that those who are addictive to the particular brands put pressure on other individuals and keep convincing them, encourage and inspire them to go and/or purchase and consume the goods of specific addictive brand (Cui et al., 2018). Finding of previous studies suggest that brand addiction elucidate the path of influencing and convincing others to buy and consume specific brand. In other words, brand addiction leads to spread positive words of mouth. So considering word of mouth as an outcome of brand addiction and based on previous literature this study hypothesize that:

H₄: Brand Addiction will lead to positive word of mouth.

2.6 Conceptual Framework

3 Methodology

3.1 Instrument

An instrument based on the 31 items was designed in order to collect the data. The measurements are adopted from previous studies. The measure of brand

addiction on 7-point Likert scale is adopted from the study of Cui et al. (2018); similarly the scale for measure the brand passion on 7-point likert scale has been adopted from Albert et al. (2013) besides that to measure the construct brand trust on 5-point likert scale has been adopted from Elena and Jose (2001). A 5-point likert scale to measure the word of mouth and brand love have been adopted from Carroll and Ahuvia (2006). The internal reliability of each scale is analyzed by the value of coefficient alpha which is best predictor of the internal consistency of the variables (Litwin, 1995). 0.87, 0.83, 0.73, 0.82 and 0.81 respectively which show that the cronbachs alpha values of all measures are above 0.70. So instruments are reliable and valid. Whereas gender, age, income, education and experience with brand are incorporated as demographics variables.

3.2 Sample and Data collection

A self-administrated survey was distributed by hand as well as online to a convenience sample of 450 consumers of apparel industry in Lahore and Faisalabad. Out of which 247 questionnaires were received, at the response rate of 54.88%. 28 questionnaires were fragmented or had missing values and could not be accommodated, so analysis was run on the consummate sample of 209 respondents. Our sample consisted of 51.20% of the female and 48.80% of the male whereas majority of our sample size lies between the age of 21-30 years that is 88.00% and rest of them lies between other different age categories. In addition to it, 59.81% of the total sample has bachelor degree and 32.06% of the total sample has master degree and rest of them have other education degrees. Besides 39.71% of the total sample have income between 1-15 thousands PKR whereas 32.70% have income level between 16-30 thousands PKR and 18.20% have the income level between 31-45 thousands PKR and rest of them have other different income levels. A question about the favorite apparel brand has also been asked during and ten different local and international brands were given as options to the respondents. In response to it 17.02% of the total sample follow Outfitters as their favorite apparel brand and 16.75% of the respondents follow Junaid Jamshed, a local brand as their favorite brand whereas 13.88% consider Levis an international brand, 12.88% consider Khaadi a local brand, 10.02% have consider Nishat a local brand as their favorite brands and rest of the sample have considered different other local and international brands as their favorite apparel brands. Further, 43.06% of the respondents have 1-3 years of experience of their favorite brand and 30.14% of the respondents have 4-6 years of experience with their favorite apparel brand and rest of them have either less than 1 year of experience or more than 9 years of experience.

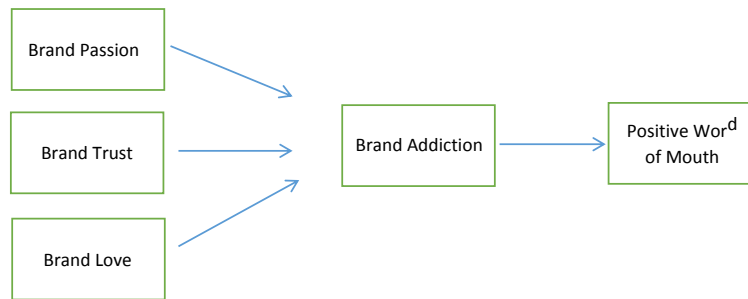


Figure 1: Research Framework

4 Results

Data were analyzed by using multiple regression analysis, a statistical technique used to analyze the proposed hypotheses. Below table shows the correlation of the variables and results of multiple regression analysis. Table 2 highlights the descriptive statistics of the latent and demographic variables whereas Table 3 shows the correlation among latent variables and Table 4 depicts the results of hypotheses testing.

4.1 Correlation Analysis

Table 3 shows the values for correlation between the study variables.

Correlation matrix indicates that there is a positive and significant correlation between brand trust and brand love at 0.672. Similarly, brand trust has a positive correlation with positive WOM, brand addiction and brand passion at .401, .399 and .411, respectively. The remaining variables also have positive correlation amongst each other as indicated by the proposed hypotheses.

4.2 Regression Analysis

We ran two separate regression models for test the proposed hypotheses. In model 1 Brand Trust, Brand Love and Brand Passion are incorporated as independent variables and Brand Addiction as a dependent variable, whereas demographics such as Gender, Age, Education, Income and Brand experience are incorporated as control variables. The results indicate (R-square= .51, P=.000) that 51% variation of the dependent variable is explained by all independent and control variables whereas P-value ensure that overall model is fit. On the other hand, in model 2 Brand Addiction is incorporated as independent variable and Positive word of mouth as dependent variable, whereas all above mentioned demographics are incorporated as control variables and (R-square=.35, P=.000), which shows that 35% variation of the dependent variable is explained by all independent and

control variables whereas P-value ensure that overall model is fit.

Four hypotheses have been analyzed by using multiple regression analysis, results are highlighted in Table 4 show that Brand trust (BT) does not have positive impact on Brand addiction (BT) ($\beta=.033$; $p=.820$; $t=.227$) but brand trust is positively related with the brand addiction, so on the basis of statistical value hypothesis 1 is not supported. Furthermore, results depict that Brand love (BL) has a positive impact on Brand Addiction at the 0.05 level of significance ($\beta=.455$; $p=.003$; $t=3.022$) that indicate that hypothesis 2 is supported. Similarly, Brand Passion (BP) has a positive impact on Brand Addiction (BA) at 0.001 level of significance ($\beta=.593$; $p=.000$; $t=9.036$) so hypothesis 3 is also supported. On the other hand results indicate that Brand Addiction (BA) will lead to Positive Word of Mouth (+WOM) at 0.001 level of significance ($\beta=.346$; $p=.000$; $t=9.386$) which depicts that hypothesis 4 has also been supported. In addition to it, results also depict that control variables such as Gender, Age, Education, and Income and brand experience remained non-significant in both regression models.

5 Discussion

In the current marketing scenario businesses indulge with more sophistication, brands putting lot of efforts in order to build strong consumer-brand relationships in order to achieve competitive advantage. As previous studies indicated that a lot of research has been done on different consumer-brand relationship but phenomenon of brand addiction remain new, meanwhile, it is one of the most important and significant ways through which a consumer asserts with brand (Cui et al., 2018). So the aim of contemporary study was to investigate the effect of the some of the antecedents of the brand addiction such as brand trust, brand love and brand passion on brand addiction which ultimately leads to the positive word of mouth. As previous research highlights this research gap that there is need to elucidate that how the phenomenon of brand addiction could function in its integrated frame-

Table 2: Descriptive Statistics

| Variables | S.D | Mean | Median | Mode | SE of Mean |
|------------------|------|------|--------|------|------------|
| Gender | .50 | .48 | .00 | .00 | .03 |
| Age | .47 | 2.01 | 2.00 | 2.00 | .03 |
| Education | .62 | 2.35 | 2.00 | 2.00 | .04 |
| Income | 2.02 | 2.71 | 1.00 | 1.00 | .14 |
| Brand Experience | 1.03 | 2.56 | 2.00 | 2.00 | .07 |
| Brand trust | .56 | 3.61 | 3.71 | 3.71 | .04 |
| Brand Love | .59 | 3.69 | 3.67 | 3.67 | .04 |
| Positive WOM | .75 | 3.72 | 4.00 | 4.00 | .05 |
| Brand Addiction | 1.17 | 4.27 | 4.05 | 4.00 | .08 |
| Brand Passion | 1.08 | 4.73 | 4.83 | 5.33 | .07 |

Table 3: Correlation Matrix and Reliability

| Latent variables | BrandTrust | BrandLove | PositiveWOM | BrandAddiction | Brand Passion |
|----------------------|------------|-----------|-------------|----------------|---------------|
| Brand Trust (BT) | (0.87) | | | | |
| Brand Love (BL) | .672 | (0.83) | | | |
| Positive WOM (+WOM) | .401 | .590 | (0.73) | | |
| Brand Addiction (BA) | .399 | .547 | .568 | (0.82) | |
| Brand Passion (BP) | .411 | .555 | .585 | .681 | (0.81) |

work with some of its antecedents as well as some of positive consequences that may involve other important factors (Cui et al., 2018), which also shows the significance of the contemporary study. Findings of this study elucidate that our first hypothesis was not supported as brand trust does not have a significant impact on brand addiction. For example if a customer or consumer has trust on a particular brand then it is not necessary that it will lead to brand addiction however brand trust is positively related to the brand addiction. This result opposes the previous literature on relationship of brand trust with other constructs as former studies argue that brand trust leads to behavioral outcomes such as loyalty and brand trust has capabil-

ity of creating a bond with particular brand (Elena and Jose, 2001). Similarly, Brand loyalty, which is a behavioral component, is created after repeated procedure of permanent relationship that is established due to trust on that specific brand (Chaudhuri and Holbrook, 2001). Whereas our second hypothesis was supported by the statistical results which posit that brand love leads to brand addiction which is an intense mode of behavior (O'Guinn and Faber, 1989). In other words, if a consumer falls in love with a particular brand which is an attitudinal component then there are more chances that he or she will show brand addictive behavior. Many Previous studies also support these findings as brand love is an emotional attachment of a consumer with a

Table 4: Regression

| No. | Hypothesis | Beta | SE | t-value | P-values | Decision |
|-----|------------|---------|------|---------|----------|---------------|
| 1. | BT → BA | .033 | .147 | .227 | .820 | Not Supported |
| 2. | BL → BA | .455*** | .151 | 3.022 | .003 | Supported |
| 3. | BP → BA | .593*** | .066 | 9.036 | .000 | Supported |
| 4. | BA → +WOM | .346*** | .037 | 9.386 | .000 | Supported |

* $p < .10$; ** $p < .05$; *** $p < .001$. Brand Trust (BT), Brand Love (BL), Brand Passion (BP), Brand Addiction (BA) and Positive Word of mouth (+WOM).

particular brand that ultimately leads to a behavioral aspect that is brand loyalty (Keh et al., 2007; Shimp and Madden, 1988).

Further our findings also suggest that brand passion is one of the antecedents of brand addiction (Cui et al., 2018) and has positive impact on brand addiction which means that if a consumer is passionate about his or her favorite brand then there is more probability that he or she will execute brand addictive behavior, these findings also have support of arguments of previous studies such as Dick and Basu (1994) highlight that a consumers attitudinal component brand passion which leads to brand loyalty that is behavioral stage. Similarly, those consumers that are more passionate about their favorite brand are more likely to give a greater amount for this particular brand (Aaker and Equity, 1991). Besides concerning to the implication of the brand passion previous literature also suggests that a consumers passion with a particular brand leads to the generation of positive word of mouth (Füller et al., 2008). On the other hand, our findings also suggest that brand addiction leads to communication of positive word of mouth which means that if a consumer is addictive to the specific brand then there is more likelihood that he or she will generate and spread positive word of mouth about this specific brand when communicating with others. These findings also have support of previous literature as word of mouth a behavioral outcome could be the consequence of different attitudinal and behavioral antecedents such as brand love, brand trust, brand passion, and others (Bauer et al., 2007; Carroll and Ahuvia, 2006; Dick and Basu, 1994). Likewise, brand addictive consumers generate positive word of mouth in order to influence and initiate others to buy and consume the products of that particular brand, meanwhile they are eager to preserve the brand and its image in every possible ways even they are putting pressure on others and keep trying to convince them to buy and consume this particular brand (Cui et al., 2018). The findings of the present study strengthen the marketing literature and a little contribution on the extant literature on consumer-brand relationships by using the bases from the theory of planned behavior.

6 Conclusion

Any strong consumer-brand relationship could be a source of competitive advantage such as brand love, brand passion, brand commitment, brand loyalty, brand addiction and many others. Both international and local brands indulge lot of marketing efforts in order to develop the strong relationships with consumers/customers so they could enable themselves to attain competitive edge by building long term relationships with consumers/customers. There is a research

call by the previous literature and practitioners which would enable them to understand and grasp the new consumer-brand relationships as well as the elucidation of the consortium between possible antecedents and outcomes of such constructs like brand addiction. As construct of brand addiction remains new and expects lot of research work to be done in order to unfold it. So, purpose of the current study is to quench the research thirst by identifying the relationship of nurturing consumer-brand relationship construct brand addiction with its possible antecedents such as brand trust, brand love, brand passion and one of the consequences that is positive word of mouth. Findings suggest than brand trust does not has positive impact on brand addiction although it is positively correlated with brand addiction, whereas brand love and brand passion do have positive impact on brand addiction. Whereas, results also indicated that a consumer has an addictive behavior toward his/her favorite brand then there is more likelihood that he/she will spread positive word of mouth regarding this brand.

6.1 Research Implication

This is a propitious research both for academia as well as for practitioners, because this study has several implications for both players. Our timely effort strengthen the existing literature on marketing and the theory of reasoned action by providing the somehow understanding the newly born consumer-brand relationship brand addiction and how its work in integrated framework with it some possible antecedents and outcomes. On the other hand practitioners, particularly entrepreneurial marketers are always looking for new tactics in order to get competitive edge and maximum profit. So this study provides insightful learning by highlighting the relationship between recently constructed consumer-brand phenomenon. As finding suggest that brand addiction will lead to positive word of mouth and could be other favorable outcomes, so marketer should focus on the antecedents that play significant role in building of this relationship (brand addiction) in order to get the favorable outcomes from this consortium.

6.2 Limitations and Future Research

As applicable with other quantitative research, this research also has couple of limitations. First, the study could incorporate some of the antecedents and outcomes of brand addiction not all, future researchers are encouraged to incorporate other possible antecedents of brand addiction such as brand identification, brand image, brand personality and some outcomes such as willingness to pay higher price, long-term relationship sustainability and identify that how they work in an integrated framework with brand addiction. Second,

due to time and financial constraints, cross-sectional data have been collected, so future researcher could conduct a longitudinal study to highlight that how strong consumer-brand relationships could be established with the passage of time. Third, the research has been conducted on apparel industry whereas future researchers are encouraged to replicate the study on other industries such as food and telecom. Forth, research has been conducted in the context of Pakistan, whereas future researchers are encouraged to replicate study in other countries contexts.

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Impact of Intellectual Property Rights Institutional Quality and Financial Development on Foreign Direct Investment - Evidence from Developing Countries

Palwasha Farooq^{*1}, & Junaid Ahmed²

¹Capital University of Science and Technology, Islamabad, Pakistan

³Pakistan Institute of Development Economics, Islamabad, Pakistan

Abstract. The current study explores the impact of intellectual property right, financial development and institutional quality on foreign direct investment. Data of patent index were used as a proxy of intellectual property right. Financial development index and institutional quality variables were taken from ICRG for the period of 1980- 2016, by applying pooled OLS, fixed test. Sample of 123 developing countries data set were used. The results are consistent with theory of OLI presented by Dunning 1979. The results explain more than 70 percent of FDI significance level is explained by these proxies. The only paper that identifies Patent right index is by Park (2008) that took patent index from 1960-2005. Furthermore, work is under taken where the patent right variables are taken as independent variables. On the contrary previous studies have empirically examined the effect of patent proxy effect on the creativity, innovations and the dissemination of the technology transfer. This study differs because patent index is included with institutional quality variables. Beside this the high level financial development is a catalyst in attracting FDI. Moreover, the FDI is higher in military regime, which is due to higher level of dis stability regime in the country. However, results shows that developing countries can improve regulatory quality by maintaining bureaucracy and accountability to enable them to take advantage from the external finance which further boosts the growth of economy.

1 Introduction

One of the principal factors that encourage FDI inflow is an improvement in the government institutions and business climate (Adams, 2008). Strengthening of IPR reforms through financial development and institutional quality is a cause of FDI inflow (Stanley et al., 1996). There exists an increase in high quality of FDI due to increased level of IPR protection (Glass, 1997). During the decade of 1980 and 1990s FDI attracted the attention of scholars due to financial liberalization globally. Moreover, as far as theoretical perspective is concerned as suggested by Fischer (2001), that immense rate of social welfare and enhanced economic efficacy is due to the liberalization of capital account (Singh, 2003). The foremost impact on FDI inflow is through the phenomena of good governance, which is identified through tangled system of process having characteristics of accountability and transparency and effectiveness of legal system and financial liberalization (Santiso, 2001). However global FDI trends hold less momentum in 2016 .But the global FDI flows mostly decline by 3 percent to approximately 1.43 trillion dollars in the year of 2017 (UNCTAD,2018). FDI inflow

and its recorded value to the developing countries is the largest source of the foreign financing as compared to other portfolios investments. (World investment Report ,2018). Thus, in essence the presence of the specific formal institutions are ensured and found to exert influence on the foreign direct investment .For instance, presence of private ownership of the business sector, banking sector reforms and the foreign exchange along with trade liberalization and also the developmental phenomena (Bevan et al., 2004).

It is important to identify the appropriate determinants of FDI so that the suitable policies can be devised in order to enhance the output of the FDI. However, with the exception of a few studies that emphasized on FDI from Asian and European countries, the existing empirics along with literature have mainly focused on the suitable determinants of the FDI by employing firm level approach and country level approach. The literature elucidates the different macroeconomic variables and key determinants of FDI that were taken into account to analyze such as the trade openness, the telephone lines ,the GDP per capita and the size of economy (Bevan et al., 2004; Moosa and Cardak, 2006). At the macroeconomic level, Buchanan et al. (2012) found

*Corresponding author.

Email: palwashafarooq24@gmail.com

that the institution quality has an impact on the FDI has almost positive and significant results, whereas by a rise in change of one standard deviation, institutional quality and FDI increase by a factor of 1.69. On the other hand, at the micro economics level, Kinda (2010) found that there is high co relation in the institutional quality and the firm level resources. Furthermore, the tests that are significant for three European counties indicate there exists a positive significant relation between regional interaction and firm level resources. While, Strine Jr (2010) found supporting evidence for the measures of the institutional quality mostly emphasizing on governance and their immediate impact on Foreign direct investment; along with the composite linkage, their return is greater in the developing transition countries as compared to the other countries. Gani (2007) concluded that rule of law ,regularity quality, political instability and governance is correlated to FDI in a sample countries of Asia ,Latin America and the Caribbean region. Busse and Hefeker (2007) found Political risk components include important determinants like corruption, bureaucracy and rule of law which have significance relation towards the determinants of foreign direct investment (Kaufmann and Wei, 1999).

There are two contrasting views of how the mechanism of strengthening of protection of intellectual property right enhances the encouragement of FDI inflows. Thus its believed that there exists a positive relationship between intellectual property right and FDI inflows and how its being affected by financial development and soundness of economy, along with the institutional quality. As its widely known and acknowledged that the TRIPS Agreement is the most vital and important instrument which plays a crucial role concerning Intellectual Property protection. Thus plays a prominent role in the promotion of the technological innovation and also to the transfer and dissemination of the technology needs. It is a great argument that how the developed countries with the strengthening patent protection will enhance the foreign direct investment in the context of developing countries and this will ultimately lead to an increased level and also greater transference along with usage of technology thus, promulgating how the TRIPS Agreement meets its objectives in regard to scenarios of country. On the other hand, not all scholars support the view that IPR is robust to enhance the FDI. There are certain argument pertaining to that IPR protection is negatively associated with economic growth which in turn effect the FDI and discourages new entrants from entering into technology entrepreneurship sector. The likelihood that how firms align their path to access and efficiently absorb technological diffusion that is most probably either through informal or formal channels most depend on the prevailing circumstances and characteristics of operating countries in which they are located ,along with capacities orientation and nature of technologies used are

still in question. It is quite obvious that , the size of economy and expected growth of the markets of the economy ultimately act as an incentive for FDI and inward licensing most prominently Maskus et al. (2005); Xavier-Oliveira et al. (2015). Thus the monopolistic nature of IPR and its profound impact on IPR varies and infer the emerging need to devise optimal IPR protection policies that will prove vital in the enhancement of FDI inflow. Thus it is concluded that the Foreign Direct Investment (FDI) is a basic necessity in the developing economics simply because most of the included countries do not have the capital allocation to fund the most expensive innovations and creativity on their own. FDI has become accrue liability to the developing countries. Thus in order to promote creativity and the technological innovation, it is obvious and clear by the promulgation of the substantive provisions of the TRIPS Agreement (Smarzynska Javorcik, 2004). As it is conferred that challenges pertaining to the policy makers mechanism can robustly influence the economic performance. It is crucial to illustrate to relating the developmental stages pertaining to effective decision making, while investing in a foreign markets that usually illustrated the dynamic fluctuating scenario of the diverse markets. As stated that the results of this inherent lacuna that how MNEs adapt to environmental factors to make appropriate behavioral decision making that is inconclusive to best guidance for policy implications does not allow best model in international markets (Aharoni, 2010). Developing nations typically have low resources and less revenue. They need to fill gap of fiscal deficit, so they borrow from external resources .Utilization of external funds depends upon the efficiency of administration .Good administration empowers a nation to accomplish its growth objectives and get to be distinctly prosperous, by setting up a conducive domain for the high and supportive financial development (North, 1997).

To the best, there exists a scarcity of literature that paid attention to small data set apart from the literature. The current study inspects set of macro-economic variables and institutional variables for 123 countries for the era of (1980-2016) the furthestmost comprehensive records of data sample to date of the country studies of the large date of the country set.

The behaviour of the multinational behaviour is investigated by the interaction of industry characteristics versus intellectual property rights (IPRs). The results show how the firms in the industrial sector with high capital costs and the budgeting techniques are more likely to maintain the steady controlling mechanism over the productive knowledge, in countries with the low level of the intellectual property protection, by ensuring that the foreign direct investment (FDI) must increase. Moreover, when IPRs are optimal, and the firms in industry sector with high level of the investment in research and development (R&D) are more likely to en-

ter a specific market by the licensing to an unaffiliated and specific host firm (Fellner and Maciejovsky, 2007). Since the end of the 80s intellectual property right protection (IPRs) has become the most vast and the prominent issue that depicts how the strategies of countries, especially in terms of foreign direct investment (FDI) should influence the country reserve. Later during the year of the 1994 to 1995, the introduction of TRIPs in the GATT and onwards the WTO pushed this known TRIPs worldwide. This also depicts that the IPRs protection goes to a high tide. Most obviously such a campaign on IPRs protection have reflective impact on the following two attributes of the present market competition, and ensuring the greater impact on the IPR policy on foreign direct investment. Due to this sort of global pressure, should results on the strengthening IPRs protection in developing countries has should become an unavoidable tendency in the order to get increased level of foreign direct investment, This probably results in the access of the better technologies and ultimately to attain high growth level (Puerta-Gomez and Cisneros-Zevallos, 2011).

The only paper that identifies Patent right index is by Park and Ginarte (1997) that takes patent index from 1960-2005. Furthermore, work has been undertaken where the patent right variable has been taken as independent variables. Most probably the previous studies have empirically examined the effect of patent proxy effect on the creativity, innovations and the dissemination of the technology transfer. This study differs because patent index is included with institutional quality variables. An Exhaustive literature inspected a lot of studies on the foreign direct investment and impact of the patent on the innovation and technology transfer. Despite the increase of flows, to date, very little attention has been gathered towards the macro-economic variables and the quality of the institutional variables that ultimately affect FDI. Moreover Patent, index based on 5 years intervals from 1960-2010 has been used. More specifically, we answer the following question:

- Is Patent index a good proxy of the intellectual property right?
- What is relationship of institutional quality with foreign direct investment?
- Is financial development index drive flow of the foreign direct investment?

The study attempts this question using data set for a period of 1980-2016 consisting of 123 developing countries based on income groups. To answer the first question, we estimated the patent index of patent right protection into the model as a proxy, instead of intellectual property right. In order to answer the second question we constructed institutional quality variable, i.e. Bureaucracy, rule of law corruption have

been taken from political risk component and its impact on FDI. The third question is about financial development proxies. That is third index of financial development, i.e. the index of the financial market; financial institution and the financial development are used as a three proxy towards the influence foreign direct investment. There exist many theories which explain the importance of FDI such as imperfect market theories, industrial organizational theory internationalism theory (Jahn, 2009; Naik et al., 2018; Pichler and Wilhelm, 2001). With regard to above theories this study is based on OLI theory proposed by Dunning 1980. Very few researchers have attempted to study the relationship between inflow of foreign direct investment and OLI paradigm independently, for the developing economics. However, the study considers this important theory as a base, because it is related to foreign direct investment. Dunning OLI paradigm for evaluating the significance and relationship from the relationship, aim to formulate effective policy concern.

2 Literature Review

FDI is a known topic in the contemporary literature that has mainly focused on the importance and prominence of IPR, institution quality & the financial development. The effects of these factors so far have not been investigated in the context of the developing economies. Empirically the alliances between IPR and the quality of the institutions and the development of the financial indexes on the foreign direct investment are diverse in nature. Dunning and Zhang (2008) theorized that FDI could be attracted in the firm by increasing the investment strategies. Thus it can increase the ownership advantages, getting beneficial from the internalization associated with the advantages, ensuring the maximum output of the advantages via ownership. He also narrated that the total FDI benefits should need to overshadow related costs that is incurred for setup and initiate the locations. If not, in contrast to set up a foreign locations, thus industry would be better off, contended to export the particular products. There is some proof to the support to the idea that FDI should enhance the competitiveness of the local industry sector, thus gaining core competency.

2.1 Intellectual Property Right and FDI

Smarzynska Javorcik (2004) discussed those government agencies that do facilitate in order to attract the FDI with the hope that multinational corporations will subsequently bring new technology and skills. Moreover, IPR protection affects FDI by particular sectors, especially in the case of transitions economies. She debates that weaker IPR protections discourages and deters in both the non-sensitive and sensitive fac-

tors. This could possibly be implemented when it undertakes local production and forces them into distribution industries. Moreover, in order to inspect the spillover effects of FDI on creativity and innovativeness in China, a technique named as regression is used to examine for the cross-section and data pooled time-series (OLS) technique is used as well, by pooling together both cross-section and time series data. However, to examine the regional heterogeneity across provinces, Panel data analysis is taken into account. These findings represent very little evidence associated with the spill over impact on FDI in China. There exists a more satisfactory and convenient approach to utilize observations from smaller spatial units from such counties whether FDI and innovativeness with country level data in the country China are available, with keeping in mind the future direction pertaining to the crowding effect (Cheung and Ping, 2004).

Schneider (2005) demeanor investigation that is empirical in nature highlighted the main role of trade in order to fix the socio economic variables in transition countries and rate of innovation. Also showing how the impact of importance of both FDI and IPRs occur in these processes. However, a sample of 28 developing countries and 19 developed countries are used. WDI is the main source of extracting data variables. Thus, it was concluded that FDI has been acknowledged in the literature as one of the most important and vast channels for the purpose of technological diffusion. There has been the link between technological diffusion and trade in physical goods. Gervais (2005) formulated a strategy for the intellectual property right and how it possibly reveals some of the major suggestions. Because IP could be better modified to best fit the needs and wants of the developing economies. However, it also highlights the major economic play that is known as deciding analytical tools.

A strong agreement on the topic of the strengthening and protection of IPR among economists is growing nowadays, that shows how patent protection affects and harmonizes the economy. Grossman and Lai (2004) inspected the major incentives that are needed by the government and agency utilize in order to protect the Intellectual property right in a world trade economy and competitive era. The study explores the relation of world economy with more on going innovativeness. Moreover its formulated that national patent policies determination in a regime of non-cooperative sector of the patent protection, it also reveals international patent agreements from efficient global regime of the patent protection, it can be done via deriving the properties in a global sector. Furthermore, the implications of the policies are discussed along with focusing global efficiency along with patent harmonization. Iwaisako (2018) described how the protection of the patent effects on the country welfare state. It also enhances facilitating the foreign direct investment strate-

gies via constructing a model of North-South quality-ladder in which endogenous location choice of firms is determined by foreign direct investment (FDI). Park and Ginarte (1997) demonstrates an update included in the index of the protection of patent published in the journal in the year of 1997. However the paper reports the index for the year of 1960-1990 for the period of 110 countries. In addition the index has also been updated to the year of 2005 and moreover for the period of 122 countries. The stronger patent laws adoption and patent right composition almost vary across the countries by ensuring the level of economic development. Evan et al (2018) studies how to theoretically derive and thus ensuring the effects of the intellectual property right on term of national economics.

2.2 Financial Development and FDI

Financial system and its development role in enhancing foreign direct investment along with economic growth is done through depicting the major key towards the technological diffusion process, which is associated with FDI. Moreover there is a growing interest by economists towards financial development and the foreign direct investment. Hermes and Lensink (2003) investigated importance of domestic financial system and foreign direct investment role and also illustrated that financial system does increase more efficient allocation of the total resources and in this way its helpful in improving the absorptive capacities of the country in regard to inflow to FDI. Similarly, study by Agbloyor et al. (2013) illustrates the long horizon perspective by forming the linkages the FDI and financial market development mechanisms. The sample data is based on sub-Saharan African region of eight countries in total for the year of 1991-2013. Subsequently, the results coherent to causality test and 2SLS panel regression depict that two variables relation, i.e. financial market development and FDI is found to be inclusive. Another study of Hermes and Lensink (2003), states that the financial system development of the recipient country is one of the important condition for the FDI that exert positive influence via economic growth. However the process of technological diffusion is facilitating by more developed financial system.

2.3 Institutional Quality and FDI

There exists diverse relationship between FDI and institutional quality. Accordingly Cuervo-Cazurra (2006) focused on the relation and the impact of corruption on foreign direct investment (FDI). Furthermore, debates how the corruption will result not only in slower impact in FDI inflows, but also shows that composition of the country and its changing result in origin of the FDI. It also reports two major findings; firstly, how the value of the corruption will be lower than

FDI. Furthermore, the corruption will be lower from those countries that signed Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. This is further suggested that in case of the corruption in the foreign countries, there should be formulated laws against bribery abroad. Secondly, the corruption also results in a higher level of corruption in engaging in foreign countries. This proposes that the investors should be exposed to the bribery at home place should not invest abroad, thus in place reach to those countries where corruption is prevailing.

Bénassy-Quéré et al. (2007) examined the role of institutions in the host & source country analysis using bilateral stock by estimating gravity by tackling multicollinearity & endogeneity bias. It also focuses on institutional distance effects on the bilateral FDI by accessing fresher data coverage of industrial and developing countries. Increase in inward FDI has been observed by focusing on bureaucracy, corruption and legal institutions. Hence, the weaker and lesser capital concentration and the protection of employment slow the inward FDI. Its concluded impact of institutional quality on bilateral FDI.

Busse and Hefeker (2007) explores the data linkages formation that exists between the institutions, the political risk of the institutions and foreign direct investment. Overall, political risk and institution quality including the 12 different sorts of indicators are used in the empirical analysis. However, the results indicate that the absence of internal conflict, ethnic tensions, government stability, and the basic democratic rights via law order are highly related to the determinants of foreign direct investment inflows.

2.4 Macroeconomic Variables and FDI

Adams (2008) explained the importance of the IPR and its strengthening impact along with discussing positive effect on FDI. Besides, it has also been discussed how the macroeconomic variables play a crucial role in order to increase the FDI inflows. This basic assumption underlying those investments done in the countries that have a lower per capita income result in yielding a higher rate of return. The variables which are obtained from the Political Risk Services Country Risk Guide include the risk variable (RISK), which is a composite measuring of the investment climate. It basically is composed of three sorts of measures: financial, political, and the economic risk.

Henriques et al. (2010) used a project level unique rich data set, which is used to analyze the trends and determinants of the FDI inflows to the region of the Southern African Development Community (SADC). Beside this, controlling the sources of the investment is undertaken and with the type of investment to the project size addition. The results are coherent to the market size that is to have a positive significant impact

on FDI inflows that is included in under all specifications, thus a result is consistent with the earlier studies.

3 Research Methodology

The study aims at exploring the relationship among intellectual property right, institutional quality and financial development. Annual panel data from 1980-2016 are used for analysis. The sample consisting of 123 developing countries is divided into the two income level. The data gathered from various sources such as World Bank database (World development indicators, international financial statistics and Walter park index). Such as LGDP is the log GDP measure of the size of the economy, LLF is labor force, INF is the inflation, TOP is the trade openness, MPS is the mobile per subscription 100 people, GDPC is the GDP per capita, extracted from WDI. FINDEX is the proxy for financial development and it is composed of three index of financial development, which are taken from IFS, INSQ composed of four quality measures including corruption, bureaucracy, Military, rule of law, are taken from ICRG. Patenta is the measure of used as a proxy of intellectual property right, data taken from Walter park index.

3.1 Panel Data Estimation

Panel data is a combination of time series and cross sectional data. Panel dataset on individuals and households are difficult to obtain as compared to pooled cross section this is mainly because it requires replications of same units over times. Multiple observations on the same units allow to include unobserved characteristics of individuals; firms, etc. (Wooldridge, 2015). The pooled model assumes that unobservable characteristics are constant, independent of heterogeneity. In this context, OLS produces consistent estimator thus, we refer to pooled OLS estimation. If the assumption regarding the unobservable variables is wrong, we are in the presence of an omitted variable. Then, we have potential bias and inconsistency of pooled OLS. The magnitude of these problems depends on how the true model behaves: fixed or random. In the pooled model, there is no model for group/individual heterogeneity. Thus, pooled regression may result in heterogeneity bias:

4 Results

4.1 Descriptive Statistics

Table 1 shows descriptive statistics, which represent statistical attributes of all variables for developing countries during period of 1981-2016 including mean, median, maximum and minimum values along with

Table 1: Descriptive Statistics

| Variable | Units | Mean | Std. Dev. | Min | Max |
|-------------|-----------|----------|-----------|----------|----------|
| FDI inflow | US dollar | 5.406502 | 2.365715 | -2.30259 | 12.58083 |
| Lgdpc | % | 9.386267 | 2.01213 | 3.602777 | 16.23135 |
| Llf | - | 1.438173 | 1.711297 | -2.30259 | 6.668355 |
| Inf | % | 14.85097 | 35.65991 | -23.8 | 492.4 |
| Tradeopness | % | 78.4781 | 41.47297 | 0.2 | 531.7 |
| Mobile | % | 47.02152 | 47.8378 | 0.1 | 223 |
| Gdpg | % | 3.796967 | 7.619003 | -62.1 | 179.2 |
| Fdind | - | 0.182386 | 0.118517 | 0.002477 | 0.823458 |
| Fmi | - | 0.095954 | 0.148238 | 2.38E-11 | 0.876004 |
| Fiindex | - | 0.272438 | 0.130708 | 0.022924 | 0.798114 |
| Patenta | - | 2.072097 | 0.8564 | 0.13 | 4.33 |
| Corruption | - | 2.663292 | 1.01807 | 0 | 6 |
| Law | - | 3.472803 | 1.457224 | 0 | 6 |

standard deviation of all the variables The FDI mean value is 5.4, least value is -2.30 and extreme value is 12.58 while volatility is 2.36. Log GDP per capita/size of economy has mean value 9.36, minimum value is 3.6677 and maximum value is 10.231 and standard deviation is -201213. The mean value of labor force is 1.43 where minimum value is about -2.30 and maximum value is 6.668 and volatility is 1.711. The mean value of inflation is 35.6591 and minimum value of 23.8 and maximum value is 492.4. Trade openness has a standard deviation of 41.4729 and minimum value is 0.2 and max value is 531.17. Mobile phone has mean value of 47.021 where standard deviation is 47.8378, and minimum value is 0.1 and maximum value is 223. GDP growth rate has a standard deviation of 7.6190 and the maximum value is 179.2 and minimum value is -6.21.

Financial development has three proxies, financial development index has a mean value of 0.1823 it has a standard deviation of 0.1185 whereas it has a minimum value of 0.0025 and maximum value of 0.825. Financial market index has standard deviation of around 0.148 and the minimum value is 2.38 and maximum value is 0.876004. Financial institution index has variability of 0.130708 and the minimum value is 0.222924 and maximum value is 0.798114. Institutional quality is measured by four proxy i.e. corruption, Rule of law, Bureaucracy, Military. Corruption is the measure of the institutional quality it has maximum value of 6 and the minimum value is 0. Bureaucracy has a standard deviation of 1.0807. Rule of law is the second proxy of the measure of institutional quality. it has a maximum value of 6 and minimum value is 0, whereas, it has a standard deviation of 1.457224 Bureaucracy is the third proxy of the measure of institutional quality .it is taken also taken from ICRG by political risk component Bureaucracy has variability of 1.094076 and has maximum value of 4 and minimum value of 0. Military is the fourth proxy of the measure of institutional quality. It

is taken also taken from ICRG by political risk component. Military has 1.595 of standard deviation and has an extreme value of 6 and minimum value of 0. Intellectual property right is measured by proxy of patent and it is taken from Walter Park index. Patent has standard deviation of 0.8564, and has an extreme worth of 4.33 and the least worth of 0.1.

4.2 Correlation Matrix

Table 2 represents correlation matrix. Size of economy is found significantly and positively related to labor force, trade openness and mobile phone as above. Moreover GDP per capita is positively correlated with size of economy, Trade openness, labor force. As shown above, the macro-economic variables, the left variables such as inflation insignificant relationship is observed Financial development is measured by three proxies such as financial institution index, financial development index and financial market index. A significant correlation is observed Institutional quality is measured by four proxies such corruption, military, bureaucracy, rule of law, there exist a positive significant relationship. Moreover in patent is a proxy to measure intellectual is highly correlated.

4.3 Pooled OLS and Hausman Test

Table 3 reports the grades of panel design analysis performed to explain the impact of macro-economic variables on FDI. This includes size of economy, inflation, trade openness, labor force and mobile phone on foreign direct investment. The results indicate that as size of economy increases, it attracts more FDI. The larger economies have more FDI as compared to smaller economies. The labor force has insignificant and positive impact on FDI. The positive sign indicates that more FDI due to availability of cheap worker. As

Table 2: Correlation Matrix

| variable | Lgdpc | Llf | inf | Top | Mobile | gdpg | fdind | fmi | fiindex | patenta | corrup | law | bur | milt |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|-------|-------|
| lgdpc | 1.000 | | | | | | | | | | | | | |
| llf | 0.813 | 1.000 | | | | | | | | | | | | |
| inf | -0.130 | -0.032 | 1.000 | | | | | | | | | | | |
| tradeopness | -0.536 | -0.592 | 0.338 | 1.000 | | | | | | | | | | |
| mobile | 0.227 | -0.122 | -0.186 | 0.138 | 1.000 | | | | | | | | | |
| gdpg | 0.119 | 0.177 | -0.060 | 0.069 | -0.06 | 1.000 | | | | | | | | |
| fdind | 0.681 | 0.460 | -0.126 | -0.105 | 0.339 | 0.044 | 1.000 | | | | | | | |
| fmi | 0.702 | 0.627 | -0.084 | -0.181 | 0.147 | 0.127 | 0.899 | 1.000 | | | | | | |
| fiindex | 0.454 | 0.115 | -0.142 | 0.023 | 0.481 | -0.073 | 0.834 | 0.507 | 1.000 | | | | | |
| patenta | 0.099 | -0.102 | -0.253 | 0.044 | 0.529 | -0.113 | 0.264 | 0.083 | 0.413 | 1.000 | | | | |
| corruption | -0.054 | 0.008 | 0.131 | -0.028 | -0.08 | 0.093 | 0.013 | 0.002 | 0.022 | -0.015 | 1.000 | | | |
| law | -0.331 | -0.322 | -0.077 | 0.177 | -0.02 | -0.066 | -0.198 | -0.217 | -0.115 | 0.003 | 0.085 | 1.000 | | |
| bur | -0.183 | -0.233 | -0.088 | 0.197 | 0.184 | -0.223 | 0.087 | 0.026 | 0.138 | 0.330 | -0.186 | -0.102 | 1.000 | |
| milt | 0.052 | -0.112 | -0.105 | 0.011 | 0.212 | 0.006 | 0.309 | 0.210 | 0.343 | 0.220 | 0.245 | 0.228 | 0.025 | 1.000 |

indicated in Hausmann relationship is significant so fixed effect model is appropriate Inflation is interpreted as insignificant the significant intercept is indicator of performing well. The trade openness has significant impact on foreign direct investment .The countries with more international trade relationship attract more foreign direct investment. The use of mobile is an indicator of technology using by masses of a country. The results further indicate that high level of technology leads to more FDI as this explains significant relationship between mobile phone subscription and FDI. High economic growth role in a well-established is an indicator of FDI. The same confirmed as there exists a significant relationship between economic growth and FDI. The higher growth attracts higher FDI. The intercept is significant that indicates the possibility of missing variables. Such variables are explained in next phase of study. Some of variables are financial development .institutional quality, and the intellectual property. Moreover the explanatory power of model is 74.1% which is reasonably good.

4.4 Financial Development and FDI

Table 4 represents the influence on financial development on foreign direct speculation. Three different proxies of financial development are used including index of financial development index of financial market and index of financial institution. The results indicate that all proxies of financial development have significant positive relationship with FDI. The high level financial development is a catalyst in attracting FDI, so far as results are concerned. In model, financial market index is used as a substitution of monetary development. Sound and well established market enhances more financial development. This would ultimately in-

crease more FDI inflow .Financial market index is significant .size of economy has significant partial relationship with FDI. This means big economies will attract more FDI. Similarly Labor force and FDI have significant relationship with FDI.The countries that have cheap labor manpower will attract more FDI. Trade openness has important relationship with FDI There exists an optimistic relation among financial market index and trade openness. More attractive relationships attract more external finance thus enhance financial market development.This means more open trade policies will attract more foreign direct investment. It is further added that insignificant relationship is observed between inflation growth per capita and FDI. An intercept is significant, indicating the possibility of missing variable. Some of them are explained in next section. The explanatory power of the model is 71% which is reasonably good.

In model financial institution index is used as a proxy of economic growth .Sound and well quality of financial institution enhances more financial development. This would enhance more FDI inflow. Financial institution is significant, whereas, size of economy has a significant relationship with FDI. This means big economies that are financially sound will attract more FDI. Labor force has a significant relationship with FDI. The countries that have cheap labor manpower will attract more FDI. Trade-openness has significant relationship with FDI. It is observed that there exist an optimistic relationship among trade openness and financial institution index because trade openness promotes increase in financial institution index. A good institution enables the financial institution channels to work in a productive manner thus reducing waste and enhancing quality of institutions, which results in financial devel-

Table 3: Pooled OLS and Hausman Test

| | (1) | (2) | (3) |
|-----------------------|--------------------------|--------------------------|--------------------------|
| VARIABLES | Pooled Effect | Fixed Effect | Random Effect |
| Size of economy | 0.816*** (0.0301) | 0.845*** (0.0307) | 0.816*** (0.0329) |
| Labor Force | 0.0666** (0.0303) | 0.0402 (0.0363) | 0.0666* (0.0385) |
| Inflation | -0.00137 (0.00148) | -0.000933 (0.00130) | -0.00137 (0.00122) |
| Tradeopness | 0.00681*** (0.000612) | 0.00684*** (0.000515) | 0.00681*** (0.000504) |
| Mobile per 100 people | 0.00539*** (0.000601) | 0.00253*** (0.000847) | 0.00539*** (0.000715) |
| GDP per capita growth | 0.0222** (0.0112) | 0.0198** (0.00941) | 0.0222** (0.0102) |
| Constant | -2.678*** (0.263) | -2.787*** (0.252) | -2.678*** (0.262) |
| Observations | 1,802 | 1,802 | 1,802 |
| R-squared | 0.741 | 0.716 | |
| Number of year | | 27 | 27 |
| Country FE | | YES | |
| Year FE | | YES | |
| Hausman test | | Prob>chi2 = 0.0119 | |

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

opment This means more open trade policies will attract more foreign direct investment .Inflation is also partial significant with FDI.Low level of inflation will influence FDI.Mobile phone per 100 peoples is significant as there exist more technology usage by masses there is more institution quality financially. It is further added that insignificant relationship is observed between growth per capita and FDI An intercept is significant ,indicating the possibility of missing variable .Some of the which are explained in next section . The explanatory power of the model is 73% which is reasonably good.

4.5 Institutional Quality and FDI

Table 5 reports patenta is the proxy to measure the intellectual property right it means protection of IPR and its strengthening process will ultimately harmonize the economy In model ,corruption is insignificant whereas the size of the economy has significant impact with FDI. This means big economies will attract more FDI. Trade-openness has significant relationship with FDI. This means more open trade policies will appeal additional foreign direct venture FDI. Inflation is partially significant ,so low level of inflation will influence FDI.Mobile phone per 100 peoples is significant as

there exists more technology usage by masses there is more institution quality financially It is further added that insignificant relationship is observed between inflation ,GDPG and FDI Sound and well developed financially institution enhance more financial development. This would enhance more FDI inflow. Financial development index is significant an intercept is significant, indicating the possibility of missing variable. Some of the are explained in next section. The explanatory power of the model is 66% which is reasonably good.

Strong rule of law and its breach and infringement policies will affect foreign direct investment. Rule of law is insignificant, low level of law and more adjusting policies instead of strong rigid policies will attract more foreign straight stockholders .In Model the size of the economy has significant impact with FDI. This means big economies will attract more FDI. Tradeopenness has significant relationship with FDI. This means more open trade policies will attract more foreign direct investment (FDI) Inflation is partially significant, so low level of inflation will influence FDI. Mobile phone per 100 peoples is significant as there exists more technology usage by masses. There is more institution quality financially, it is further added that insignificant relationship is observed between inflation, GDPG

Table 4: Financial Development and FDI

| | (1) | (2) | (3) |
|----------------|--------------------------|--------------------------|--------------------------|
| VARIABLES | Fin Market Index | Fin Inst Index | Fin Deve Index |
| lgdpc | 0.721*** (0.0395) | 0.690*** (0.0383) | 0.677*** (0.0399) |
| llf | 0.0913** (0.0415) | 0.150*** (0.0388) | 0.115*** (0.0386) |
| inf | 0.000955 (0.000841) | 0.00144* (0.000813) | 0.00137* (0.000784) |
| tradeopness | 0.00562*** (0.000672) | 0.00577*** (0.000715) | 0.00543*** (0.000700) |
| mobile | 0.00600*** (0.00110) | 0.00433*** (0.00122) | 0.00485*** (0.00124) |
| gdpg | 0.0157 (0.0117) | 0.0168 (0.0119) | 0.0159 (0.0115) |
| fmi | 0.918*** (0.278) | | |
| fiindex | | 1.429*** (0.171) | |
| fdind | | | 1.625*** (0.225) |
| Constant | -1.763*** (0.376) | -1.798*** (0.331) | -1.520*** (0.351) |
| Observations | 1,032 | 1,058 | 1,058 |
| R-squared | 0.713 | 0.732 | 0.732 |
| Number of year | 25 | 25 | 25 |
| Country FE | YES | YES | |
| Year FE | YES | YES | |

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

and FDI Sound and well developed financial institution enhance more financial development. In contrast low level of law result to some of extent strengthening of patent .this means patent are affected and they are not 100% significant. A low level of significance is observed. This would enhance more FDI inflow. Financial development index is significant an intercept is significant, indicating the possibility of missing variable. Some of which are explained in next section. The explanatory power of the model is 64% which is reasonably good.

Strong Bureaucratic rule of law will lower the foreign direct investment .As investors are less likely to be concerned to such countries where there are stringent policies. Investors are more likely where there is adjusting and flexible law. This also impacts the labor force In Model the size of the economy has significant impact with FDI. This means big economies will attract more FDI. Trade-openness has significant relationship with FDI. This means more open trade policies will attract more foreign direct investment. Mobile phone per 100 people is significant as there exists more

technology usage by masses there is more institution quality financially It is further added that insignificant relationship is observed between inflation labor force ,GDPG,Patents and FDI Financial development index is significant. Well set financial institutions will enhance FDI an intercept is significant, indicating the possibility of missing variable. Some of them are explained in next section .the explanatory power of the model is 65% which is reasonably good.

Military safeguarded the country, this will attract the foreign investors because better policies and check and balance is observed, this will lead to accountability, thus ensures more FDI. In Model the size of the economy has significant impact with FDI. This means big economies will attract more FDI. Tradeopenness has significant relationship with FDI. This means more open trade policies will attract more foreign direct investment. Mobile phone per 100 people is significant as there exists more technology usage by masses there is more institution quality financially An intercept is significant ,indicated the possibility of missing variable .Some of the which are explained in next section .the

Table 5: Institutional Quality and FDI

| VARIABLES | (1) Patent | (2) Corruption | (3) Rule of Law | (4) Bureaucracy | (5) Military |
|----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| lgdpc | 0.604*** (0.0506) | 0.677*** (0.0587) | 0.681*** (0.0441) | 0.665*** (0.0486) | 0.705*** (0.0494) |
| llf | 0.112** (0.0508) | 0.0271 (0.0540) | 0.0437 (0.0449) | 0.0303 (0.0450) | 0.0556 (0.0431) |
| inf | 0.00425** (0.00160) | 0.00759*** (0.00186) | 0.00394** (0.00155) | 0.00264 (0.00191) | 0.00409** (0.00175) |
| tradeopness | 0.00450** (0.00167) | 0.00400* (0.00221) | 0.00688*** (0.00129) | 0.00716*** (0.00140) | 0.00671*** (0.00122) |
| mobile | 0.00617*** (0.00214) | 0.00392 (0.00235) | 0.00609** (0.00274) | 0.00446** (0.00197) | 0.00428* (0.00215) |
| gdpg | 0.0471*** (0.0162) | 0.0274 (0.0238) | 0.0232 (0.0211) | 0.0273 (0.0205) | 0.0237 (0.0198) |
| fdind | 2.504*** (0.358) | 2.795*** (0.676) | 2.038*** (0.459) | 2.639*** (0.432) | 1.854*** (0.587) |
| patenta | 0.112* (0.0539) | 0.209*** (0.0648) | 0.112* (0.0585) | 0.121 (0.0782) | 0.152** (0.0555) |
| corruption | | 0.111 (0.0919) | | | |
| law | | | 0.0150 (0.0336) | | |
| bur | | | | -0.0503 (0.0579) | |
| milt | | | | | 0.0642* (0.0346) |
| Constant | -1.482*** (0.446) | -2.598*** (0.673) | -2.180*** (0.430) | -1.923*** (0.477) | -2.627*** (0.502) |
| Observations | 479 | 354 | 405 | 421 | 432 |
| R-squared | 0.714 | 0.663 | 0.643 | 0.657 | 0.645 |
| Number of year | 22 | 22 | 22 | 22 | 22 |
| Country FE | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES |

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

explanatory power of the model is 64

5 Conclusion

The study explained the impact of financial development, institutional quality and intellectual property right on foreign direct investment during 1980 to 2016 in sample of 123 countries finding in various income groups. Historically many theories such as imperfect market theories, industrial organizational theory internationalism theory imperfect market theories and institutional approach theory explained inflow of FDI that dealt with an attempt to link theory with trends of FDI along with information asymmetry with strategic de-

cision making. In regard to above theories this study is based on OLI theory proposed by Dunning 1980 or eclectic or ownership, location and internationalism theory. Very few researchers have attempted to study the relationship between inflow of foreign direct investment as a dependent variable and OLI paradigm independently for the developing economies. However, this is considered an important theory as a base of the study because it is related to foreign direct investment.

Though FDI is recurrently examined on diverse disciplines such as international economics, geographical economics, worldwide business and management, none of the theory can completely explain the phenomena of FDI. Thus, complete analysis of FDI from empirical and theoretical perspectives indispensably ex-

plains institutional quality level of financial development. The study reveals that two proxies of institutional quality i.e. bureaucracy and military in general influence performance of institutional quality of FDI. The study explains that the model is 70% when financial development is added to the macro economic variables.

Strong Bureaucratic rule of law will lower the foreign direct investment .As investors are less likely to be fascinated to such nations where there are stringent policies. Investors are more likely where there is adjusting and flexible law. Similarly patent is the proxy to measure the intellectual property right it means protection of IPR and its strengthening process will ultimately harmonize the economy. Size of the economy has significant impact on FDI. Macro-economic variables such as size of economy will affect FDI. Big economies will attract more FDI. Similarly Labor force and FDI have significant relationship with FDI. The countries that have cheap labor manpower will attract more FDI. Trade openness has significant relationship with FDI. This means more open trade policies will appeal extra foreign direct investment (FDI). Inflation is partially significant, so low level of inflation will influence FDI. Mobile phone per 100 people is significant as there exists more technology usage by masses Financial development index is used as a proxy of financial development. Sound and well developed financial institution enhances more financial development. This would enhance more FDI inflow. Financial development index is significant financial market index is used as a proxy of financial development .sound and well established market enhance more financial development. This would ultimately increase more FDI inflow. Financial market index is significant.

The study has strong policy implications .Intellectual property right and patent protection and its strengthening will harmonize the country and facilitate the FDI and attracted the foreign investors as well. It will also help in the promotion of the technology innovation and creativity to the extent to the transferring and dissemination of the technology. Developed countries where there are TRIPs agreements are followed will ultimately enhance the foreign direct investment .thus the monopolistic nature of the IPR will affect the foreign direct investment.

Results of study indicate that size of economy can be boosted by reducing corruption and in general via improving role of institutional quality. For reducing the reliance on external finance developing countries should concentrate on improving the level of capital formation at home. Study has some policy implications for developing countries; governments of developing countries should take necessary actions for making institutions strong primarily regulatory quality in particular strong accountability.

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Investigating the Effect of Store Image on Purchase Intention with Mediating Role of Service Quality: A Study of Hyper Star and Metro

Yusra Shakeel¹ & Sobia Sultana*²

^{1,2}Lahore College for Women University, Lahore, Pakistan

Abstract. The paper aims at identifying the effects of store image on purchase intention in international retail outlets in Lahore, Pakistan. The study focuses on the different dimensions of store image that effect consumer purchase intention in the retail outlets and how service quality contributes in building store image significantly. A sample of 265 consumers was taken; the research is quantitative in nature. A questionnaire (survey) method was used and data were collected from two supermarkets Metro and Hyper star in Lahore. This development is an important focus for both researchers and operators of hypermarkets. EFA and CFA models are employed for the study. The study focuses on the importance of store image in retailing and how it influences purchase intention in a positive way. Service quality also contributes to store image and helps create customer satisfaction and loyalty which in return affect consumer perceived behavior. The results indicate that store image has a significant effect on service quality and purchase intention. Managers can make the perception of stores better by enhancing the service provided to customers. The management staff can improve the quality of interaction between the staff and the customers. The store environment can be improved and made more attractive to attract customers.

Keywords: store image, purchase intention, service quality, retailing.

1 Introduction

There has been a change in the consumers lifestyle, with changes in the demand of goods and services. It is evident that markets now stock global brands with consumer awareness, new technological inventions have made retailing more captivating and the demand for perfection from consumers has led to improved product quality. A change has been noticed in the retailing pattern and layout, the retailing channels now evolve around branded stores to meet the new demands of consumers (Jaliwala et al., 2014). The change in the retailing sector was more evident in the Western countries previously with the international retail chains like Wal-mart, Carrefour and Tesco. In context of retailing in Pakistan, the first entry was made by Metro and Makro in 2007 and later in 2009 Hyperstar was launched in major cities like Lahore, Islamabad and Karachi. Customers in Pakistan were used to shopping from traditional grocery stores when channel diversity in retail chains was less popular. A shift has been observed from the traditional stores to the branded international chain stores, since customers have evaluated the new retail chains in terms of product variety, convenience and the benefit of one-stop shopping. The importance of these large retail stores is evident from the customer spending at a particular store (Batislam and

Filiztekin, 2011).

There has been considerable growth in the retailing business which is evident from the entry of multinational organizations which have expanded their operations in the developing and developed countries (Yaprak, 2008). Since the retail expansion is across cultures there is a difference in the perception of products and the way in which the products and services are perceived in terms of quality. Hence, the retailing business has become more bicultural and demanding (Zhang, 2009). The customer attitudes and expectations are different across countries and so the retailing business has been shaped according to the national boundaries in different countries (Davis et al., 2008). In eastern cultures the concept of browse and bargain is more evident than in western cultures where the prices marked are stated and fixed (Verhoef et al., 2009). A lot research has been conducted in retail shopping experience in the western culture while few are found in the Eastern culture (Arnould and Thompson, 2005).

In Pakistan, the concept of retailing has been modified with the new phenomena of self-service stores which were the kiriyana stores located in small vicinities of the city. The self-service stores are usually associated with huge retail stores with wide variety of goods and ample place to shop and enjoy the shopping experience while some consumers still believe in the

*Corresponding author.

Email: sobia.hassan@lcwu.edu.pk

small retail stores with individual attention from the sales person. These small stores usually are the grocery stores while the entry of Hyper tsar and Metro has made it convenient for customers to do one-stop shopping.

2 Literature Review

2.1 Store Image

Store image is defined as the overall impact of perceived image associated with the store in the minds of consumers (Hartman and Spiro, 2005). It is also the symbolic association in the minds of the customers with perceived functions relating to specific stores (Šalčiuvienė et al., 2009). Store image is built according to the strategic positioning of the store in the minds of consumers (Dolbec and Chebat, 2013). Studies reveal that store image reduces risk, helps customers in major purchase decisions (Bao et al., 2011; González et al., 2007).

It is very important for the retailers to develop a clear store image in the minds of consumers since there has been drastic change in the behavior of consumers. Store image has gained considerable attention by academicians and practitioners. Prior research on store image has explained a direct relationship with purchase intention, also applicable in case of private store brands. It has been stated the more concrete the store image, the greater will be the chances of purchase by consumers (Collins-Dodd and Lindley, 2003; Diallo, 2012).

Priporas (2002) stated that store image was the most dynamic variable in the retail markets of Greece. The major store attributes are location, convenience, merchandize, design elements and store personnel behavior (Kaul, 2005). The Pakistani consumers need an extensive assortment variety and quality products under one roof (Moazzam and Badar, 2006). There are four types of shoppers identified which include typical, occasional, social and anti-social. These shoppers preferred store convenience, pricing ,products, merchandize and personnel ,these factors also derive consumer satisfaction (Theodoridis and Chatzipanagiotou, 2009). Consumer satisfaction has been determined via store image and customer sale staff relationship (Bloemer et al., 2002). Mohan et al. (2013) has also explored the service quality dimension like shopping convenience, store environment, pricing & promotion, responsiveness, customer sales service and billing.

2.2 Cue Utilization Theory and Store Image

When a brand is not popular among customers, they estimate the value of a brand from the image of the

retail store (Vahie and Paswan, 2006). The reason being that customers can associate the private label brand with the store itself. The product assortment of a retail store represents the quality and variety of brands carried by the retail store. Store image can be used as an extrinsic cue to judge the value of a brand (Ailawadi and Keller, 2004; Collins-Dodd and Lindley, 2003). A positive store image creates a positive brand image (Dhar and Hoch, 1997; Pettijohn et al., 1992). Store image can thus influence the judgment for a brand. The way in which consumers arrive at quality judgments is called cue utilization theory (Sprott and Shimp, 2004). It includes extrinsic cues which do not affect products appearance (brand name, store name and price) while intrinsic cues relate to core product characteristics like (texture, ingredients, taste and smell) (Herz and Diamantopoulos, 2013; Woodside, 2012). The cue utilization theory suggests that store image can be a determinant of product quality (Dawar and Parker, 1994). When customers are unaware about the brand the cues (product quality) can be determined from the store image. Therefore, store image can have a direct and positive relationship with consumer purchase intention.

2.3 Purchase Intention

Purchase intention is a behavioral action with the buying intention and possibility of purchase in response to a stimuli (Jin et al., 2016). It is also the willingness of customers to react to certain actions (Thakur and Srivastava, 2015). Pre-purchase behavior involves consumers gathering information regarding the product and retail store to evaluate their purchase decision (Wang et al., 2013).

The prospect theory is based on the study of non-rational consumption behavior in a rational way (Gefen et al., 2003). According to prospect theory the individual behavior is based on how individuals grade different alternatives, their expected results and possible risk perceptions. Consumers choose the alternative with maximum gain. The purpose of this theory is mentioned in terms of the attitude and drive for shopping that can affect consumer evaluation standard on their behavior. The theory has been widely used to explain the behavior of consumers (Camerer, 2011).

The theory of reasoned behavior states that when different consumer attitudes converge they form behavior (Sheppard et al., 1988). The theory also states that in the consumer decision making process the consumer attitude has a direct impact on the behavioral intention (Zhang and Kim, 2013). Researchers have discussed the process of recognizing the product that they want to buy; the next step is that they gather information regarding the product and evaluate the product. Lastly, they purchase the product and send feedback. So, before buying the product the shoppers gather significant information about the product they

are intending to purchase so that their needs meet the demand. Purchase intention is stated as the possibility that buyers are willing to and able to purchase goods, an increase in purchase intention means that there is increased possibility that the shopper will buy the product. Purchase intention is also signaling behavior of consumers since an intention to buy represents positivity towards brand commitment (TEKİN et al., 2016). Purchase intention is also effected by a lot of external factors (Keller, 2001). These external factors can include variety of brands stocked in the store, physical location and timing (Das, 2014). The intrinsic factors include fulfillment of a need, preference satisfaction and placing the consumer in a better position (Luo et al., 2011).

H₁: Store image has a significant and positive effect on purchase intention

2.4 Learning Theory and Purchase Intention

Purchase Intention is influenced by the positive feelings associated with the brands carried by the retail store and external factors like store location, timing and brands sold by the store (Das, 2014). Intrinsic factors which affect purchase decision include fulfilling customer needs, satisfying customers and giving them an improved situation (Tang et al., 2011). Purchase intention can be used as a forecaster of consumer behavior suggested by Wu et al. (2011). Customers previous positive experience influences purchase intention (Kinard and Hartman, 2013). Learning theory suggests that to perform the purchase function consumers requires purchase and consumption knowledge for future repeat purchase (TEKİN et al., 2016). The two approaches to learning theory are behavioral and cognitive. The first one takes place because of the events happening in the external environment and reinforcement in learning. The second approach acknowledges the importance of the mental processes which play role in interpreting the environment and the past experiences with objects such as (brands etc). In this sense, store familiarity (Chebat et al., 2005; Diallo, 2012) and experienced based learning (Szymanowski and Gijbrecchts, 2013) play a crucial role in influencing purchase intention.

2.5 Service Quality

Service quality is the evaluation of the service provided by the service provider (Sharma et al., 2014). Service quality is based on five aspects touchable level, reliability, attentiveness, assurance and response (Rahman et al., 2012). The perceived service quality is based on the expectations and experiences (Jabnoun and Hassan Al-Tamimi, 2003). Service quality is a complex

term for customers to measure than product or price as noted by Nakhai and Neves (2009). According to them, the perception of measuring service quality is to link customer expectation to the actual service performance. According to Chuang (2010) service quality can be estimated by measuring differences between perceptions and expectations about a service. There are two types of service quality concepts that exist; one is American, and one is European (Brady and Cronin Jr, 2001).

The American perspective focuses on the functional quality of service quality while the European perspective focuses on technical quality with image of service along with the functional element. Fullerton (2005) has adapted the scales from the study of Brady and Cronin Jr (2001) who identified three dimensions to evaluate the concept of service quality. The three dimensions are interaction quality, outcome quality and environment quality. Interaction quality is defined as the interaction between quality of service and between service providers and consumers. This dimension includes three indicators which are known as attitude behavior and expertise. Environment quality is basically the interaction of consumers with the overall evaluation of the environment and atmosphere. This dimension includes the ambiance of the retail outlet, the design and other social factors. Lastly, outcome quality is the total quality output received or experienced by the customer and is known as the total service outcome evaluation. This dimension consists of the valence factor, waiting time and tangibles.

According to various researchers it was found that perceived service quality by the consumers is a critical driver in the customer perception and behavior (Parasuraman and Grewal, 2000). Product quality, service quality and price are the major drivers of perceived value which in return determine customer loyalty. As explained earlier in the literature it has been discussed that the service quality was initially described as gap between the expectation and actual outcome while later it was criticized for the reliability and validity by Wang et al. (2004). To overcome this issue Dabholkar et al. (2000) came up with the concept of overall service quality which combined perceptions and expectations into a single term. Until recently the overall service quality has been used in studies. Dabholkar et al. (2000) suggested that the specific aspects of service quality have existed before, instead of components, of overall perceived quality.

H₂: Store image has a positive and significant effect on service quality.

H₃: Service quality as a positive and significant effect on purchase intention.

2.6 Relationship between Store Image, Purchase Intention and Service Quality

Product quality is a key component of store image. Perceived product quality influences purchase intention (Wells et al., 2011). When a customer sees a product at a store, he takes an impression from the store and makes a perceived quality image in his mind. Product quality is also a determinant of repurchase intentions (Zhou et al., 2009). Store image can positively influence customers to buy products and services from the retail store and hence purchase intention (Bao et al., 2011; Di-allo, 2012; Grewal et al., 1998; Wu et al., 2011).

Store image and service quality lead to customer satisfaction which affects the intention of customers to repurchase. Retail service quality aspects like the sales deals, wider product range and store atmosphere leads to customer satisfaction (Pan and Zinkhan, 2006). The in-store service quality complements the store image since the service encounters and the physical appearances & behaviors have been rated highly by customers (Kim et al., 2012).

A direct and positive relationship between purchase intention and service quality has been found (Laroche et al., 2005; Mohan et al., 2013; Yap and Kew, 2007). Service quality has gained much importance by corporations since empirical studies investigated that service quality can help in improving the essential business objectives such as retaining customers and increasing productivity and profitability of firms (Carrillat et al., 2007; Kang and James, 2004; Ladhari, 2009). Also, service quality is viewed as the most difficult component to compete by competitors (Carlos Fandos Roig et al., 2006). Service quality enables value creation, value increases by increasing service quality while decreases with a decrease in service quality (Tam, 2012).

H₄: Service quality mediates the relationship between store image and purchase intention.

2.7 Framework

3 Research Methodology

3.1 Sample

The sample consisted of 265 customers of which 101 were males and 164 were females. The data were collected from the two stores Hyper star and Metro located in Lahore region. The respondents in the study included 94 employed, 81 unemployed, 64 full-time employed, 11 part time employed and 15 others which majorly included retired people. The education level of the respondents varied from 4 who were matric, 31 had done intermediate, 135 were bachelors, 82 were masters and 13 acquired some other education.

3.2 Measures

3.2.1 Purchase Intention

Purchase Intention has been measured using the scale developed by Ha and Jang (2012) and Vijay (2013). Five-point Likert scales have been used to take responses from the customers which range from strongly agree (5) to strongly disagree (1). The items under purchase intention measured the likeliness of customers intending to purchase from the store again. The estimate for reliability was found to be 0.927.

3.2.2 Store Image

Store image has been measured using the scale developed from the study by Dabholkar (1995) and Finn and Kayande (2004). Five-point Likert scales have been used in order to take responses from the customers which range from strongly agree (5) to strongly disagree (1). The items that measured store image included staff responsiveness, customer care, store atmosphere, shopping convenience and product assortment. The estimate for internal consistency was found to be 0.878.

3.2.3 Service Quality

Service quality has been measured using 5 point likert the scale developed from the study by Dabholkar (1995) and Verma and Duggal (2015). The items measured under service quality included physical aspect, reliability, personal interaction, problem solving, policy and information on retailers. The estimate for internal consistency was found to be 0.947.

3.3 Procedure

The survey was conducted with enough sample size making a strong basis to judge the impact of store image on purchase intention with mediating role of service quality. Quantitative approach has been used to and so self-administered questionnaires have been used to measure and validate the hypothesis. For the analysis purpose the processing tools used are SPSS (Version 22) and AMOS (Version 22) were used to perform analysis. The first phase involved data entry in SPSS. Data screening was done for finding outliers and missing values in SPSS. Descriptive statistics was used to spot any missing values and outliers in the data.

The next step involves checking reliability and validity of data. The reliability of factors was checked through the Cronbachs alpha value, Confirmatory Factor Analysis (CFA) and Structural equation model (SEM) have been used to examine the statistical ability and relation of the variables (Federici, 2013)]. Structural Equation Model (SEM) is a statistical tool that uses



Figure 1: Research Framework

factor analysis and path analysis (Qureshi and Compeau, 2009). SEM is used because its a more reliable statistical technique to analyze data with flexible assumptions and minimal chances of error.

4 Results

To measure the model a twostep approach has been incorporated. CFA approach has been used to test the model (Hair et al., 2011).

As a rule, the measurement model is tested before the structural equation model (Anderson and Gerbing, 1988; Sengars and Grover, 1993). Reliability is a measure to assess the internal consistency of the questionnaire (Sekaran and Bougie, 2016). While validity confirms that each item under the construct is actually able to measure the construct. Reliability and validity can be analyzed by Cronbachs Alpha value, factor loadings and the value of AVE and CR (composite reliability) (Carlson and Herdman, 2012).

The above table shows that the Cronbachs alpha value ranges from 0.877 to 0.934, the minimum acceptable value according to Hair et al. (2011) is 0.5. The value of AVE ranges between 0.513 to 0.616, all the values fulfill the minimum requirement of 0.5 (Hong and Cha, 2013). The composite reliability which is a measure of internal consistency ranges from 0.878 to 0.947, each item meets the minimum acceptable value of 0.6 (Fornell, 1982). The value of MSV should always be less than AVE, it measures the level to which a variable can be explained in terms of other variable (Farrell and Rudd, 2009).

4.1 Goodness of Fit

The maximum likelihood estimation method has been used to analyze estimates for the model (Chang and Tseng, 2013).

The above table shows the maximum likelihood estimation (Chang and Tseng, 2013). All the values in the acceptable range indicate that the model has an acquired model fit. The Chi-square value of 2.421 is acceptable which is below the acceptable value of 3. This value helps in evaluating the model by minimizing the effect of sample size on the model fit (Byrne, 2016). The value of GFI is 0.823 which is greater than the suggested value of 0.8. It is a goodness of fit statistic and

indicates the variance which is accounted by the population co-variance (Tabachnick et al., 2007). The value of AGFI which helps to adjust the GFI on the basis of degrees of freedom is below the suggested value of 0.8 and is 0.776. Research suggests that since the values of GFI and AGFI are influenced by the sample size and the degrees of freedom it is difficult to determine the suggested or appropriate values of GFI and AGFI from the perspective of power analysis (MacCallum and Hong, 1997). The value of TLI should be greater than 0.9 and for our model it is 0.889. TLI also adjusts the model on the degrees of freedom (Fornell, 1982). CFI is based on the assumption that all the variables are uncorrelated and on this basis it compares the sample co-variance matrix with the null model (Fornell, 1982). The value of CFI is 0.906 above the acceptable value of 0.9. RMSEA indicates the wellness of model, the value of RMSEA is below the minimum value of 0.08 for the model it is 0.073 which indicates model fitness.

4.2 Structural Equation Model and Hypothesis Testing

Hypothesis was tested through structural equation model. The results of the SEM did not confirm model fit purely based on our data but of other indices based on the (incremental fit) our model fits the data perfectly, i.e., (chi-square=2.421, GFI=0.823, AGFI=0.776, TLI=0.889, CFI=0.906, RMSEA=0.073). The results show that the independent variable store image has a significant effect on the dependent variable purchase intention and mediator service quality with a p-value less than 0.001. Therefore, hypothesis H₁ (Store Image → Purchase Intention) and H₂ (Store Image → Service Quality) are supported (Awang, 2012). This thus supports the argument that customers tend to buy more, their intention to purchase increases with an attractive image, quality merchandize and a comfortable shopping environment and this also effects the quality of service positively. With reference to H₃ (Service Quality → Purchase Intention), the ratios (S.E=0.038, C.R=7.532, p< 0.001) support the hypothesis.

4.3 Mediation Analysis

The purpose of this section of analysis is to determine the mediation hypothesis. According to Baron

Table 1: Item reliability, composite reliability and average variance extracted

| Variables | Items | Cronbach's alpha | AVE | CR | MSV |
|--------------------|-------|------------------|-------|-------|-------|
| Store Image | SII | 0.889 | 0.616 | 0.927 | 0.188 |
| Purchase Intention | PII | 0.877 | 0.595 | 0.878 | 0.224 |
| Service Quality | SQQ | 0.934 | 0.513 | 0.947 | 0.224 |

Table 2: Model Fit Summary

| Measures | Recommended Criteria | Model Fit |
|----------|----------------------|-----------|
| CMIN/DF | <3 | 2.421 |
| GFI | >0.8 | 0.823 |
| AGFI | >0.8 | 0.776 |
| TLI | >0.9 | 0.889 |
| CFI | >0.9 | 0.906 |
| RMSEA | <0.08 | 0.073 |

Table 3: Structural Model Results

| Structural Path (Standardized Regression Weight) | Estimate | S.E | C.R | P |
|---|----------|-------|-------|-----|
| H ₁ Store Image → Purchase Intention | 0.209 | 0.03 | 6.883 | *** |
| H ₂ Store Image → Service Quality | 0.228 | 0.047 | 4.864 | *** |
| H ₃ Service Quality → Purchase Intention | 0.288 | 0.038 | 7.532 | *** |

Note * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

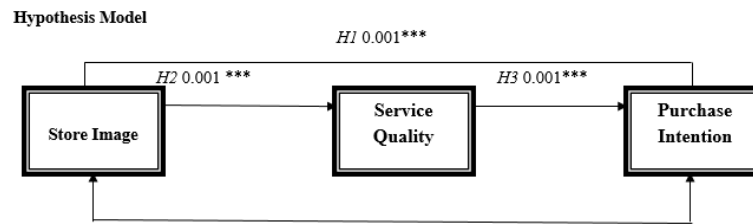


Figure 2: Hypothesis Model

and Kenny (1986), there are three levels of mediation that is full, partial and no mediation.

The statistical significance test for mediation is done through the bootstrapping technique with a sample size of 2000 (Shrout and Bolger, 2002). For the current study this sample size is used for measuring direct and indirect effects of (store image, purchase intention and service quality).

The above table shows the direct and indirect effects. The results presented in the above table explain service quality partially mediates the relationship between store image and purchase intention by fulfilling the direct and indirect path effect. This is also proven by the significant effect of store image on purchase intention with values ($p < 0.001, \beta = 0.355$), store image on service quality ($p < 0.001, \beta = 0.287$) and service quality on purchase intention ($p < 0.001, \beta = 0.388$). An insignificant effect is shown by ($p > 0.05, \beta = 0.111$) with the stan-

dardized two-tail significance being significant which hence proves partial mediation is caused by service quality.

5 Discussion

The study was conducted from the perspective of two international retail stores operating in Pakistan. As its evident from the presence of and opening of large malls and hypermarkets in Pakistan, a change in the shopping trend has been observed. Many studies have been conducted with the perspective of store brands or a brand name, but store image of large entities have not been fully explored.

The first hypothesis H1 is that store image positively effects purchase intention. A strong and positive relationship has been found between store image and

Table 4: Direct and Indirect Effect

| Direct Effects | | |
|-------------------------|--------------|----------------|
| | Standardized | Unstandardized |
| SI → PI | 0.355*** | 0.209*** |
| SI → SQ | 0.287*** | 0.228*** |
| SQ → PI | 0.388*** | 0.288*** |
| Indirect Effects | | |
| SI → SQ → PI | 0.111 | 0.066 |
| Two-tailed significance | 0.001 | |

Note * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

purchase intention, since the perceptions of store image play an important role in building perception in consumers minds which then creates image whereas purchase intention is the reflection of the consumers idea of store image in their minds. It has been stated that consumers will purchase more if there is positive store image (Collins-Dodd and Lindley, 2003; Diallo, 2012).

The next hypothesis is that store image has a positive relationship with service quality. This is also supported by the existing literature. Store image has been described as a complex combination of dimensions which are build up from consumers past shopping experiences (Weber Cullen et al., 2002).

The third hypothesis is that service quality has a significant positive impact on purchase intention. The hypothesis was derived from the existing literature in field. Service quality is defined as the extent to which a customer is satisfied from availing the services. Consumer purchase intention is the desire to buy a product or service (Diallo, 2012). Direct relationship has been found between image of a store and purchase intention, also applicable in case of private store brands. It has been stated that when store image is positive the chances of purchase increases automatically (Collins-Dodd and Lindley, 2003; Diallo, 2012). Although, service quality has not been measured as a mediator between store image and purchase intention, but our research concludes from the statistical analysis that service quality partially mediates between store image and purchase intention and hence our fourth hypothesis H4 is also accepted based on the statistical results.

5.1 Limitations, Conclusion and Recommendations

The research has some limitations. Firstly, it was only conducted in the Lahore region (Pakistan) with two retailers (Hyper star and Metro). For study with a broader perspective other region with these two retailers could have been included for more generalized results. Secondly, one of the restrictions was time otherwise its a better option to go for longitudinal research since it covers a broader time frame and it studies the

cause and effect relationship between variables more thoroughly (Ryder et al., 2006). Thirdly, store image is built up of a number of factors which can effect purchase intention and likewise service quality has several dimensions, the dimensions of each of these variables were chosen based on the study of the two retail stores with respect to our culture, since both the retail stores are international study could have been conducted across cultures to get a wider and clearer picture of the variable effects and interrelationships. Lastly, for better research results a combination of qualitative and quantitative research could have been used for the study.

5.2 Future Directions

Since this research is an initial effort as a research student, further inquiry into the subject is required, for example other dimensions of store image and service quality can be included in the study. An, overall study was conducted to evaluate the effect of store image on purchase intention, the subject of research was wide and general, future researchers can restrict research for example specify to departments like grocery, furniture, electronics for more specified and accurate results this can help researchers to go in depth of the research issue. From the perspective of store image and purchase intention, online purchases can also be focused since many modern retailers are offering online and home delivery services. Also, more than one independent variable can be added to study the effect on purchase intention for example store loyalty and store image could both contribute effect on purchase intention. Future research could also target psychographics and demographics of customers, segmentation of customers would give more accurate results and basis for analysis. Longitudinal research should be used by future researchers this would help them to get a wide range of results with broader perspective and the cause and effect relationship can be understood more effectively. A comparative study should be done between two or more cities; this would give a broader perspective.

A mixed method of research can be used for future research that would include both quantitative and qualitative research. Retailer perspective should also be entertained, and data collection should be done with the customer and retailer perspective.

5.3 Implications

The marketing managers utilize the results obtained from the research to make critical marketing decisions. The study indicates that store image has a significant effect on service quality and purchase intention. Therefore, managers can make the perception of stores better by enhancing the service provided to customers. For instance, the management staff can improve the quality of interaction between the staff and the customers. The store environment can be improved and made more attractive to attract customers. Other atmospherics can be focused like the kind of music played at the retail store, in-store facilities, layout of store etc.

Store image can also be improved by improving the variety of products, the product quality, product offerings, improving the ambiance of the store, making the store more attractive with physical facilities. The research can provide guideline for the marketing managers of the stores to device their marketing strategy and thus improve the target customers with affecting the purchase intention through improvements in the store image and service quality provided by both Hyper star and Metro.

5.4 Conclusion

The research conducted reveals the factors which can influence the customers intention to purchase in two international retail stores Hyper star and Metro operating in Pakistan. The research has given some useful insights that marketing managers may have overlooked while strategizing their marketing plans. The conventional criteria of marketing managers that was product, price, promotion and placement have now been replaced by other influential factors like interaction, store atmospherics, store image building and these factors have been proven substantial in enhancing customers purchase intention.

The study has proven that store image which includes staff responsiveness, customer care, store atmosphere, product assortment and shopping convenience play an important role in affecting purchase intention (TEKİN et al., 2016). The practical implications of this research can be very useful for people involved in hypermarket business and those who want to enter the retail business.

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The Impact of Operational Flexibility on Firm Performance: Evidence from Pakistan's Textile Sector

Pervez Akhtar*¹ & Fahad Muqaddas²

^{1,2}NUML Business School, National University of Modern Languages, Islamabad, Pakistan

Abstract. This paper examines the impact of operational flexibility on firm performance. This research aims to determine the impact of two specific flexibility types on firm performance in the textile industry of Pakistan. Flexibility categories are defined as volume flexibility and material handling flexibility. Both categories of flexibility are significant for a textile sector as the material handling is one of the main issues on the production floor in textile mills, while volume flexibility is the core of competition regarding variety in the product line. The empirical data were collected through a questionnaire addressed to 360 production and operations managers in Pakistani textile companies. Out of which 250 questionnaires that answered all the questions were evaluated and analyzed. The linear regression method was used to identify the impact of volume and material handling flexibility on firm performance. Overall results showed that volume flexibility and material handling flexibility both have a positive impact on firm performance in Pakistan textile sector.

1 Introduction

Modern business world is universal and aggressive in nature. The quick replacement of products on shelves, short product life cycles, knowledgeable and well-informed customers is the characteristics of modern business environment. These characteristics make manufacturing firms more responsive. For this reason, modern manufacturing systems are expected to be fast, efficient and effective in creating and sustaining the competitive advantage (Duclos et al., 2003). All Over the world, manufacturing industry has experienced a rapid and unexpected change in the last few decades, including changes in competitive behavior, suppliers attitude, customer expectations, production processes, and technology (Wiggins and Ruefli, 2005).

A significant number of authors have viewed the types of intensification and changes in competition (Hum and Sim, 1996; McNamara et al., 2003; Meredith et al., 1994; Spina et al., 1996). These authors are convinced that there are many cases of failure in the business sector because of static business operations. Ford closed its five plants in North America in the past due to shortage of parts. Cell phones manufacturer Ericsson lost its share prices against Nokia in 2000 and ultimately left the handset market because of interruption in chips supply for its new models (Radjou, 2000). Boeing, the maker of the largest airplanes in the world had to bear the loss of \$2.6 billion in 1997 because two of its suppliers were unable to deliver the critical parts on

time.

The environmental turbulence can be solved considerably through manufacturing flexibility. Organizations are dependent on the environment because they procure inputs and sell their outputs in the same environment. It is the responsibility of top-level managers to build such a relationship with the external business environment that guarantees firms survival in the long run. This is often called a strategy, through which different short-term plans and programs can be formulated (Eppink, 1978). If organizations want to compete successfully, they must upraise flexibility in their operations (Duclos et al., 2003).

This study explores the relationship between operational flexibility and firm performance where operational flexibility (material handling flexibility and volume flexibility) is taken as an independent variable, while firm performance (operational) is a dependent variable. The quantitative method is used to collect the data from 360 textile firms of Pakistan. A seven-point Likert scale questionnaire is used to collect data from production and operation managers. The data is analyzed by using PLS and SPSS statistical packages.

This study is novel in the sense that there are few such studies conducted on manufacturing flexibility on such a significant sample of more than 350 firms in the Textile sector of Pakistan. The combination of volume flexibility and material handling flexibility is not tested yet in the best knowledge of the researcher. The following sections will present the literature on operational

*Corresponding author.

Email: pervaizakhtar915@gmail.com

flexibility and firm performance.

2 Operational Flexibility Definitions in Literature

There is no single definition of flexibility in existing literature. Flexibility is the strength of any organization to fulfill the increasing expectations of customers without an increase in cost, time, performance losses and organizational disruptions. Flexibility is not a single dimension concept; instead it has multidimensions that can be defined in different ways.

It is a multi-dimensional concept which can be defined in numerous ways. According to Gerwin (1987) flexibility is the ability of an organization handle the uncertain future. Corr ea (1994) defines flexibility as the interaction between external environment and the system of an organization. De Toni and Tonchia (2001) defined flexibility as a concept of adaptation and change. Dixon (1990) associated it with cost, service, and product quality. According to Upton (1995, 1994), it is all about providing more and more options to the customers, responding quickly to the customer needs, and performing productively in this regard.

2.1 Volume Flexibility

In literature, we cannot find a single agreed definition of volume flexibility. Upton (1994) defines it as the ability of a production system to alter the product volumes. Sethi and Sethi (1990) defined it as the ability of the production facility to operate efficiently and effectively at different levels of output. According to Gerwin (1993) it gives production managers a change to raise or decrease the overall production levels.

Stigler (1939) initiated the study by measuring the volume flexibility with an economics concept average cost curve. According to him, steeper cost curve shows the inflexibility of a firm. Oi (1961) argued that during the price fluctuations period volume flexibility increases the firms profit. Tang and Tomlin (2008) argued that a firm could risk its supply chain by sourcing from an unreliable supplier or it can minimize this risk by taking supplies from a reliable supplier who has volume flexibility. Zailani and Rajagopal (2005) suggested that volume flexibility can be utilized to overcome the problems of replacements on time demanded and claimed by customers. According to Fisher et al. (1997) if firms have better information regarding future demands they can make better decisions of investment to achieve volume flexibility. Anupindi and Jiang (2008) established a strategic relationship between quantity and price under demand vagueness. They concluded, in a competitive business market decision to invest in volume flexibility depends on demand stability.

The point of view presented by different scholars above leads to the formulation of below hypothesis.

H₁: Volume flexibility is positively associated with firm performance.

2.2 Material Handling Flexibility

Material handling flexibility is about moving the raw material on a production floor. It is the capability of a system to handle different material types on production floor in such a way that proper processing and positioning can facilitate the overall production process. It covers the transporting of parts, loading and unloading, and finally storing them under the changing conditions of a manufacturing facility. Klotz and Chatterjee (1995) defined material handling flexibility regarding location of machines, the linkage between each pair and group, and time consumed for every potential move between the machines. Sadler and Hines (2002) emphasized on buffer sizes, which can be defined as the ability to adjust and accommodate different shapes, sizes, and adjustment of material moving in an emergency. Flexibility in material handling is very crucial and essential for any firm. The flexible material handling arrangements surge the readiness and utilization of machines and reduces the throughput times.

Flexibility in handling materials can be achieved with automated devices such as pushcarts and fork-lift trucks on the production floor. The layout of the production floor should be supportive of the movement of these automated devices. To have flexible production system devices like robots, automated guided machines, and computer-controlled vehicles would be required to achieve material handling flexibility. These machines can be used to transport different parts to a location where there is a mechanical breakdown or any blockage (Stecke, 1986). Gerwin and Kolodny (1992) conducted research in Sweden and concluded that more space, better layout, better ergonomics, a cleaner environment and use of automated devices could increase material handling flexibility.

The parallel assembly lines facilitate an assembler not to get slower because of a problem. With access to material, the operators become more autonomous of system and staff and can control their activities in an improved way. This can increase material handling flexibility as compared to traditional systems.

Chatterjee et al. (2006) presented a concept of common material handling arrangements that can connect one machine with another. According to them the material handling flexibility is the ratio of paths supported by a common system. de Bie et al. (1998) identified the critical features in material handling devices and assigned weights to these features based on their material handling capabilities to measure the material handling flexibilities. Stecke (1986) estimated that flexible man-

ufacturing system's performance increases with the increase in material handling flexibility. Stecke (1984) identified subsequent systems to increase flexibility in the manufacturing system. These are roller conveyors, power conveyors, belt conveyors, monorails, mono tractors, and other automatic guided devices. They emphasized on different devices and evaluated them for their influence on different types of flexibilities. Following hypothesis is formulated based on the above literature review.

H₂: Material handling flexibility is positively associated with firm performance.

2.3 Firm Performance

According to the existing literature, corporate performance is a multidimensional phenomenon. However, there is no consensus among the researchers that what should be included to measure the firm performance and what should not (Arzu Akyuz and Erman Erkan, 2010). Bourne et al. (2003) did the literature review of past literature on firms operational performance and concluded that it is measured with four main dimensions in the past cost, quality, time and flexibility. Beamon (1999) presented three categories of performance measurement from the supply perspective. They are flexibility, output and source related measures. Gunasekaran et al. (2004), on the other hand, presented performance measures as operative, tactical and strategic.

Beamon (1999) and Gunasekaran et al. (2004) proposed financial measures to judge firm performance which includes sales, profit, and return on investment (ROI). Capon et al. (1990) suggested that performance can be measured through costs, operational efficiency or financial efficiency. According to Hofmann and Locker (2009), firm performance should be measured with both financial and non-financial measures. Martin and Patterson (2009) argued that firms operational performance measures should include lead time and assets utilization. Lai et al. (2002) divided performance into two categories: external performance and internal performance and concluded that measures such as reliability, flexibility, and supply chain responsiveness could be used to measure external performance while cost and assets utilization can be used to measure internal performance.

This research study uses both financial and non-financial measure to judge the performance of the Pakistan textile sector. The financial measures are net profit growth (NPG) and sales growth (SG); while, non-financial measures are customer satisfaction (CS) and lead time (LT).

3 Research Methods

This research study is based on quantitative methods of research. The data are collected through a seven-point Likert scale questionnaire from respondents. The unit of analysis for this research is production and operations managers of Pakistans textile firms. The collected data were analyzed by using PLS-smart statistical package and SPSS.

3.1 Research Model

3.2 Sample Selection

Research population for this study is the textile sector of Pakistan. According to the figures provided by Ministry of textile and Industry and All Pakistan Textile Mills Association (APTMA, 2017) textile sector of Pakistan has 1513 textile processing, printing and finishing mills, (medium and large), The sample was derived out of the total population by using the scientific formula for sampling calculation. As per the statistical research formula, the sample size for this research study is 306 firms approximately. This study is based on large size firms. The size of firms is based on their total capitalization in the textile sector. PXI (Pakistan Stock Exchange Index) data was used to select firms based on their market capitalization. See below Cochran (2007) formula used for sampling.

$$n_o = \frac{Z^2 pq}{e^2}$$

Where:

- e is the margin of error
- p is the (estimated) proportion of the population which has the attribute in question,
- q is 1 - p.

4 Results

Following sections present the results of this research study. The latter part of this section presents the conclusion and recommendations for future research.

4.1 Factors Loading

Factors loading results show that there were some factors which did not meet the criteria of .70 on the factor loadings on the reflective construct model. In volume, flexibility constructs all the factors have loading above .70. For volume flexibility, all five factors were

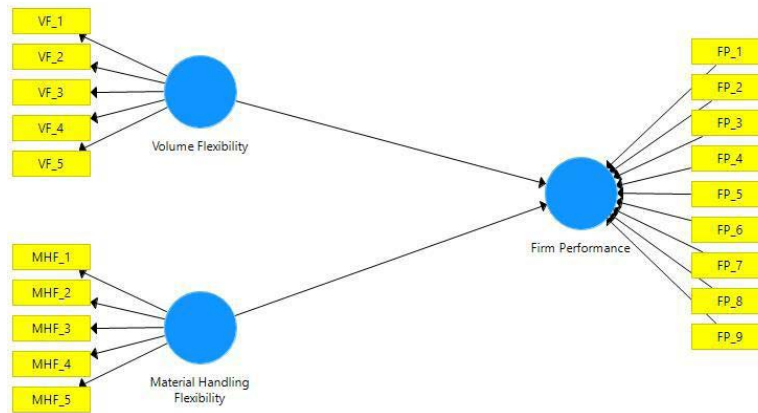


Figure 1: A priori research framework

kept in the final model. While on material handling flexibility all the factors have loading above the statistical criteria that is .70 except factor MHF.4 which was dropped in the final model. On the firm performance factors, only three factors meet the criteria of having factors loading above .70, so all other factors were dropped.

4.2 Factors Loading & Final Research Model

The figures in table 1 show the construct reliability and validity of the scale used in this research. Cronbach’s alpha values show that all three variables of this research have a strong loading which are 0.801 for firm performance, 0.856 for material handling flexibility and 0.830 for volume flexibility.

Correlation matrix shows that there is a strong correlation between the independent and dependent variables of this research. Material handling flexibility figures show that it has a correlation of 0.43 approximately which means that there is a strong correlation between material handling flexibility and firm performance. Volume flexibility also has a strong correlation. The correlation between volume flexibility and firm performance is 0.544. The correlation figures of both independent variables suggest a strong correlation between manufacturing flexibility and firm performance. Both independent variables have a correlation of 0.43 between each other.

To investigate the contribution of independent variables independent variable, a simple regression model was used in which firm performance acted as dependent variable while the volume flexibility and material handling flexibility were taken as independent variables. The linear relationship between the variables was observed as follows.

$$Y = \beta_0 + X_1 + X_2 + \epsilon$$

Where,

- Y= firm performance
- β_0 = constant term
- X1= volume flexibility
- X2= manufacturing flexibility
- ϵ = error term.

Table 3.0 presents the regression analysis results. The relationship between independent and dependent variables is significant ($p = 0.00$) and positive the R-Square figure shows that almost 40% variance is explained by both independent variables of this research in firm performance while the individual variance explained by volume flexibility is 0.389 or 39% and material handling flexibility has the contribution of 0.36 or 36% with at statistics of 8.04.

5 Discussion

The overall results are in line with the past research studies. It adheres to the proposition of the resource-based view theory (RBV) that firm performance is a function of resources mix [Fredericks \(2005\)](#). Many scholars have found similar results if a firm has flexibility in its system through which it can handle variation in demand and supply this will result in better firm performance. The importance of internal resources in creating firm performance and gaining competitive advantage is well known by the executives. So, it is quite notable that how firms differ when they generate, configure and deploy resources to compete within the same industry for higher performance ([Hooley et al., 1990](#); [Sirmon et al., 2007](#)).

The material handling flexibility should be in greater control of the organization as it can result in better performance as the results show in this research. [Kim and Pekrun \(2014\)](#) also found the same results that firms with higher level of flexibility enjoy better performance, whereas firms with a lesser level of flexibility face difficulties to achieve their desired goals.

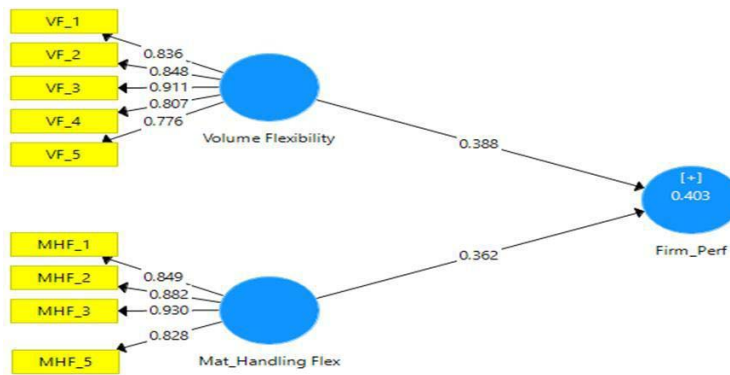


Figure 2: Source: PLS-Smart Output

Table 1: Construct Reliability and Validity

| | Cronbach's Alpha |
|--------------------------------------|------------------|
| Firm Performance | 0.801 |
| Material Handling Flexibility | 0.856 |
| Volume Flexibility | 0.830 |

Source: Authors own elaboration

Table 2: Correlation Matrix

| | Firm Performance | Material Handling Flexibility | Volume Flexibility |
|--------------------------------------|------------------|-------------------------------|--------------------|
| Firm Performance | 1.00 | | |
| Material Handling Flexibility | 0.439 | 1.000 | |
| Volume Flexibility | 0.544 | 0.439 | 1.000 |

Source: Authors own elaboration

Table 3: Regression Analysis

| | R-Square | Adj. R-Square | t-statistics | p-value |
|-------------------------|----------|---------------|--------------|---------|
| Firm Performance | 0.403 | 0.389 | 8.04 | 0.00 |

Sources: Authors own elaboration.

Kumar et al. (2008) also found a significant relationship between material handling flexibility and firms operational performance. They emphasized on buffer sizes, which means that operational flexibility enables the firm to produce different varieties of a product (i.e. size, design) in case of emergency or expansion.

Volume flexibility also shows a positive relationship with firm performance in this research study. This result is in support of past studies conducted by Cachon and Kök (2007) and Anupindi and Jiang (2008) who established a strategic relationship between quantity and price under demand vagueness. They concluded that in a competitive market decision of investment in volume flexibility could lead to better firm performance.

In the literature on operational flexibility, Parker and Wirth (1999) developed measures of volume flexibility and classify connections between different types

of flexibility. Jack and Raturi (2002) used case studies method to segregate the basics of volume flexibility and their impact on firm performance. Vokurka and Lummus (2000) conducted a survey on the literature of volume flexibility and concluded that volume flexibility is positively correlated with firm performance and managers should take timely decision to make their firm's volume flexible.

6 Conclusion

Based on the results of this research study and discussion presented in the last part of this research paper it can be concluded that operational flexibility has a positive impact on firm performance. The operational flexibility was presented by volume flexibility and material handling flexibility in this research. The results

show that volume flexibility has slightly more impact on firm performance than material handling flexibility so, in the textile sector of Pakistan, managers should focus more on volume flexibility in comparison to material handling flexibility however, both are equally important for better performance as the difference between volume flexibility and material handling flexibility's contribution towards firm performance is not that visible. So, managers should focus on overall manufacturing flexibility so that they can achieve better results.

6.1 Implications, Limitations, and Future Research Directions

This research study can be a good guideline for the managers in Pakistan's textile sector. They can learn the importance of operational flexibility and its impact on their firm performance. For the future researchers, this study can be a good guideline and source of literature. Moreover, this study is conducted on the textile sector of Pakistan; the future researcher can apply the same model or can enhance this model in other countries or regions especially, the close competitors of Pakistan's manufacturing sector, like India, China, and Bangladesh, which have the different business environment.

This study has a limited scope; although many literature sources were reviewed on the impact of operational flexibility and firm performance, it is not possible to cover all relevant sources. So, it is possible that some of the researchers, practitioners and audience disagree with the findings of this study.

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Can DuPont Analysis Predict Voluntary Delisting from Stock Exchange? Evidence from Pakistan

Muhammad Nadir Hussain Khan*¹ & Haji Suleman Ali²

^{1,2}COMSATS University Islamabad, Pakistan

Abstract. This study explores whether voluntary delisting of companies from stock exchanges can be predicted by the DuPont Model. ROE (Return on Equity), NPM (Net Profit Margin), ATO (Assets Turnover) and LM (Leverage Multiplier) of 13 voluntarily delisted firms from Karachi Stock Exchange were compared with same ratios of respective sectors for 6 years preceding the delisting year by applying t-test. Difference of means of DuPont ratios between voluntarily delisted firms and their respective sectors were not found statistically significant. Thus, ROE, NPM, ATO and LM, which are the measures of profitability, asset utilization (efficiency) and leverage respectively, are not the significant predictors of voluntary delisting decisions in Pakistan. To the best of researchers knowledge, this study is first attempt to differentiate between voluntarily delisted and listed companies on the basis of DuPont Model.

Keyword: DuPont Model, ROE, NPM, ATO, LM, Voluntary Delisting

1 Introduction

A stock market functions as financial intermediary as it channelizes funds from surplus units to deficit units. Businesses find registration with stock exchanges beneficial for them. There is a possibility to raise funds from a wide spectrum of investors. Equity markets can be efficient and cost effective sources of funds under tight monetary regime with higher debt costs. It also decreases companies dependence on debt markets, and thus reduces interest burden. Listed firms can attract highly skilled staff by offering them stock options and other such incentives. Listed companies receive more media and analysts coverage which adds to the value and publicity of the company. Companies can bring their abnormal leverage back into balance.

Benefits that a listed company is likely to receive by listing include relaxation in borrowing constraints, more liquidity, enhanced bargaining power with banks, and the recognition of investors (Pagano et al., 1998; Ritter, 1987). Increased access to public markets and more transparency provides companies with better bargaining power when it comes to negotiation with banks, and thus they have less borrowing problems and more diversification of sources of funds (Bharath and Dittmar, 2006; Pagano et al., 1998). Corporations raise equity either to finance their growth or to bring their leverage back into balance (Pagano et al., 1998). US survey, on the other hand, suggests that raising funds is not the only reason behind companies go-

ing public, they do so to create shares that could be used in future acquisitions (Brau, 2012). Across the Atlantic, the European companies get listed for the purposes of enhancing their bargaining position with banks, leverage reduction, and the organizations that cannot achieve their purpose of rebalancing their leverage by raising equity funds decide to turn private (Bancel and Mittoo, 2009). Findings from Bancel and Mittoo (2009) also suggest that firms go public to have more recognition. Better liquidity is an extra advantage for publicly listed companies as IPOs result in ownership distribution and superior level of liquidity with very little transaction expenses (Pagano et al., 1998).

Share liquidity is a very vital factor for the decision to go public and it is more important in United Kingdom than in continental Europe (Bancel and Mittoo, 2009). High growth companies need funds to finance their growth and they are likely to benefit by listing themselves on stock exchanges because this reduces their difficulties regarding funds as they have access to low cost external financing (Bharath and Dittmar, 2006; Fischer, 2000; Pagano et al., 1998). Bharath and Dittmar (2006); Marosi and Massoud (2007); found that firms having more growth opportunities are more likely to stay listed in order to raise more funds to finance their growth. Bancel and Mittoo (2009) showed that chief financial officers (CFOs) of European firms believe that funds for the growth opportunities that lie before corporations are a very important consideration while deciding to go public.

*Corresponding author.

Email: nadir.rehan1979@gmail.com

Karachi Stock Exchange was the largest and most liquid stock exchange of Pakistan until January 2016, when all the three stock exchanges of Karachi, Islamabad and Lahore were integrated into one Pakistan Stock Exchange. Pakistan was ranked third in 2014 amongst Worlds best performing markets a third consecutive year when the Country had earned a place amongst Worlds top 10 performing markets. By the end of April 2015, 560 companies were listed on Karachi Stock Exchange with listed capital of Rs.1177.77 billion (\$11.77 billion) with market capitalizations of Rs. 7305.81 billion (\$73.05 billion).

While there are benefits of being listed at stock exchanges, and many companies try to get themselves listed every year around the Globe, but at the same time many listed companies get delisted from the stock exchanges as well. Delisting is mainly of two types; involuntary and voluntary (Macey et al., 2008). Involuntary delisting is when a firm does not deliberately get delisted, but is delisted either due to financial distress (declared bankrupt by the Court of Law), or is merged into and acquired by some other company, or is delisted by the regulators for the breach of law. On the other hand, voluntary delisting is when a company requests a stock exchange to delist it and buys back its shares from general public and ceases to be a public company out of its own will. Voluntary delisting is called Going Private Transaction-GPT. Literature in corporate finance covers the decision of corporations to go public, and the opposite phenomenon is not studied in detail. Past decade witnessed upsurge in delisting around the Globe. According to the SDC (Securities Data Company), 900 companies have been delisted from US financial market since 1996. The numbers of listed companies in United States in 2012 were 14% less than the numbers of listed companies in US in 1975. Europe has not been an exception either. In two decades from 1995 to 2005, the number of listed European companies shrank by 25%.

Ever since the inception of 21st Century, as many as 211 companies had been delisted from Karachi Stock Exchange in 16 years. The number compared with 560 listed companies is huge. A list of delisted companies from 1963 onwards is available on website of the Karachi Stock Exchange (now Pakistan Stock Exchange) and for all the companies delisted since the start of 2001, reason of delisting for each company had also been mentioned. Companies had got delisted for a variety of reasons. For example, a few companies voluntarily closed their businesses, some of mutual funds were converted into open-ended mutual funds, some companies got liquidated by the orders of Court of Law, and a large number of companies were delisted for they violated the listing regulations of the Karachi Stock Exchange. However, 78 out of these 211 companies opted to delist from the Karachi Stock Exchange voluntarily and went Private after having bought their

shares back.

Now, that has been the research problem for this study. What circumstances did lead them to go Private? Did they have unique characteristics (as compared to their industry peers which stayed listed) on the basis of which we can predict if a company is going to be delisted? Were they facing profitability, efficiency and capital structure issues? The study particularly focused if components of DuPont analysis can serve as a predictor for voluntary delisting of firms. DuPont Model has not been applied to differentiate between the voluntarily delisted companies and the companies that stay listed. This is unique and first of its kind study. Therefore, the research contributes to theory of corporate finance, and is of fundamental importance as predictability of voluntary delisting of firms may change investors behavior towards them. The research will open a new avenue in corporate finance and may have theoretical and practical implications for future researchers, academicians and policy makers.

2 Theory and Hypotheses

DuPont Model, also known as DuPont Analysis, DuPont Equation, DuPont Identity or DuPont Method, was developed and employed by DuPont Corporation in 1920s to calculate Return on Equity (ROE). ROE, calculated through net Profit divided by equity, is an important measure of a firms performance and it tells how much a firm earns or loses for its shareholders. This is Warren Buffets favorite ratio. Mr. Warren Buffet is one of the Worlds richest persons and has earned most of his wealth by investing in stocks. However, ROE alone does not tell where the performance of the firm is coming from. In order to overcome this problem, DuPont Model breaks down ROE into following parts:-

$$\text{ROE} = \text{Net Profit Margin (NPM)} * \text{Assets Turnover (ATO)} * \text{Leverage Multiplier (LM)}$$

Net Profit Margin (NPM) is calculated through net profit divided by sales, and is a measure of operational efficiency of the firm. NPM can be increased by either charging premium prices or by controlling production as well operating costs. Companies, with distinguished product and strong brand power, charge premium prices to increase their margins, whereas companies following cost leadership strategy rely more on cost saving to offer competitive prices to their customers. Assets Turnover (ATO), calculated through sales divided by assets, is a measure of assets management and assets utilization of the firm. It points at how optimally assets are used to generate sales revenue. Firm with differentiation strategy may have lower sales than firm with cost leadership strategy, because, the

former relies on margin and the latter on turnover. Finally, leverage multiplier (LM), calculated through assets over equity, hints at financing policy of the firm. What is debt-equity mix and what percentage of assets are financed by debt, and equity? Higher ratio represents higher leverage. Leverage acts as double-edged sword. If a company's debt generates more returns than its cost, then ROE will increase. A return on debt lower than its cost will work the other way. Thus, leverage can have positive as well as negative effects on ROE. DuPont Model tells where the ROE is coming from. It is viewed well if it comes from NPM and Assets Turnover, and poor if it comes from leverage, because high leverage increases finance cost as well as financial risk. A successful firm should at least have either of two ratios of NPM and Assets Turnover above its rivals and competitors.

How does DuPont model relate to voluntary delisting of companies from stock exchanges? It has already been established that companies enlist themselves on stock exchanges to finance their growth (Bharath and Dittmar, 2006; Marosi and Massoud, 2007; ?). Growth ultimately increases sales, size and profitability of companies. And, when more funds are raised through equity, it reduces and balances leverage. DuPont model captures these variables. A company may remain listed on stock exchange as long as its enlistment motives are achieved, and therefore has high ROE, NPM, ATO and balanced LM. Otherwise, company may find it appropriate to delist from stock exchange. Therefore, it may be expected that voluntarily delisted companies may have lower ROE, NPM, ATO and higher LM in delisting preceding years compared with peer companies that stay listed. While there is no direct evidence on how DuPont analysis specifically predicts voluntary delisting decision, however literature review presents many hints towards it. Common characteristics of voluntarily delisted firms are small size, young age, lower growth opportunities, low liquidity, low turnover, undervaluation, high leverage and low profitability. The components of DuPont Analysis can be employed to examine and compare ROEs, NPMs, ATOs and LMs of voluntarily delisted firms with those that remain listed to check if there exists disparity which may help in predicting delisting decisions. Pour and Lasfer (2013) very recently researched into the reasons of voluntary delisting of firms from Alternative Investment Market (AIM) and concluded that along with other things, companies with low profitability delist from AIM. Profitability is measured by ROE and NPM. Boucly et al. (2009); Renneboog et al. (2007); Weir* et al. (2005) have concluded that, along with other things, companies with small size are more likely to delist voluntarily. Size is measured by Assets (Kang, 2017) and sales the two together make ATO (Asset Turnover ratio calculated as Sales/Assets). Corporations raise equity either to finance their growth or to

bring their leverage back into balance (Pagano et al., 1998). Across the Atlantic, the European companies get listed for the purposes of enhancing their bargaining position with banks, leverage reduction, and the organizations that cannot achieve their purpose of rebalancing their leverage by raising equity funds decide to turn private (Boucly et al., 2009). Thus, high or abnormal leverage is also associated in literature with voluntary delisting of firms. Thus, the final component of DuPont analysis namely leverage multiplier (LM) becomes relevant proposition. Pour and Lasfer (2013) reported that voluntarily delisting companies have negative returns, low profitability and high leverage. El Kalak et al. (2018) have recently observed that voluntary delisting is all the more likely when companies revenues fall or expected to fall sharply in the times ahead. They also empirically found that small size and high leverage predict voluntary delisting. From 1998 to 2001, Weir* et al. (2005) researched into the characteristics of delisted firms that opted to go private via LBO. They compared 117 firms with a sample of 362 companies that opted to remain public in the same period and revealed that the delisted firms were smaller, younger, diversified and had lower growth opportunities before them. Thomsen and Vieira (2007) researched into the determinants of 3,577 delistings among 12,612 European companies from 21 different countries between 1995 and 2005. Their findings unfolded that the delisted firms were slow-growing, undervalued and relatively illiquid. More recently, Boucly et al. (2009) examined 830 French firms that delisted via an LBO in 1994-2004 period. By matching the LBO firms with a control group of firms that belong to the same business sector, they found that smaller and undervalued firms were the most likely targets for LBOs. Hensler et al. (1997) compared surviving IPOs Vs. non-surviving IPOs and concluded that age, size and initial return increase survival time. Thus, low profitability, poor efficiency and high leverage are generally associated with voluntary delisting. Therefore, voluntarily delisted companies have lower profitability (ROE, NPM), lower efficiency (ATO) and higher leverage (LM) than average ROE, average NPM, average ATO and average LM of the industries they belong to. Based on extensive literature review, the study proposed following hypotheses:

H₁: Average ROE of voluntarily delisted firms and their respective industries are not equal.

H₀₁: Average ROE of voluntarily delisted firms and their respective industries are equal.

H₂: Average NPM of voluntarily delisted firms and their respective industries are not equal.

H₀₂: Average NPM of voluntarily delisted firms and their respective industries are equal.

- H₃: Average ATO of voluntarily delisted firms and their respective industries are not equal.
- H₀₃: Average ATO of voluntarily delisted firms and their respective industries are equal.
- H₄: Average LM of voluntarily delisted firms and their respective industries are not equal.
- H₀₄: Average LM of voluntarily delisted firms and their respective industries are equal.

3 Methodology

Data were obtained from balance sheet analysis reports, compiled and published by the State Bank of Pakistan. Our population is companies delisted voluntarily from Karachi Stock Exchange since the start of 21st Century. Of the 78 companies voluntarily delisted from Karachi Stock Exchange till December 2015, data of 33 companies allowed us to calculate ROE, NPM, ATO and LM. Data of one company delisted in 2016 was also obtained from the same source. Thus, in total, data of 34 companies was available to us for this research. We calculated all the four ratios of DuPont Analysis namely ROE, NPM, ATO and LM for the 6 years preceding the delistment year. These ratios were compared with the same ratios of Industry to see if there existed dissimilarity. There were some difficulties too. In some cases, either the data were not available or calculating the ratios didn't make sense due to peculiar circumstances of the companies. For instance, there were numerous cases where both net profit and equity were negative. Now, calculating ROE in such a case would result in a positive integer, which does not make sense for a company that has negative profitability and negative equity. Many companies could not be included in final data due to these two reasons. Therefore, many such companies were dropped, which otherwise might have helped in proving our hypothesis and only the companies whose data made sense for the purpose of descriptive statistics and comparison with industries were included in final sample.

Finally, 13 companies, whose data set was complete for 6 years preceding and adjacent to delistment year, were chosen. DuPont components were calculated for the delisted companies and their respective industries and compared through t-test in line with Kang (2017). Since the sectors DuPont ratios include the companies listed on Karachi Stock Exchange, therefore the comparison was virtually between voluntarily delisted companies and the companies that stayed listed. The Data of 6 years preceding and adjacent to the delistment year were categorized into 2 groups, T-6 to T-4 and T-3 to T-1, where T is the delistment year. Thus, data in T-6 to T-4 category were data of 6th, 5th and 4th year before the delistment year, whereas data in T-3 to T-1 category had data of 3rd, 2nd and 1st year prior to

the delistment year. Kang (2017) compared voluntarily delisted and listed firms in two groups too.

4 Results

4.1 Descriptive Statistics

Table 1 presents means, maximums, minimums and standard deviations of DuPont ratios of voluntarily delisted companies and their respective sectors for the same years. Means of ratios of delisted companies is lower than means of sectors ratios except for the NPM ratio. At the same time, mean of ROE of delisted companies is negative and lower than mean of sectors. However, the ratios had more volatility in companies as indicated by standard deviations.

4.2 Comparison of Means between Delisted Firms and Sector: 6th, 5th and 4th Years before Delisting Year

Table 2 presents results of Model 1, which comprises means of companies and their sectors DuPont ratios calculated for years T-6 to T-4. The results reveal that means of ATO are almost same, whereas the remaining three means of the companies are lower than their respective sectors means. However, these differences are not statistically different as evidenced by the t-statistics.

4.3 Comparison of Means between Delisted Firms and Sector: 3rd, 2nd, and 1st years before Delisting Year

Table 3 presents the results of Model 2 which compares the companies means of DuPont Ratios with respective sectors means for the period from T-3 to T-1, where T is the delistment year of the company. We have divided data into two groups on the expectations that voluntarily delisted companies may emit stronger signals of delistment as they draw close to the delistment year. Results reveal that means of DuPont Ratios for the companies were lower than means of respective sectors except Leverage Multiplier Ratio, which is higher for voluntarily delisted companies. However, these differences are statistically insignificant as indicated by the T-statistic. The results hold that there was no difference of means of ratios between voluntarily delisted firms and their respective sectors.

More interestingly, the two groups had no significant differences with respect to ROE, NPM, ATO and LM and still the voluntarily delisted firms opted to delist from Karachi Stock Exchange. The findings suggest that performance based indicators of ROE, NPM, Asset Management and efficiency indicator of ATO

Table 1: Descriptive Statistics

| DuPont Components | N | Minimum | Maximum | Mean | Std. Deviation |
|---------------------|----|---------|---------|--------|----------------|
| ROEC | 78 | -29.00 | 2.98 | -.2510 | 3.36399 |
| NPMC | 78 | -3.34 | 6.70 | .1197 | 1.24228 |
| ATOC | 78 | -.82 | 2.75 | 1.0253 | .65274 |
| LMC | 78 | -323.00 | 332.48 | 1.7961 | 53.32096 |
| ROES | 66 | -.47 | 1.23 | .1820 | .23240 |
| NPMS | 66 | -.18 | .39 | .0536 | .07751 |
| ATOS | 66 | .18 | 3.98 | 1.2077 | .87299 |
| LMS | 66 | 1.27 | 9.79 | 3.0341 | 1.32111 |
| Valid N (list wise) | 66 | | | | |

Note: ROEC= return on equity of delisted companies, NPMC= net profit margin of delisted companies, ATOC= asset turnover of delisted companies, LMC= leverage multiplier of delisted companies, ROES= return on equity of sector, NPMS= net profit margin of sector, ATOS= asset turnover of sector, LMS= leverage multiplier of sector

Table 2: T-Test for 6th, 5th and 4th year before delistment year

| Model 1 | | (T-6 To T-4) | |
|---------------------|------------------------|----------------|--------------|
| DuPont Components | Mean of Delisted Firms | Mean of Sector | t-statistics |
| Return on Equity | -0.59 | 0.11 | -0.936 |
| Net Profit Margin | 0.019 | 0.04 | 0.0651 |
| Asset Turnover | 1.11 | 1.10 | 0.017 |
| Leverage Multiplier | -7.74 | 3.16 | -1.29 |
| N | 39 | 39 | |

Note: T is the year in which firm is delisted. For Example, if a company is voluntarily delisted in 2007, its T-6, T-5 and T-4 will be 2001, 2002 and 2003 respectively.

Table 3: T-Test 3rd, 2nd and 1st Year before Delisting

| Model 2 | | T-3 To T-1 | |
|---------------------|------------------------|----------------|--------------|
| DuPont Components | Mean of Delisted Firms | Mean of Sector | t-statistics |
| Return on Equity | 0.1005 | 0.2090 | -1.106 |
| Net Profit Margin | 0.0479 | 0.0684 | -0.132 |
| Asset Turnover | 0.9439 | 1.2073 | -1.434 |
| Leverage Multiplier | 11.3351 | 2.8801 | 0.995 |
| N | 39 | 39 | |

Note: where T is the year in which firm is delisted. For Example, if a company is voluntarily delisted in 2007, its T-3, T-2 and T-1 will be 2004, 2005 and 2006 respectively. Means of the DuPont ratios of companies were compared with means of their sectors for the same years.

and financing policy (Capital Structure) indicator of LM dont influence the voluntary delistment decision in Pakistan.

5 Discussion, Conclusion and Implications

Our study was aimed at finding whether the voluntarily delisted firms from the Karachi Stock Exchange

since the start of 2001 to the close of 2015 had different financial characteristics than those that stayed listed with respect to DuPont Ratios, on the basis of which the event of voluntary delistment could be predicted. However, results reveal that DuPont Ratios: ROE, NPM, ATO and LM of the voluntarily delisted firms and the ones that stayed listed had no significant differences. Thus, the conclusion drawn from the study is that profitability, asset management (efficiency) and leverage are not the determinants of voluntary delistment of firms. The result stand in agreement with

Kang (2017), who found that leverage and total asset turnover do not separate the voluntarily delisted firms from listed one in South Korea. She found that profitability of voluntarily delisted firms and listed ones was statistically same in 2nd year (T-2) before delistment. However, in the preceding (T-1) year, voluntarily delisted firms had higher return on assets (ROA), which meant that firms with higher profitability are more likely to go private probably to save their earnings from distribution. Our results stand in contrast to prior research on voluntary delistment decision, which has found that low efficiency, low profitability and higher leverage cause voluntary delistment. For instance, Pour and Lasfer (2013) found that voluntarily delisted firms had significantly different leverage and profitability than those firms which stayed listed. Companies failing to re-balance their leverage go private i.e. companies with high leverage turn private (Bancel and Mittoo, 2009). Thus, high or abnormal leverage is also associated in literature with voluntary delisting of firms. Pour and Lasfer (2013) reported that voluntarily delisting companies have negative returns, low profitability and high leverage. El Kalak et al. (2018) have recently observed that voluntary delisting is all the more likely when companies revenues fall or expected to fall sharply in the times ahead. They also empirically found that small size and high leverage predict voluntary delistment. However, our study reports that profitability, asset utilization and leverage of the voluntarily delisted firms and the staying firms are very much the same.

Once it is evident that financial performance, efficiency and leverage do not influence voluntary delisting, therefore it can be inferred that companies voluntarily delist due to some other motives such as ownership concentration, agency conflict, ownership structure, regulatory rules & regulations, costs associated with listing, information asymmetry, conflict between majority & minority shareholders, investors recognition and analysts coverage etc., which needs to be ascertained in future research. Like decision of going public, it is logical to assume that corporations weigh costs and benefits, and if costs of being listed exceed the benefits, then the normal decision would be to delist from the stock exchange and become a private concern. Going public sharply increases costs. Marosi and Masoud (2007) found that Sarbanes-Oxley Act (SOX) and costs to meet the regulatory requirements of stock exchanges as well as regulatory bodies are major factors that have caused many delistings in United States. SOX and free cash flow problem in context of agency cost are extremely important determinants of firms decision to go private (Leuz et al., 2008). Therefore, the first and foremost consideration for the companies to go private is to avoid costs that are associated with listed companies be they direct and/or indirect costs. Bharath and Dittmar (2006) opine that since companies undertake

cost-benefit analysis at the time of deciding to go public, therefore, it is likely that the same is carried out when they see that costs associated with listings have gone past benefits that emanate from it. These costs and benefits relate to access to financing, agency costs, asymmetric information, and financial visibility. The literature provides evidence that benefits of listings include more liquidity, easier access to financial markets and the likelihood of sharing risk with public investors. However, when companies realize that they are not getting what they had listed for, the ultimate decision is to go private. Why bear cost without having its fruit? Or why bear more cost than benefit?

Mehran and Peristiani (2009) have defined financial visibility as a measure for asymmetric information: it is the capability of a firm to attract sufficient intensity of investor attention and recognition (analyst coverage). Thus analyst coverage is important as it can affect the companies in many ways. Thus it is safe to assume that firms with higher financial visibility are less likely to go private, whereas firms with lower financial visibility are more likely to opt out of the stock market. Another way to evaluate investor attention is to examine the liquidity of the stock and the associated trading expenses. As established by numerous studies and models (Amihud, 2002; Bolton and Von Thadden, 1998; Boot et al., 2006), liquidity of share trading is a key benefit of going public. Resultantly, firms with low stock liquidity are more likely to go private.

For GPTs located in continental Europe, the conflicting parties are large and minority shareholders (Croci and Giudice, 2014). Large shareholders may be desirous of having more benefits that can result from control. In case of BOSO, where the large shareholders (for example, shareholders having 90% or more voting rights in France) cash out the minority shareholders; the primary conflict is not between shareholders and managers (agency conflict), but between large shareholders and minority shareholders. As suggested by Martinez and Serve (2011), stimuli for large shareholders in deciding to go private may be different for different large shareholders based on firms identity. For a firm largely owned by family members, the incentive to go private may be to have strong unchallenged control and private benefits that are not available to one and all in shareholders list. Families are risk-averse and they prefer to quit the market whenever they find any challenge to their control. This is especially true for smaller and undervalued firms which often become ideal target for the acquisition predators. Family owners may also delist their company to put a ban on the ability of the minority shareholders to sell their shares in the market especially to institutional investors, because as mentioned earlier the primary conflict is between controlling and minority shareholders.

In Anglo-Saxon countries, the principal form of the GPT is LBO, which is often aimed at companies with

a low ownership concentration. Under such situation, LBO is carried out to avoid agency cost as LBO is regarded instrumental in addressing the agency conflict between managers and shareholders. How an LBO can cause managers interests to align with those of shareholders can be possibly elaborated in two ways (Jensen, 1986). Kaplan (1989,?) mentions that necessity of realignment of managers and shareholders interests is an important determinant of delisting decision. GPT allows more ownership and hence more control as the delisted and private is now owned by less number of shareholders than when it was a public firm. The profits of the firm are now distributed amongst less number of shareholders and as result, shareholders wealth increases more in a private firm, and this allows shareholders to reward the performance of managers with extra incentives. Thus, the managers may be tempted to work towards shareholders interests for their own benefits.

Another hypothesis that explains reduction in agency conflict as a result of GPT via LBO is free cash flow (FCF) Hypothesis. The high debt that results from substantial borrowing aimed at cashing out shareholders disciplines managers not to waste free cash flow, because they have to undertake debt servicing and they are closely monitored by lenders like banks etc. Free cash flow gives birth to agency conflict between managers and shareholders in public companies, especially in firms with low growth opportunities (Jensen and Meckling, 1976). Therefore, corporations with dual problem of free cash flow and low growth opportunities prefer to go private to address the agency conflict between managers and shareholders. However, we find some mix evidence of this in Literature. Lehn and Poulsen (1989)s findings are that FCF is an important determinant in making decision to go private, whereas Marosi and Massoud (2007) provide evidence that FCF is an important consideration only for firms that generate high cash inflows but at the same time dont have growth opportunities to utilize those high inflows. Kang (2017) points out that international firm voluntarily delist from one stock exchange to register at some other more lucrative stock exchange. She reports that Japanese stock market went up by 105%, Chinese stock markets by 33.6% and South Korean by merely 5.3% from December 2011 to December 2014. Thus, market recession serves as determinant of voluntary delisting as well.

5.1 Limitations and Future Recommendations

This study found that voluntarily delisted firms in Pakistan had same DuPont Model ratios compared with the sectors they worked in. Therefore, these firms might have got delisted due to some non-performance

indicators and variables like ownership concentration, agency conflict, ownership structure, Regulatory rules & regulations, costs associated with listing, conflict between majority & minority shareholders, investors recognition and analysts coverage etc., which needs to be ascertained in future research. More research is needed to establish whether voluntarily delisted firms can be distinguished from staying firms on the basis of DuPont model. Our recommendations in this respect for the future researchers are that instead of comparing DuPont ratios, numerators and denominators of the DuPont ratios (net profit, equity, sales and assets) should be compared between voluntarily delisted companies and the companies that stayed listed to avoid problems faced in interpreting ratios calculated from negative numerators and / or denominators.

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Entrepreneurial Orientation and its Dimensions Impact on Firms Performance with the Mediating role of Innovation Performance

Yasmeen Sultan*¹, Sualeh Khattak² & Habib Ahmed³

^{1,2,3}*Hamdard University, Islamabad, Pakistan*

Abstract. The Entrepreneurial Orientation (EO) of firms is broadly described as a dimension of strategic posture and important part for enhancing firm Performance. The current study investigated the effect of Entrepreneurial orientation and its dimensional factors (Innovativeness, Risk-taking, Pro-activeness, Competitive Aggressiveness and Autonomy) on firm Performance with the mediating effect of Innovation Performance. Based on data from SMEs, the results indicated that EO has a significant positive association with firm execution. First, Entrepreneurial orientation focus on grown-up economy was expanded, taking a step in the direction of the applicability of the Entrepreneurial Orientation idea in the growing economy perspective. Second, it was explored how Innovation performance connected with SMEs performance and competitive power control the association between entrepreneurial orientation and firm performance. The most important objectives of these studies are to establish the level of Entrepreneurial Orientation on SME and create the influence of this orientation on firms performance. The Research study also represents policy and practice that give a source for entrepreneurial orientation decision and actions. In other words, it was established that EO helps SMEs owners to act entrepreneurially.

1 Introduction

The Small & Medium Enterprise (SME) plays an essential function in Pakistan monetary growth. Worth of small and medium enterprises and entrepreneurship to countries "economies has significance gain; huge firms in an attempt to stay behind beneficial are implementing mass lay-offs on non-core sector of their big business (Van Gelderen et al., 2005). In the same way, a number of scholars recognize and appreciate the significant role played through Small & medium enterprises as engines for powerful financial development and improvement. The helpful welfare and competitiveness of most economies, both nationally and internationally depends to a large degree with the universal health of SMEs of Pakistan. For example, in US 85% of new jobs are generated by SMEs (Audretsch, 2002; Lappalainen and Niskanen, 2009). When Small & Medium Enterprises and entrepreneurial orientation contributed more into economic growth, the study of how this business and entrepreneurs in general can improve their performance to warranty their continued existence in the harsh economic environment has become even more important. In the Most Research studies Entrepreneurship literature implies useful concept that would be operated when investigating for potential reparations or enhance their business chances during unsympathetic economic times.

This study is grounded on the two theories, i.e. Resource Based theory and Schumpeter Innovation Theory. Resource based theory explains the creation of market place vision to contain feature (Alvarez and Busenitz, 2001). It also suggests that Organization wishes to achieve greater than standard profits by implementing certain factors. Advertise system must be continually better educated concerning the future worth of these Mythologies than further firms in the similar market (Alvarez and Barney, 2004).

Schumpeter Innovation theory (Schumpeter, 1939) established the role played by innovativeness performance in entrepreneurial orientation; it describes a process, procedure of development and of creative destruction which happens when existing market structures are interrupted by new goods and services development process that move resources away from existing business to new ones consequential to wealth creation through establishments of new firms.

1.1 Problem statement

Given the high disappointment rate of small firms in Pakistan, there is a need to recognize system & get better performance. As indicated by Giampiccoli et al. (2013), Entrepreneurial Orientation is a critical way to obtain competitive advantage and enhance performance for a wide range of firms. Different Investiga-

*Corresponding author.

Email: yasmeensultan291@gmail.com

tions have demonstrated a positive connection between the usage of entrepreneurial orientated procedures and company Performance (Covin et al., 2006; Marfo et al., 2015; Rose, 2007; Short et al., 2009; Wang, 2008). This suggests that in new small businesses; firms implement entrepreneurial orientated approaches and carry on entrepreneurially orientated method, and the more effective they are probably going to be. Very few small firms, on the other hand, take on entrepreneurial orientated activities (Zehir et al., 2015).

1.2 Research Gap / Finding

The research gap in this study is that, in base article the researchers have taken only three measurement dimensions of Entrepreneurial Orientation (Innovativeness, Pro-activeness, & Risk-Taking) to measure firm performance (SMEs). But current study takes five measurement dimensions of Entrepreneurial Orientation (Innovativeness, Pro-activeness, Risk Taking, Autonomy, and Competitive Aggressiveness) to measure firm performance (SMEs) with the mediating role of Innovation Performance in Islamabad Pakistan. Beside this, the majority of the studies with one exception (Hughes and Morgan, 2007), have only precise Entrepreneurial Orientation and have not checked the connection of its individual dimensions and firm performance. The current study aims to check the individual impacts on the firm performance of SME. In other words, it was established that EO helps SMEs owners to act entrepreneurially. This research study thus intends to fill up this research gap. The limited growth of SMEs in Pakistan and their high failure rate may be associated with them lacking the entrepreneurial orientation and its dimensions needed.

2 Literature Review

2.1 Entrepreneurial Orientation

First of all, the idea of Entrepreneurial Orientation was developed by Miller (1983), then by Covin et al. (2006), which is based on the three dimensions of Entrepreneurial Orientation (i.e., Innovativeness, Pro-activeness, and Risk-Taking). In the Past literatures the research has shown a direct connection between Entrepreneurial Orientation (EO) and firm Performance (Bengesi and Le Roux, 2014; Lee et al., 2001; Lumpkin and Dess, 1996; Zahra and Covin, 1993). On the other hand, the important deliberation remains around the part of entrepreneurial orientation (Covin et al., 2006). Lumpkin and Dess (1996) also paid attention to the complexity of entrepreneurial orientation to Firm performance and proposed that the affiliation between entrepreneurial orientation (EO) and Firms performance connection is precise. On the other hand, the relation-

ship between entrepreneurial orientation and firm performance is affected by external factors as well as internal factors of firms. The entrepreneurial orientation research study has been mostly conducted in United States or other developed countries.

2.1.1 Innovativeness

Innovativeness in a firm is defined as the introduction of novel ideas that can allow the firms to develop its product or service. Mirela (2008) established that innovativeness is a very important aspect for survival, development, performance, growth, and successful firms.

2.1.2 Pro-Activeness

First of all, the concept of Pro-activeness was defined by Rauch et al. (2004), he explained it as an opportunity seeking and forward-looking insight characterize through the beginning of new goods and services process in advance of the competition and performing best in expectation for future demand.

2.1.3 Risk-Taking

Risk taking is the most important third dimension of Entrepreneurial Orientation. According to Miller and Friesen (1982) the risk-taking is described or defined as the measure of firms in which manager is ready to create huge and risky source faithfulness, to support, those which have a reasonable option of special stop working". In this study the purpose of risk taking in entrepreneurial orientation may be recognized because it is incented replace of entrepreneurial orientation.

2.1.4 Autonomy

According to Lumpkin and Dess (1996) the entrepreneurial Orientation dimension of Autonomy is defined as the firms tendency in the direction of independence or self-sufficiency, which is a key element of entrepreneurial orientation.

2.1.5 Competitive aggressiveness

According to Lumpkin and Dess (1996) the Competitive aggressiveness dimension of entrepreneurial orientation is referred as a firms tendency to straight and powerfully challenge its competitor to accomplish ingress or obtain improved location in the marketplace and is characterize by receptiveness in situation of argument or reactive action.

2.2 Firm Performance of SMEs

In todays big business world, firm performance is considered very vital. On the other hand, a lot of principle use in research studies which determines firm performance of Small & medium enterprises. According to

Venkatraman and Ramanujam (1986), the firm performance of SMEs can be measured with both dimensions which are financial performance and non-financial performance of a firms. Financial measures are basically related to monetary factors such as profitability and sales expansion of firms or organization. For Example: return on assets (ROA) and return on sales (ROS) and non-financial measures are related to products, services quality, employees and customers satisfaction. In fact, they have confidential firm performance data is one dimension.

2.3 Innovation Performance

Innovation performance can be defined as the utilization of an ideas or creativity, which is used to improve the products, processes, procedures that increase the significance of firm performance and usefulness of the products and services of firms. Innovation performance is a vital factor for the firm performance which includes both terms (financial or non-financial performance) and evaluates competitive advantage of firms (Bhuiyan et al., 2005). In this research study the mediating variable Innovation performance is used to measure direct impact on firm performance.

2.4 Relationship between Innovativeness and Firm Performance

Innovativeness is first and most important dimension of entrepreneurial orientation that explains the thoughts which support creativity for goods / services development, introductions of technologies in their process and procedures, and products / services novelty through research and development (Lumpkin and Dess, 2001). Innovativeness occurs when an innovative firm is willing to try new product line & experiment with a new advertising, to an obsessive obligation in new products or technological (Lumpkin and Dess, 1996). According to Wiklund and Shepherd (2005) the innovativeness emphasizes on a high-performance rate to firm performance, in current market situations.

H₁: Innovativeness has positive significance influence on firm performance and direct impact on its measures.

2.5 Relationship between Pro-Activeness & FP

Pro-activeness is a second dimension of entrepreneurial orientation and its can be described as the firms proactive or reactive activities towards their competitor. According to Lumpkin and Dess (1996), Pro-activeness can also improve firm performance which includes financial or non-financial performance, which

increases competitive advantage of a firm. The significance of pro-activeness is highlighted in theoretical and empirical research dissuasions. On theoretical level, the pro-activeness leads to increased firm performance. On empirically level the pro-activeness leads to better performance in terms of financial or non-financial which is growth and profitability, products and services firm performance (Kraus et al., 2011).

H₂: Pro-activeness has positive significance influences on firm performance and directly impacts its measures.

2.6 Relationship between Risk Taking and Firm Performance

Risk taking is related to independent action of an individual or group of members to bring novelty of dreams and then forwards an idea or a vision and carrying it out to completion (Lumpkin and Dess, 1996). The significance of risk taking and its impacts on firm performance also highlighted in theoretical and empirical research discussions. Literature suggests that firms willingness to engage in high risk-taking behavior which enables firm to seize profitability opportunities of uncertainty leads to long term profitability (McClelland, 1961). Similarly, empirical studies suggest that the risk-taking enables firms to secure superior growth and long-term profitability in contrast to risk avoiders.

H₃: Risk taking has positive significance influences on firm performance and directly impacts on its measures.

2.7 Relationship between Competitive Aggressiveness and Firm Performance

Competitive aggressiveness requires strong accomplishment with the intention of outperforming industry rivals. This can be ended by improving current products development as well as doing things differently. According to Kollmann and Stöckmann (2014) Firms as a result discover a new position for themselves or target at the competitors weaknesses by increasing superior products or services. Additionally, firms can act insistently and rapidly through innovation. Competitive aggressiveness mobilizes constant participant evaluation further more as a result the deconstruction of the worth parcels of the rivals to produce greater contributions Hughes and Morgan (2007).

H₄: Competitive aggressiveness has positive significance influences on firm performance and directly impacts on its measures.

2.8 Relationship between Autonomy and firm Performance

Autonomy encourages innovation because it is a cause for creativeness and idea. Entrepreneurial orientation initiative is altered in entrepreneurial outcome by independent hard work of key individuals performing external control (Lumpkin and Dess, 2001). Such individuals are frequently referred to as champions (Green et al., 2008). Firms member that desires to investigate speculation opportunities repeatedly should generate environment, where novelty group members are open to survey potential not including the pressure of planned norm or managerial civilization that may slow down the detection process (Burgelman, 1983). We therefore anticipate that autonomy influences the SMEs performance.

H₅: Autonomy has positive significance influence on firm performance with directly impacts on its measures.

2.9 Relationship between Entrepreneurial Orientation & Innovation Performance

Current study is supported by two theories, which include Schumpeterian innovation theory for firms performance two dimensions financial or non-financial performance, and second is resource-based theory. So, Schumpeter Innovation theory is for entrepreneurial orientation and its five dimensions which are Innovativeness, Pro-activeness, risk taking, competitive aggressiveness and autonomy. Whereas the Resource based theory provides a powerful impact to organizations and how they can perform better than other firms which are existing in the same market.

H₆: Entrepreneurial Orientation has positive significance influence on Innovation performance.

2.10 Innovation Performance Mediate the relationship between (EO) & (FP)

In the strategy literature innovation performance is an important concept that creates value for SMEs and enables sustainable competitive advantage in the complex and rapidly changing business environment (Madhavan and Grover, 1998). Firms that have higher innovation capabilities are more successful in responding to changing conditions and developing new capabilities to adopt changes and as a result achieve better performance (Fernández-Muñiz et al., 2009). Innovation performance is related to organizations adoption of a new idea or behavior (Zaltman, 1973). Innovation occurs in different types such as product innovation, process innovation, service innovation and technological innovation. Therefore, due to the intense competitive environment, firms need entrepreneurially ori-

ented individuals or groups in order to innovate new and different products, services, images and processes which cannot be imitated easily by others. This is why we propose that innovation Performance mediates the positive relationship between EO & FP.

H₇: Innovation performance positively mediates the relationship between Entrepreneurial orientation and its dimensions with directly impact on firms performance and its measures.

2.11 Relationship between Entrepreneurial Orientation, Innovation Performance & Firm Performance

The relationship between Entrepreneurial Orientation and its dimensions impact on firm performance is a vital focus in this research (do Paço et al., 2011). On the other hand, various studies have shown that Entrepreneurial orientation has a positive relationship directly or indirectly with firm performance which could be financial or non-financial performance. It means that Small & Medium Enterprises that adopt Entrepreneurial orientation and its dimensions outperform. Entrepreneurial Orientation and its dimension have been one of the most significant factors which show a competitive advantage.

H₈: Entrepreneurial Orientation and Innovation Performance both have significant and positive impact on firm performance.

3 Methodology

3.1 Research Design

This Research design is arrangement of conditions for collection of data and analysis of data relevant to research purpose with economy technique (Kothari, 2004). This study will adopt a descriptive research design.

3.2 Population

The target population under this study is registered SMEs in Pakistan County. This contained a total of all the 250 registered SMEs with Premier institution of the Government Pakistan under Ministry of Industries & Production. Small & Medium Enterprises development Authority (SMEDA) was established in October 1998.

3.3 Sample Design

This study used a random sampling process to select the target population of the research study. A sample size (10% to 30%) is good representation of selected and target population (Mugenda and Mugenda, 2003).

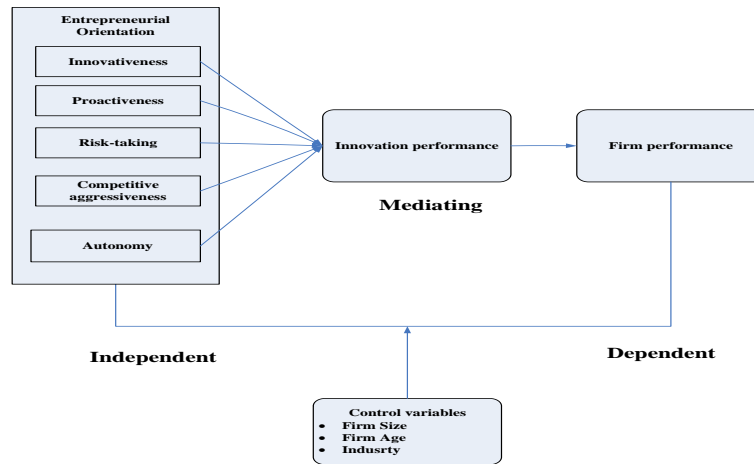


Figure 1: Theoretical Framework

The sample size of this study was 250 SME in Pakistan. The sampling frame included either services or manufacturing industries.

3.4 Data Collection

The study has been used primary data collected using questionnaires. Questionnaires are a quick method of obtaining data as compared to other instruments. To achieve this purpose the researcher sustained an evidence of questionnaires. The questionnaires were administered using a drop and pick technique to SMEs owners & managers. In this research study the independent variable dependent variables and mediating variable require five-point Likert-scale responses ranged from (1) = strongly disagree, (2) = disagree, (3) = neutral, (4) = agree and (5) = strongly agree.

3.5 Instrumentation

3.5.1 Independent Variables

Entrepreneurial orientation in this study is used as independent variable. Scale developed by (Lumpkin and Dess, 1996) was adopted for measuring (EO). Fifteen items were used for five Entrepreneurial orientation dimensions with Five-point Likert scale by Covin and Slevin (1989). Where (1) = strongly Disagree, (2) = Disagree, (3) = Neutral, (4) = agree, (5) = strongly agree. All the questions in the survey were used to measure the firms performance and measure firm activities.

3.5.2 Dependent Variable

The dependent variable of this research study is firm performance. To measure performance, the first one is financial firm performance and the second one is non-financial firm performance. General Managers of the firms were requested to rate their financial and non-financial performance over the past three years as com-

pared to their competing firms. İşeri-Say et al. (2008) business performance scale was used. So financial performance was measured concentrating on growth and profitability which involves three questions where as non-financial performance was measured concentrating on customer and employee outcomes which involve four items scale. Firm performance measure with total seven item scale, on a 5-point Likert scale, where (1) = very low, (2) = low, (3) = moderate, (4) = high, and (5) = very high.

3.5.3 Mediating Variable

The Mediating variable of this study is Innovation Performance. Scale developed by Prajogo and Sohal (2006) was used to measure innovation performance. On the other hand, accordingly to West and Anderson (1996) the concept of innovation performance is defined as the application of new ideas, processes or procedures. The 6-items questionnaire is created to measure innovation performance, with five-point Likert scales, where (1) = strongly disagree, (2) = disagree, (3) = neutral, (4) = Agree, and (5) = strongly agree are used to get responses from SMEs owners.

4 Results

4.1 Tests of Reliability and Validity

In this study we used a test of Reliability (consistency) and validity to measure the internal consistency of variables items. In the test of reliability and validity we evaluate the internal consistency of variables items which is estimated by using Cronbachs Alpha value. So that the results of this study analysis were as shown in (Table- 1), the entire Eight Variable of this study show Cronbachs alpha value which are greater than the recommended value of (0.70) which indicates a comparatively high level of internal consistency in all variables

Table 1: Result of Reliability and Validity Analysis which shows Cranachs Alpha Value

| | Variables of study | No. of Items | Cronbachs Alpha |
|-----|-----------------------------|--------------|-----------------|
| | Entrepreneurial orientation | | |
| (a) | Innovativeness | 3 | .853 |
| (b) | Pro-activeness | 3 | .866 |
| (c) | Risk Taking | 4 | .790 |
| (d) | Competitive Aggressiveness | 4 | .870 |
| (e) | Autonomy | 4 | .838 |
| | Innovation performance | 6 | .899 |
| | Firm performance (SMEs) | | |
| (a) | Financial performance | 3 | .864 |
| (b) | Non-financial performance | 4 | .920 |

The Sum of Percentage Is Not 100% Due to Rounding.

items that are used in this research study.

4.2 Correlation Coefficient

Correlations Coefficients are used to illustrate inter relationships among variables. The correlation results of all variables show that all the variables are highly correlated to each other. The Pearson correlation results indicate in (see Table 4-2).i.e., Mediating variable of this research study is Innovation Performance and Independent Variable of the research study Entrepreneurial Orientation are 0.675 (67%) correlated, Dependent Variable of this research study Firm Performance and Independent Variable Entrepreneurial Orientation are 0.598 (59%) correlated, and Mediating Variable Innovation Performance and Dependent Variable Firm Performance are 0.678 (67%) are Correlated with each other The correlation values between all the Variables less than 0.80 indicate that there is no multi-co-linearity issue (Jalali et al., 2014). The results of this research study through (Covin et al., 2006), established to an Entrepreneurial Orientation and its all the five-dimensional are positively connected with Innovation Performance to the firms performance. According to Lumpkin and Dess (1996) & Hughes and Morgan (2007) established an un-equal impact of Entrepreneurial Orientation and innovation performance effect on the firm performance.

4.3 Regression Analysis

In this research study we used regression analysis to predict the value of dependent variable which is based on the independent variables values. Linear regression analysis was run for testing the effect of Innovativeness, Pro-activeness, Risk Taking, Competitive aggressiveness and Autonomy on firm performance., independent variable Innovativeness, Pro-

activeness, Risk Taking, Competitive aggressiveness and Autonomy on mediator variable (Innovation Performance)and effect of mediating variables (Innovation Performance) on dependent variable (Firm Performance); also Independent variable and Mediating Variable (Innovation Performance) on Firm Performance. This research study finding is consistent with research by Fagerström (2008); Kafayat et al. (2014); Kibera and Muturi (2018); Park et al. (2013).

4.3.1 Mediation Regression Analysis for Entrepreneurial Orientation and Innovation Performance

We performed hierarchical regression analyses in order to test the hypothesis formally. Firstly, EO was regressed on Innovation performance. In the first step, control variables are (Firm Size, Firm Age, and Industry) were entered and only the value of their R^2 is reported, that shows 0.17% of the Dependent variable innovation performance is explained by the control variables. In the second step, EO was entered and the values of their R^2 , change in R^2 and beta (β) are reported. The value of $R^2 = 0.566$ that shows about 56% of the variation in Innovation Performance is caused by EO but the remaining 44% is not captured in this model and needs to be explored. The value of the F-statistic (3.458, sig 0.000) is statistical significant and indicates that the model is fit. The δ in R^2 indicates that, after controlling demographics, the value of R^2 is significantly affected.

The hypothesis predicts that EO is positively associated Innovation performance. To test These predictions, we regressed Innovation performance on EO (see Table 6).EO heuristic bias ($\beta = 0.225$, $p < 0.000$) was a significant predictor of Innovation Performance, providing support to H_6 .

Table 2: Correlations Coefficient

| Variables | Mean | SD | EO | Innovation performance | FP |
|------------------------------------|---------|---------|--------|------------------------|----|
| Entrepreneurial Orientation | 48.4794 | 9.56317 | 1 | | |
| Innovation performance | | | .675** | 1 | |
| Firm Performance | 20.3042 | 3.66143 | .001 | .678** | 1 |
| | 21.1779 | 5.12491 | .000 | .000 | 1 |

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

* . Correlation is significant at the 0.05 level (2-tailed)

Table 3: Regression Analysis

| Variables | β | T Value | P Value | R ² | Change in R ² |
|-----------------------------|---------|---------|---------|----------------|--------------------------|
| Step 1 | | | | | |
| Control | | | .017 | | |
| Step 2 | | | | | |
| Entrepreneurial Orientation | .225 | 3.223 | .001 | .566 | .0549** |

n=200, *p<0.05, **p<0.01, ***p<0.001; Dependent Variable: Innovation Performance.

4.3.2 Mediation Regression Analysis for Innovation Performance and Firm Performance

We performed hierarchical regression analyses in order to test the hypothesis formally. Firstly, Innovation Performance was regressed on Firm performance. In the first step, control variables (Firm Size, Firm Age, and Industry) were entered and only the value of their R is reported, that shows 0.5% of the Dependent variable FP is explained by the control variables. In the second step, Innovation Performance was entered and the values of their R², change in R² and beta (β) are reported. The value of R² = 0.379 that shows about 37% of the variation in Firm Performance is caused by Innovation Performance but the remaining 63% is not captured in this model and needs to be explored. The value of the F-statistic (4.205, sig 0.000) is statistically significant and indicates that the model is fit. The δ in R² indicates that, after controlling for demographics, the value of R² is significantly affected.

The hypothesis predicts that mediating variable Innovation Performance is positively connected with dependent variable Firm performance. To test these Predictions, we regressed firm performance on Innovation Performance (see Table 7). Innovation Performance heuristic bias ($\beta = 0.275$, p<0.000) was statistically significant predictor for Firm Performance, providing support to H₇.

4.3.3 Mediation Regression Analysis for EO, Innovation Performance & Firm Performance

We performed hierarchical regression analyses in order to test the hypothesis formally. Firstly, EO & Innovation Performance was regressed on Firm performance. In the first step, control variables (Firm Size, Firm Age, and Industry) were entered and only the value of their R is reported, that shows 0.5% of the Dependent variable firm performance is explained by the control variables. In the second step, EO & Innovation Performance were entered and the values of their R², change in R² and beta (β) are reported. The value of R² = (0.460 & 0.396) that shows about 46% and 39% of the variation in Firm Performance is caused by EO and Innovation Performance but the remaining 54% and 61% is not captured in this model and needs to be explored. The value of the F-statistic (9.273 & 9.434, sig 0.000) is statistical significant and indicates that the model is fit. The δ in R² indicates that, after controlling for demographics, the value of R² is significantly affected. The hypothesis predicts that EO & Innovation Performance is positively associated with Firm performance. To test these predictions, we regressed firm performance on EO & Innovation Performance (see Table VIII). EO & Innovation Performance heuristic bias ($\beta = 0.397$ & 0.196, p<0.000) was a significant predictor of Firm Performance, providing support Hypothesis 8 & In Mediation Regression analysis this study shows that

Table 4: Regression Analysis

| Variables | β | T Value | P Value | R ² | Change in R ² |
|------------------------|---------|---------|---------|----------------|--------------------------|
| Step 1 | | | | | |
| Control | | | .005 | | |
| Step 2 | | | | | |
| Innovation Performance | .275 | 3.970 | .000 | .379 | .0374** |

*n=200, *p;0.05, **p;0.01, ***p;0.001; Dependent Variable: Firm Performance.*

Table 5: Regression Analysis

| Variables | β | T Value | P Value | R ² | Change in R ² |
|-----------------------------|---------|---------|---------|----------------|--------------------------|
| Step 1 | | | | | |
| Control | | | .005 | | |
| Step 2 | | | | | |
| Entrepreneurial Orientation | .397 | 5.994 | .000 | .460 | .155** |
| Innovation Performance | .196 | 2.937 | .004 | .396 | .191** |

*n=200, *p;0.05, **p;0.01, ***p;0.001; Dependent Variable: Firm Performance.*

the relationship between Independent dependent and meditating variable is significant so its a partial Mediation.

5 Summary, Conclusions and Recommendations

5.1 Discussion

This research studys main objective was to establish the role of entrepreneurial orientation and its dimensions on the firm performance (which is financial or non-financial performance) with the mediating role of innovation performance. The study found out that entrepreneurial orientation helps small & medium enterprises to increased performance. This study also establishes that the major factors that impacts performance of SMEs which includes Innovativeness, Proactiveness, Risk-Taking, Competitive Aggressive & Autonomy.

This research study also reveals that innovativeness impacts the firm performance of small & medium enterprises which enable them for market disseminations. The firms persuade inventive ideas and conducting tests when introducing new products and Technological Ideas, developing new technological processes; develop new products and services in SMEs. The Innovation performance generates new value for customers satisfactions and motivation, initiates innovations performance in most situation ahead of their competitors and they are creative in create and scheming resources.

This research study identified that pro-activeness prejudiced the firm performance of SMEs, in large extent because the firms owners identify needs of cur-

rent and potential customers and consumers, reallocates its income to compact with budding opportunity and pressure, and monitor market trends to predict future trend. Although from these methods the firm is able to predict or act in response to up-and-coming needs of customers. In that ways and process the firms are able to continually seeks opportunities for new customers and consumers which relate to their current or presents needs or wants. The firms are also capable for anticipating new changes and create competitive advantage.

This research findings also exposed that risk taking impact on firm performance of SMEs to a big amounts the respondents approved to the statement that their firms commit a huge part of their wealth to venture with unsure outcomes, takes heavy borrowing from banks, invest in high-risk goods which guarantee high profits ,interrelate a lot with consumers to reveals new opportunity, use risk managing technique to moderate the risks in the firms, decrease the conclusions of risk-taking by onward preparation and anticipate every one effect, and handle themselves at some stage in stressful times of firm before they make a risky firm decision they determine whether it is the right decision to make.

This research study also identified that Autonomy refers to the firms capability to make decisions and to continue their activities / actions independently, not including any restrictions from the firm owners and managers. It also shows that strong desire of a person has freedom to develop of their own idea and they can implement it. Several scholars also recommended that autonomy gives power to all players in the firms to motivate them and build their satisfactions to act entrepreneurially, and helps them to improve their firm performance either financial performance or

non-financial performance. Despite that acknowledgement of autonomy enhances firm performance. This research study also reflects that the Competitive aggressiveness in firms performance is an intensity of effort to better perform production rival, which is characterize by an aggressive attitude and a powerful reaction to competitors proceedings.

5.2 Conclusions

In regards to entrepreneurial orientation and its dimensions this research study concludes that its five dimensions have a major contribution toward increased firm performance of small & medium enterprises which are as follow and discussed. EO plays a vital function in determining the firm performance of SMEs would be recognized. According to above mentioned debate, it can be concluded that an (EO) can be considered as processes, practices, thinking, and decision-making activities OR actions which guide firms toward improvement in its products and services & technology process. The significance of (EO) is to be continued existence and firm development of SMEs through innovation performance roles and functions which are very significance for every small & medium enterprise.

5.3 Limitations of the Study

This research study limitations are on the role play by entrepreneurial orientation to firm performance of small and medium enterprises; which has an exclusive trade environment compared to other countries, dissimilar results would have been predicted if a wider district was investigated to would-be further envoy of SME. This study also focused on other principal factor such as Government policies, political power, environmental factors between others were not enclosed in this study since they were not inside the capacity of study of the investigator. Moreover, the studys dependence on questionnaire presented so far, an additional limitation to the study because the true position would not be established with confidence. This, therefore, complete the studys conclusion and generalization a theme for additional testing. At last, the study composed data as of just a small representation of small and medium enterprises in Islamabad Pakistan, exit out an extra set of regularly significant population. It is consequently recognized that their insertion would have significantly varied some of the studys conclusion.

5.4 Suggestion for Future Studies

This study recommends that as like study must too be complete on further cities/countries because their operations are diverse from those intentional in this study. Further studies must be done on other city other than Islamabad, to get out whether it will give up

the same information or change. Similar to as Studies might also be done on impact of Entrepreneurial orientation (EO) on business performance in terms of sales growth and profitability of SMEs and all other organizations.

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Influence of Corporate Social Responsibility on Organizational Citizenship Behavior through Double Mediation Analysis

Farrah Khan*

University of Lahore, Islamabad, Pakistan

Abstract. Previous literature has examined the direct relationship between the concept of corporate social responsibility & organizational citizenship behavior. Present study is investigating the mediated link between CSR & OCB through organizational justice & organizational identification. Theory of Social exchange & social identity are supporting our study by providing foundations for interpretation that organizational social responsible behavior can influence OCB of employees through justice and their identification perception. Tests applied to the randomly selected data of 212 employees from different organizations of Pakistan. Our findings show fully mediated relationship between CSR & OCB through organizational justice and organizational identification. CSR towards employees has a strong relationship with OCB. The findings in this study will help in enhancing role of CSR for employees OCB.

Keyword: Corporate Social Responsibility, organizational citizenship behavior, organizational justice, organizational identification

1 Introduction

Various studies have observed the direct relationships between Corporate Social Responsibility (CSR) and other organizational outcomes, why dont anyone analyze the process through which this relationship occurs (Farooq et al., 2014). We are conducting a study in which CSR & Organizational Behavior (OCB) will be examined through mediated mechanism of organizational justice and organizational identification (OI). Previously CSR was analyzed with affective organizational commitment through organizational trust and organizational identification (Farooq et al., 2014). Literature has discussed that CSR can influence organizational citizenship behavior of employees (Gond et al., 2010). Study should focus on the mediation process through which a relationship occurs for better practical implications. If any relationship will be left unaddressed, causalities will be occurred. To address such issues we are going to do investigation on this relationship through mediating role of organizational justice (OJ) and organizational identification with support of theory of social exchange & social identity in context of Pakistan. Glavas and Godwin (2013) have used social identity theory to test the relationship between CSR & OI.

The current study proposes that double mediation link between CSR & OCB can give better understanding about the processes at workplace & enables

management of the organization towards initiatives of CSR. Therefore we are going to adopt double mediation method to cultivate a theoretical model of influence of CSR on OCB of employees. Social exchange theory can also support this towards positive link between CSR & OCB through OJ. If employees will be treated fairly, in return they exert effort towards organizational performance. Impacts and effects of dimensions of CSR were analyzed that how CSR influences employee performance and other outcomes (Turker, 2009). These dimensions of CSR can influence employees towards performance through process of exchange and identification. In our study we will focus on internal CSR dimension i.e. CSR towards employees, to relate it with OCB. It is our concerned dimension over here because employees OCB is the behavior which will be affected internally through organizational justice & organizational identification. CSR towards employees can influence employees more effectively as compared to other dimensions. After understanding this relationship managers would be able to assist employees to develop OCB through CSR. Once employees will observe that their organization is socially responsible, they would be able to develop sense of give back to their organization.

We are testing our model in one of the developing countries i.e. in Pakistan. On the other hand, we are going to find out the solutions for problems which employees face regarding organizational behavior in Pak-

*Corresponding author.

Email: farah.khan.cs.uol.edu.pk

istan. Organizations ought to think over that how they treat employees, in return it will motivate employees to perform better role in the organization which will lead towards OCB. In this way employees will want to be identified with such organization which is responsible for the people outside and inside the organization. We are suggesting that how these kinds of problems can be solved through organizations CSR approach. These are the variables which are sensitive areas for a manager to be improved in organization. In our point of view CSR can help an organization to improve such problems through proper management. In this paper we will discuss that what roles organizational justice and organizational identification as intermediaries play in the association between CSR and OCB.

First section of our study will review the concept of CSR. Then next section will discuss impacts of CSR on OCB through OI & OJ. Social identity theory and social exchange theory will also be discussed to support these links. Then methodology will be developed using preacher & Hayes to estimate model. Finally results, managerial implications & future directions will be discussed.

2 Literature Review

2.1 Corporate social responsibility (CSR)

Corporate social responsibility has already been discussed by scholars for several managerial disciplines (Hansen et al., 2011). CSR is defined by council for supportable development of world business as:

the ongoing commitment by business to act morally and add to economic development while refining the quality of life of the workforce (Birth et al., 2008).

Various organizations are now taking part in social activities by addressing social concerns which can affect people. This includes employees within the company, supply chain, customers and community in which company survives. CSR towards employee is one of the key points for the social aspects of CSR. We have excluded other dimensions of CSR due to irrelevancy with the current study.

- CSR Towards employees: Our concerned dimension is CSR towards employee. This is internal CSR that has direct strong relationship with OCB. Employee is the one who takes organization from decline stage to maturity. Why do organizations always expect employees to behave in extra manner to facilitate organizations, organizations should also focus to facilitate them. Organizations should be responsible towards employees benefits beyond formal contracts terms

and conditions. Organizations should be responsible for equal distribution of outcomes, for fair treatment, regardless of all types of diversity. When a human being perceives to be treated with care, in exchange he/she will respond in the same way.

Research classifies CSR and workforces in two comprehensive categories. Chief category states that how actions of an organization regarding CSR can effect employees actions (Backhaus et al., 2002). Social identity theory supports this concept that if organizations keep engaging themselves in welfare of its stakeholders, it creates reputable image in the mind of employees. Organizations social responsibility influences employees satisfaction for job positively through programs designed for ethics (Valentine and Fleischman, 2008). Literature examines the link between CSR & employees engagement and commitment which shows positive results (Farooq et al., 2014). These findings from literature clear us that employees want to be identified with organizations which are linked with society for its development; as an outcome they stay committed to organizations. Literature has focused on the link between CSR & identification as organizational identification is the part of social identity process (Fischer et al., 2007). Organizational identification was also linked with CSR. Organizational identification is insight of unanimity with or belongingness to an organization, where the individual denotes him or herself in terms of the organization(s) in which he or she is a member (Bhattacharya et al., 1995). CSR has positive impact over organizational identification through which members act can be affected positively (Fischer et al., 2007). As a whole literature on CSR demonstrating that there is a straight and solid relationship between CSR & employees outcomes, we just need to explore other mechanisms which can affect these relationships.

Our study is contributing to the literature in different ways. We have discussed identification aspect of CSR, social exchange process has also been discussed which suggests that if organization is engaged in CSR related activities then this will make perception in the mind of employees that organization cares for them and kind to them & then employees reciprocate in the same manner with positive attitudes. We suggest that CSR can influence OCB of employees through organizational justice and identification. Organizational justice is defined as a persons perception about organization to be fair in all aspects (Bies and Shapiro, 1988). Organizational justice is about the perception of employees within organization while CSR is about the fairness of organization with external entities as well. So we can say that CSR involves organization in all those activities which are ethical, moral and benefit its employees and other members of the society. It was hypothesized by Zhang et al. (2006) that CSR can influence employ-

ees perception about justice and then automatically employees performance can be affected. Overall this study will present another mechanism for the association between CSR and OCB.

2.2 Organizational citizenship Behavior

Organizational citizenship behavior is another significant concept to be discussed in the area of management. [Organ \(1988\)](#) presented a huge contribution in the field of management by adding OCB as an important factor for the development of employee performance ([Podsakoff et al., 2000](#)). High level of OCB increases productivity level and chances of success. Researchers define OCB as:

A set of voluntary and optional behaviors which are not part of individuals official duties; however, they are carried out and lead to effective improvement of tasks and roles at the organization ([Appelbaum et al., 2007](#)). [Organ \(1988\)](#) explained five dimensions of OCB, which can play important role in affecting organizations overall performance.

- First is **altruism**, it is the behavior that has effect of helping colleagues within organization for organizational tasks.
- Second is **conscientiousness**, it includes behavior that is beyond basic role requirement of organization ([Wong, 2009](#)).
- Third is **Civic virtue**, it is characterized by behavior in which employees have deep concerns and interests in the organizational development ([Jamali and Mirshak, 2007](#)). This is the positive kind of involvement from employees ([Weyzig, 2006](#)).
- Fourth is **Courtesy**, is kind of behavior in which employee tries to avoid has conflicts with others ([Hansen et al., 2011](#)). It also states that one should remain polite and wise to others ([Nielsen et al., 2012](#)).
- Last is **sportsmanship**, it has been defined as ability to tolerate undesirable organizational circumstances. Sportsmanship ultimately saves time when employees reduce to complain.

OCB is motivating tool for employees to perform well ([Bienstock et al., 2003](#)), it also enhances the satisfaction of employees ([Abdullah and Rashid, 2012](#)). There is a strong association between organizational performance and OCB that's why various studies were conducted on the bases of consequences and antecedents of OCB. Literature states that CSR can influence and enhance OCB of employees which is important for development of an organization ([Khan et al.,](#)

[2014](#)). Another aspect of CSR is about legal activities, which is very important for OCB. Employees perception about organizational legal acts can affect OCB ([Dutton et al., 1994](#)). Being citizen of a society, an individual perceives all business entities to perform in ethical way and legal ways ([Pinkston and Carroll, 1996](#)). In this way good OCB can be enhanced in employees through which they will want to be identified with reputed organizations ([Thomas et al., 2004](#)). It is employees perception that if organization is engaged in CSR then it is concerned about well-being of the society, then employees show positive behavior and perform positively which shows strong link between CSR and OCB ([Turnipseed and Rassuli, 2005](#)).

3 Theoretical Framework and Research Model

We suggest that organizational justice and organizational identification are two effects of CSR which can influence employees OCB. We are conducting a study in which influence of CSR on OCB of employees will be mediated through organizational justice & organizational identification. We suggest that internal CSR (towards employees) will affect OCB of employees through social exchange and social identity mechanisms. In our paper we are discussing double mediation in which organizational identification is a mediator for employees perceived organization citizenship behavior through organizational justice. If this treatment is in terms of fairness then it will show justice which will motivate an individual towards better performance. If employees will be treated properly it will make them feel valued, they would like to be identified with organization which will ultimately enhance OCB as well.

3.1 Organizational Justice as Mediator: Social Exchange Mechanism

As literature gives us data about OCB that Organizational citizenship behavior is related to the outcomes which are beneficial for organization such as goal attainment, better productivity & improved ethical environment ([Wright and Sablinski, 2008](#)). Socially responsible behavior of organization can make employees to be more productive towards organization ([Hansen et al., 2011](#)). Additionally combine literature of [Lindgreen and Swaen \(2010\)](#) suggests that CSR can enhance positively employees perception of organizational justice. If employees will be treated fairly, in exchange they will perform well. Social exchange theory supports this exchange relationship between organization & employee. Basically social exchange theory is built on proper exchange process of emotions and

resources between supervisor and employees (Blau, 1964). The key opinion of the theory is that individuals carry out their social contact in the very similar way that businesses carry out economic exchange. Another study suggests that the relationship between supervisor & employee can be influenced positively by fair treatment as well & it is important to know that how supervisor or management of organization treat employee (Cropanzano and Mitchell, 2005).

To support this notion first we will discuss briefly origin of justice and then literature about it. Organizational justice was firstly generated by Greenberg, which states that an individual perceives organization to be fair in all aspects (Greenberg, 1987). Justice is a decision or action taken by an entity which is morally right. Justice at workplace can be linked to ethics, law, religion etc. according to organizational point of view justice is associated with fairly given pay, promotion with justice, fair selection criteria (Usmani and Jamal, 2013).

We are taking Organizational justice as a whole but for understanding of overall organizational justice we will briefly discuss dimensions of Organizational justice. There are important components of organizational justice which divide overall OJ into three dimensions. First is distributive justice, second procedural justice and last is interactional justice which further includes interpersonal and informational justice (Bies, 1986). Distributive justice is about the justice employees expect from organization in the form of outcomes.

These outcomes can be tangible and intangible in nature such as pay or praise (Adams, 1965). After Adams research about first dimension of organizational justice, two other researchers presented a new measurement of organizational justice as procedural justice (Colquitt, 2001). According to them procedural justice focuses on the procedures used to distribute the outcomes. Interactional justice was presented by Bies (1986), which emphasizes on perception of workers of the interpersonal behavior during decisions and ways (Bies, 1986). It involves social actions such as employees expect to be treated with respect and dignity from supervisor. Further this dimension is divided into two concepts: interpersonal & informational justice.

When employees perceive that they are treated with respect, dignity and in a polite way while taking decisions then they perceive that the organization deals with interpersonal justice. On the other hand when employees expect timely decisions, truthful information about outcomes this will come under informational justice (Colquitt, 2001). Enhanced organizational justice will improve employees performance. Managers should focus on to improve organizational commit-

ment, employees satisfaction and identification with organization to enhance organizational justice through distributive and procedural justice (Usmani and Jamal, 2013).

Corporate social responsibility & organizational justice give the concept of normative assumption (Rupp et al., 2006). Whenever employees treatment is being discussed, according to CSR norms should be followed for treatment of individual, group and environment. In return employees will respond with responsibility for organization in the form of enhanced OCB. Another research says that attitudes and behaviors of individuals are directly influenced by the treatment they receive from organization in perspective of justice (Cropanzano et al., 2011). We suggest that automatically if organization is socially responsible for employee, will treat them fairly then it will lead towards enhanced OCB.

H₁: Employees perception of CSR positively influences employees OCB through perceived OJ.

3.2 Organizational Identification as Mediator: Social Identity Mechanism

Study says that those with high level of organizational identification display better performance at work which promotes their positive response towards organization (Van Knippenberg et al., 2004). Social identity theory proposes that CSR influences positively and directly identification of employees. Individuals seek to maintain positive social identity from different groups (Ashforth and Mael, 1989). Organizational identification is the insight of unanimity with or belonging to an organization among members which is important to the success of many organizations (Mael and Ashforth, 1992). Literature says that employees would like to be identified with the organization which have repute and strong positive image, which will automatically enhance employees self-worth (Turner, 2010). CSR towards employees ensures the support of employees and comfortable environment to work, which will enhance employees perception to be at prestigious place. We therefore propose that CSR to employees can enhance organizational identification.

In terms of social identity, literature suggests that organizational identification has direct link with OCB (Tyler and Blader, 2001). According to Duane, employees perceive that CSR is surely related to OCB (Hansen et al., 2011). Organizational identification & OCB both are psychological terms which are related to employees outcomes. As literature has given data about the relationship between CSR & OCB and OI has positive relationship with CSR & OCB so we suggest that OI can mediate this relationship positively. Therefore, we

hypothesized:

H₂: Employees perception of CSR positively influences employees OCB through perceived OI.

3.3 Double Mediation between CSR & OCB through OJ & OI

Social identity says that being recognized by reputed organization is a natural and organizational phenomenon which is required by every employee in organization. If employees will be treated fairly and honestly it will naturally influence them to be fair with organization in return. This will enhance their organizational identification automatically. For OCB enhancement organizations ought to be socially responsible for employees to influence their perception of identification with organization. When employees are treated fairly they will want to be identified with such organization. They will focus on extra role activities for the better performance (Lipponen et al., 2005). In a study researcher perceived that organizational justice is positively related to organizational identification (Tyler and Blader, 2003). Literature examines the mediation role of organizational identification between organization-focused justice and organization focused outcomes (Lipponen et al., 2005). So previous studies have shown relationship between OJ & OI, through which we can say that employees want to be identified with such organizations which prevail justice in their systems. In above constructs of organizational justice and organizational identification we have discussed relationship of CSR & OCB. We suggest that organizational justice can influence organizational identification of employees for our study about CSR & OCB.

H₃: Employees perception of CSR positively influences employees OI through perception of OJ.

Employees perceive that socially responsible organization must focus on its employees as well. Our previous hypothesis says that when employees will be treated fairly they will want to be identified with such organization; it will lead to enhanced OCB of employees for organization. Previous discussed all studies and literature says that CSR has strong relationship with other employee related outcomes (Hansen et al., 2011). Relationship of OCB has also been examined with CSR and other organizational variables. Additionally another combined study says that CSR can influence employees perception of OJ & CSR affects OCB as well (Gond et al., 2010). In that way employees will prefer to work beyond their core responsibilities, which will ultimately improve organizational performance. According to the analysis of the literature we suggest that CSR can enhance OCB of employees when

employees will be treated with justice, it will automatically enhance organizational identification of employees which will result in enhanced OCB.

H₄: Employees perception of CSR positively influences OCB through double mediation of OJ & OI.

Through different theories we are conducting a study which will result that CSR will influence organizational citizenship behavior of employees through fair treatment and strong identification with organization. Our model has a single path through double mediation. We will finally examine this relationship empirically.

4 Research Methodology

4.1 Respondents & Procedure

In this study, we have surveyed managers and supervisors of four major companies of Lahore, Pakistan. There are a lot of sectors which are growing day by day to facilitate customers in every manner. We have picked those companies for our survey which are involved in CSR activities. Through websites of those companies we got CSR related information, which proves that they are concerned about welfare of the society, those companies are engaged in facilitating customers by providing wide range of healthy and protected products. After market analysis we moved towards data gathering section. We contacted human resource managers of all adopted companies to obtain their help in distributing questionnaires to randomly identified employees. We placed drop box nearby so that employees may put their questionnaires there and anonymity can be maintained (Karriker and Williams, 2009). Respondents were given one week to fill questionnaire and a reminder was given to them through call. We distributed 300 copies of questionnaires and received 230 responses; good response rate was noticed (70%) due to face to face and other reminders. After examining missing value final responses were 212.

4.2 Instruments

We have used developed instruments for our study. Variables of the study are well used by previous studies, so there was no difficulty to select instruments from sources. Questionnaire is based on Likert scale ranging from 1-7. In which 1= strongly disagree and 7= strongly agreed. Before initiating the study we pre tested the questionnaire with few business students to recognize any kind of problem related to items, comprehension and understanding. Pretest revealed no problem regarding duration, content and relevancy.

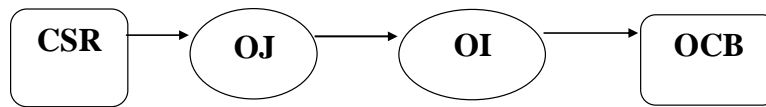


Figure 1: Theoretical Framework

4.2.1 Corporate Social Responsibility

For the measurement of CSR, instruments developed by [Turker \(2009\)](#). Six items were used to measure CSR to employees.

4.2.2 Organizational Identification

For Organizational identification six item scale was used the this study administrated all items in a 7-point Likert scale ([Mael and Ashforth, 1992](#)).

4.2.3 Organizational Citizenship Behavior

For this study 4-item scale on Likert scale was selected to measure OCB developed by [Podsakoff et al. \(2000\)](#).

4.2.4 Organizational Justice

For overall measurement of organizational justification instrument using 14-item scale was adopted ([Cropanzano and Stein, 2009](#)).

5 Results and Findings

In this section we are discussing the examination of data to discover the relationship between independent variable CSR and dependent variable OCB of employees. The mediating role of OJ & OI is also inspected. Additionally, to check hypothetical relationship between variables, validity of instruments are examined in context of Pakistan. To test our model multiple regressions has been used with the help of SPSS. In our study we have tested descriptive statistics and missing value analysis. Further demographic investigation of respondents was also carried out to know the demographic characteristics of our sample. Data were collected from 300 respondents, out of which 212 respondents filled out the questionnaire in all aspects.

The above table shows that, all cases are now valid, without any missing value. After removing missing values, further tests will be performed.

5.1 Overall Strategy

We have evaluated data in overall three steps. First we examined the reliability and validity through CFA (Confirmatory factor analysis) for entire measures ([Anderson and Gerbing, 1988](#)).

5.2 Measurement Validity: CFA

We have adapted instruments for all variables from well recognized sources still we have to check the reliability and validity in context of Pakistan. For this purpose we have performed CFA for CSR to employees, OJ, OI & for three dimensions of OCB i.e. loyalty, helping & industry. We tested a single factor CFA at first in which we aimed to load all items of the six measures on a single factor ([Anderson and Gerbing, 1988](#)) and the model fit of a single factor is not good (Table 2). In a single factor χ^2/df should be less than 5 but in our case it is greater than 5. The value of GFI, TLI, CFI ought to be greater than 0.90 but in our case it is less. RMSEA ought to be 0.0 but it is greater so model-1 is not acceptable. We then tested multiple factors analysis in which all items were loaded on their respective factors. In multiple factor analysis χ^2/df should be less than 5 and our result is showing less value. The value of GFI, NFI, TLI, and CFI should be greater than 0.90 and RMSEA should be 0.0, so model-0 is acceptable. The t indices of the multiple factors CFA model were good and within the range of acceptable models (Table 2).

χ^2 Chi square value, df degree of freedom, GFI goodness-of-t index, NFI normed t index, TLI TuckerLewis index, CFI conrmatory t index, RMSEA root mean square value.

We also examined the convergent and discriminant validity of the instruments. In our case Average variance extracted (AVE) for every instrument was greater than the suggested value of 0.50, demonstrating satisfactory convergent validity. Discriminant validity was established since the AVE for each construct was greater than any squared correlations (Table 3).

In the table values given in font which looks bold signify the AVE; other values are the squared correlations among the variables.

5.3 Reliability of Measuring Instruments

Being reliable is all about being consistent of a measuring instrument. Internal consistency was tested with Cronbachs alpha coefficient for 4 instruments in our study ([Ruekert, 1992](#)).

Above table is showing that all of the scales have values of alpha in range from .683 to .923. In social sciences researchers accept value of alpha higher than 0.6, as values greater than 0.7 is considered as good, above 0.8 is considered as very good, and above 0.9 is considered as excellent. We can see that our all measuring

Table 1: Missing Value Analysis

| Statistics | | |
|---------------|---------|-----|
| Missing Value | | |
| N | Valid | 212 |
| | Missing | 0 |

Table 2: Indices of Alternative Models of CFA

| | Model | Description of the model | Model Fit Indices | | | | | | |
|--|---------|--------------------------|-------------------|-----|-------|-------|-------|-------|-------|
| | | | X2 | Df | X2/df | GFI | NFI | TLI | CFI |
| | MODEL 1 | Single factor CFA | 3995.450 | 435 | 9.185 | 0.370 | 0.280 | 0.251 | 0.299 |
| | MODEL-0 | Multiple factor CFA | 480.544 | 335 | 1.434 | 0.861 | 0.906 | 0.965 | 0.969 |

instrument have values of alpha greater than 0.6 which means they have good reliability in context of Pakistan.

5.4 Common Method Variance

We have used common method variance multiple methods such as Harmon one factor, common latent factor to test the common method bias (Podsakoff et al., 2000). The overall analysis of all the variables produced six distinct factors, which together given sum of 81.717% total variance; where first factor did not sum up majority of the variance (only 37.180%). Correspondingly, the common method latent factor for mediating, independent, and dependent variables generated only 23.031% of the common factor, significantly less than the acceptable Threshold of 25% podsakoff2000. Thus, CMB was not a serious threat for our data.

6 Results

6.1 Descriptive Statistics

In Table 5 we have provided all required means, standard deviations, and correlations between the model variables. Given correlation table will offer to have a look into all hypothesized and non-hypothesized relationships among the concepts.

7 Model Testing

The hypothesized model produces good fit with the data ($\chi^2 = 584.26$, $df = 340$, $\sqrt{\chi^2/df} = 1.542$, $GFI = 0.859$, $NFI = 0.898$, $CFI = 0.961$). Values are in favor of our model as shown in table 6 below.

7.1 Mediation Effects

Notion of mediation infers a causal hypothesis where an independent variable causes a dependent variable, through its effect on a mediating variable (Sobel, 1990). There are specific effects which are of notice in multiple mediation methods (MacKinnon et al., 2000). In (table 7) we provide the direct effects of CSR to employees on OI, OJ & OCB as well as indirect effects of CSR to employees OCB through mediation of OI & OJ. CSR to employees has positive influence on organizational identification and organizational justice. CSR to employees has negative effects on loyalty and industry. There is a strong positive effect of mediators on OCB. All indirect effects are significant as shown in table. In our case, the effect of the CSR components on AOC is carried through two parallel mediating paths (via trust and identification). CSR to employees has stronger mediation with helping component of OCB as compared to other components of OCB.

Table 3: Test of Discriminant Validity

| | AVE | industry | org_justice | org_identification | helping | loyalty | CSR.Emp |
|---------------------------|-------|--------------|--------------|--------------------|--------------|--------------|--------------|
| Industry | 0.664 | 0.815 | | | | | |
| org_justice | 0.565 | 0.175 | 0.752 | | | | |
| org_identification | 0.795 | 0.213 | 0.433 | 0.892 | | | |
| Helping | 0.819 | 0.071 | 0.382 | 0.263 | 0.905 | | |
| Loyalty | 0.661 | 0.396 | 0.223 | 0.287 | 0.176 | 0.813 | |
| CSR.Emp | 0.792 | 0.052 | 0.270 | 0.270 | 0.136 | -0.026 | 0.890 |

Table 4: Reliability of the Items

| Scales | Cronbach's Alpha | No of items |
|-------------------------------|------------------|-------------|
| CSR-Employees | .855 | 6 |
| Organizational Justice | .683 | 6 |
| Organizational Identification | .874 | 5 |
| OCB | .923 | 5 |

Table 5: Descriptive Statistics

| | Mean | Std. Deviation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|------|----------------|---------|--------|---------|--------|--------|--------|--------|-------|---|
| Gender1 | 1.31 | .466 | 1 | | | | | | | | |
| Age1 | 1.56 | .709 | -.178** | 1 | | | | | | | |
| Education | 2.46 | .570 | .163* | -.079 | 1 | | | | | | |
| HRAVG | 5.17 | 1.39 | -.001 | .097 | -.025 | 1 | | | | | |
| OIAVG | 5.70 | 1.18 | .025 | .116 | -.108 | .256** | 1 | | | | |
| AVGHELP | 4.69 | 1.70 | -.152* | .051 | -.184** | .126 | .257** | 1 | | | |
| AVGLOYAL | 4.79 | 1.25 | -.162* | .080 | -.044 | -.016 | .258** | .162* | 1 | | |
| AVGINDUSTRY | 4.67 | 1.11 | -.050 | .035 | .054 | .052 | .206** | .062 | .387** | 1 | |
| AVJOJ | 5.46 | 1.08 | -.202** | .210** | -.116 | .247** | .438** | .392** | .273** | .153* | 1 |

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

* Correlation is significant at the 0.05 level (2-tailed).

8 Discussion

Basic purpose of the current study is to examine the relationship between CSR and OCB through mediation of organizational justice and organizational identification. Using SRM we determined that OCB is one of the strong outcomes of CSR through different mediations. Therefore we can say that OCB is not a direct outcome in fact there are different mechanisms through which this relationship builds.

There is positive contribution of OCB towards literature regarding organizational performance (Bienstock et al., 2003). Previous research has contributed in terms of dimensions and other variables affected by OCB, we have conducted a research in which CSR influenced OCB positively through double mediation. Previously may be this relationship was analyzed for multiple mediation, we have analyzed double mediation between these variables. This finding can give new shape to the mechanisms between CSR & OCB. Hence this study has contributed to the growing body of research in CSR and organizational outcomes empirically. Previous re-

search says that CSR was analyzed from both perspectives, internal & external but we have taken internal CSR for our study to analyze the OCB of employees. The results of this study present few observable differences concerning CSR, OCB, and OJ & OI. Thus this study can be presented to organizations as guideline to follow for the help in CSR & OCB related areas.

8.1 Managerial Implications

Previously CSR was discussed in literature as external function for public relation & development, it can be powerful tool for internal customer as well i.e. employees. Our model suggests that if organizations create a distinctive & strong corporate image for external audience, they should also focus on to enhance employee performance through CSR. Justice and identification affect job related attitudes like motivation, engagement & satisfaction (Saks, 2006). Our study has shown useful results for making strategic CSR policies concerning employees. Employees perception about OCB & overall outcomes can be influenced through CSR. When company gets involve in CSR, employ-

Table 6: Fitness of Model

| | Model | Description of the model | | Model Fit Indices | | | | |
|--------------------|-------|--------------------------|-----|-------------------|------|-------|-------|-------|
| | | X2 | Df | X2/df | GFI | NFI | TLI | CFI |
| Hypothesized model | | 524.26 | 340 | 1.542 | .859 | 0.898 | 0.957 | 0.961 |

Table 7: Direct and Indirect Effects

| independent variable | Helping | | | Loyalty | | | | Industry | | | | | | |
|------------------------|---------|--------|--------|----------|-------|-----------|--------|----------|-------|-----------|--------|----------|-------|-----------|
| | Direct | Direct | Direct | Indirect | Total | Mediation | Direct | Indirect | Total | Mediation | Direct | Indirect | Total | Mediation |
| CSR.Employees | 0.164 | 0.272 | 0.071 | 0.068 | 0.139 | 48% | -0.111 | 0.088 | 0.199 | 44% | -0.027 | 0.077 | 0.05 | 1.54% |
| Organizational Justice | 0.393 | 0 | 0 | 0.098 | 0.098 | 1 | 0 | 0.127 | 0.127 | 1 | 0.103 | 0.071 | 0.174 | 40% |
| OI | 0 | 0 | 0.25 | 0 | 0.25 | 0 | 0.324 | 0 | 0.324 | 0 | 0.18 | 0 | 0.18 | 0 |

ees feel proud to be part of such company. Managers should focus on CSR activities specially related to employees to develop positive behaviors of employees & to reduce negative behaviors. Organizations mostly ignore the original purpose of CSR & exhibit CSR only for advertisements and to show off. This study has given a guideline to managers that this matter should be considered properly for organizational performance. This research has further proved that CSR towards employees can influence strongly the OCB of employees, which will ultimately improve employees overall performance.

8.2 Future Directions & limitations

This study has used data of 212 employees; large sample size can be used to analyze the results across organization. This study also opens up ideas for other studies undertaking other variable to examine for different results. We have used social identity & social exchange mechanisms, other mechanisms can also be used to analyze same relationship. Future studies can analyze dimensions of organizational justice, dimensions of OCB. This study has used organizational justice and organizational identification as mediator between CSR & OCB, future research can fill this gap of mediators with other variables. CSR toward OCB have been discussed previously by few researchers, in future new researches should be based on other organizational outcomes. Moreover present research was done in context of Pakistan; new studies can examine these relationships in different context.

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The Influence of Remittances on Education and Health Outcomes: an Analysis for South Asian Countries

Sana Ullah*¹, Muhammad Tariq Majeed² & Adiq Kausar Kiani³

^{1/2}Quaid-i-Azam University, Islamabad, Pakistan

³Federal Urdu University, Islamabad, Pakistan

Abstract. Remittances all over the world play significant role in improving the standard of living of the people in general. Broadly it is difficult to analyze all the characteristics of life standards and, usually researcher look at the educational or health indicators, which are the major concerns of every household. In this study, we also explored the effect of international remittances on educational and health indicators for selected South Asian countries. Our findings show that remittances play a vital role in enhancing health attainment for instance, escalating life expectancy, slashing infant mortality and fertility rate. The Two-Stage Least Square (2SLS) technique has been applied. Upshots of our study suggest that flow of remittances is one of the significant sources for economic development. It is viewed that high migration rate effect only health variables but a little improvement has been observed for educational attainment in South Asian region.

Keyword: Remittances, Education, Health, South Asian

JEL classification: O11, O15, I10, I20

1 Introduction

It is observed that over 200 million people in the world are currently living in a country in which they were not born, a number that is becoming larger with passage of time (Schiantarelli, 2005). These aliens send money to their home countries, known as Foreign Remittances. For most developing countries, a remittance becomes second largest sources of foreign income after Foreign Direct Investment (FDI) (Schiantarelli, 2005). In this situation, some factors have a special importance in a particular community. They are not important source of valuable foreign exchange for the developing countries, but are also a source of poverty reduction and improvement of Physical Quality of Life Index (PQLI) and Human Development Index (HDI).

One stream of well-being they lift the liquidity constraints in to their own community. This is one of the biggest sources which used for health and educational purposes. Remittances really effect to reduce poverty levels, impel educational attainment and subsidize to improve health indicators to great extent (Calero et al., 2009; Gupta et al., 2007; Jongwanich, 2007; Stark et al., 1988; Taylor and Wyatt, 1996). Therefore, it is said that Inflow of remittances reduce the poverty by inspiring the income of the recipient country, removing credit constraints, enhancing investment in education, escalating human development by spending more in-

come on better health services. In the same context, Duryea et al. (2005) identified that remittances may also use to facilitate housing infrastructure. These physical environment improvements in which families live are thought to contribute toward rebates in infant mortality and fertility rates. Amuedo-Dorantes and Pozo (2011) found that families who spend more remittances to cover their medical expenses have better health facilities than those who do not.

Despite the growing interest in this area, the existing literature is still limited in South Asian countries. Yet, most existing studies focused on Latin American countries and also hidden the education and health indicators issues. In short, all time focus on economic consequences of using remittances and paid very less attention to this area. In general, these ideas have been mostly supported by empirical evidence on migrant-sending countries. In this context, we use the South Asian regions in our study to explore the influence or use of remittances on human indicators.

The basic purpose of the paper is to study the impact of remittances on development indicators (education and health) for selected South Asian countries. This study tries to explore whether remittances is a strong instrument influencing and improving education and health indicators or not. Further, how remittances in different countries are used for different purposes and underlying reasons behind them.

*Corresponding author.

Email: sanaullah133@yahoo.com

1.1 Remittances to South Asia: An Overview

Migrants have become directly and substantively involved in different economic and social activities in their countries. Migration of South Asians to the whole world for work purpose is not a recent phenomenon; Asian migrants have been going around the world for more than three decades. Workers remittances to under-developed countries have experienced a sensational increase in the last few decades. According to the [Schiantarelli \(2005\)](#), in 1990 remittances to low and middle income countries amounted to about US\$30 billion. It is predicted that after fifteen years this amount would reach approximately up to US\$170 billion, i.e. \$10 billion increase every year for the next fourteen/fifteen years.

There is a long history of labor migration from South Asia to various parts of the world. Today Asians workers are operating their working duties brightly overall the World, especially in UAE, Europe and USA etc. Because these labor markets have low size of population, these nations have great possibility to appeal labor force from numerous sides of the world. Due to the easy migration to the labor market of these countries, majority of Asians skilled and unskilled force perform their duties in these countries. \$63.82 billions India is the highest among South Asian who receive remittances whereas Bangladesh is lowest \$15.8 billions. Pakistan is 8th largest among South Asian regions who receive remittances i.e. \$20.1 billion. In the decade of 1980, tremendous increase by remittances to Bangladesh, India and Sri Lanka region but international remittance has increased for Nepal over the last decade. In case of Pakistan, first one and half decades remittance continue to decline and again growing significant instrument after 2000. Figure 1 illustrates this trend.

2 Literature Review

Limited studies discussed the issue of influence of remittances on education and health outcomes for South Asian regions; therefore this study is conducted for the purpose to address this issue particularly. Researchers viewed that there is increased trend of migration or remittances sent by migrant to or from South Asian countries, but limited work has been found on human development in the context of remittances. However, educational and health position of children that belonging to migrant households. Recent empirical studies highlight the linkage between education and health outcomes due to remittances and however, these results are not captured due to the lack of accurate data in South Asian regions, and most of the work is yet not completed.

In our study, effects of remittances on education and health have been examined. We obtained the data of remittances on household level and discussed the patterns of remittances. While related studies concentrate on macro effects in recipient countries including life expectancy, infant mortality rate and fertility rate. In this section, we present only education and health indicators development literature through remittances in various regions but there is enough literature available on this issue internationally. Therefore we discuss briefly different literature cited for developed and developing countries in this study.

Large number of studies has shown that there is an upsurge of average year of schooling of family members due to the overcome the liquidity constraints. Remittances are also lifting the budget constraint of families in latest era that also might raise the expenditure of human capital. New research agenda on remittances and year of education has emphasized the budding performance in developing countries. For instance, [Yang \(2005\)](#) found many children year of schooling in families whose migrants receive larger external finance in Philippines. [Dhungana and Pandit \(2014\)](#) found same result for Nepal; [Córdoba et al. \(2004\)](#) found same kind of results for Mexico communities in his study.

In case of Haiti, [Amuedo-Dorantes and Pozo \(2006\)](#) tested the hypothesis that remittances raise educational attainment. They found that migrant income affect negatively with household members due to failure of the children enrollment in the school. However, migrant income starts to inflow; they raise the school enrolment and attendance with passage of time. Especially, girls enrolment and attendance appears to be raised from the external finance and secondary school enrolments grow more by the family. Remittances have a significant contribution to educational variables as remittances add emphatically to the attendance, school enrolment and years of schooling.

[Dustmann and Glitz \(2011\)](#) defined the remittances function in these words; they lift the liquidity constraints, enhances investments in human capital of developing countries, students in under-developed nations are often expected to pay for their books, transport, uniforms, food and sometimes even teacher salaries pay from this source. Furthermore, attending school imposes additional costs on the family through with reductions in income or family production by the attendee. See also [Elbadawy et al. \(2009\)](#); [Wahba \(1996\)](#) for Egypt; [Jensen and Nielsen \(1997\)](#) for Zambia; [Ilahi \(2001\)](#) for Peru; [Kabki et al. \(2003\)](#) for West Africa; [McKenzie and Rapoport \(2006\)](#) for Mexico, [Acosta et al. \(2007\)](#) for Latin American countries and [Calero et al. \(2009\)](#) for Ecuador; which provide an extensive discussion on the role of lifting of liquidity constraints. Similarly, [Córdoba \(2006\)](#) found positive effect of migration on educational attainment for children in poor families.

Table 1: Top 10 Remittance-Receiving Countries, 2015

| No | Country | Remittances (\$US billions) |
|----|-------------|-----------------------------|
| 1 | India | 72.2 |
| 2 | China | 63.9 |
| 3 | Philippines | 29.9 |
| 4 | Mexico | 25.7 |
| 5 | France | 24.6 |
| 6 | Nigeria | 20.8 |
| 7 | Egypt | 20.4 |
| 8 | Pakistan | 20.1 |
| 9 | Germany | 17.5 |
| 10 | Bangladesh | 15.8 |

Source: *Migration and Remittances Fact book, Development Prospects Group, World Bank (2016)*

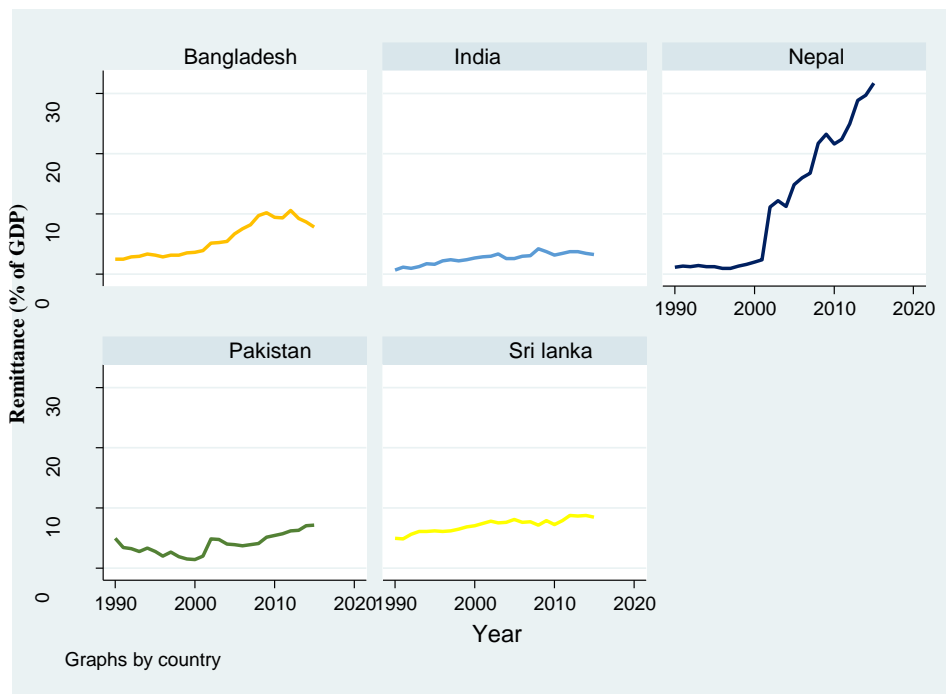


Figure 1: Remittance (% of GDP) Inflows by Region (1990-2015) Source: World Bank (2016)

In addition, [Taylor and Wyatt \(1996\)](#) viewed that remittances increase the volume of family resources and also increase the maximum years of schooling.

The second part of the literature emphasizes the health indicator improvement through a migrant income. Child health is relatively imperative for the prosperity of community and regulates development of human capital. Starting from [Grossman \(1972\)](#) production model, remittances help to impel child health outcome by the means of purchases of children health care and feed, while migration phenomenon might have significant positive affect child health first through the

smaller amount of time spent by parents with their children and this concentration impel with passage of time.

[Acosta et al. \(2007\)](#) analyze the contribution of remittances to Latin America and used a set of health variables in their study. They included, height and weight-for-age of children aged 0 to 1 years and children aged 2 to 5 years. They observed that children aged 0-5 year have been vaccinated. In a nutshell, their analysis shows that children in recipient families enjoy better health facilities. [Amuedo-Dorantes and Pozo \(2011\)](#) analyzed the link between remittances and health care expenses. Furthermore, remittances

increase health care expenditures and the level of expenditures undertaken. In short, a remittance is a statically significant determinant of health care expenditures, when compared to alternative sources of income. [Zhunio et al. \(2012\)](#) predicted the Mexico societies, found that a 1% rise in remittances per capita reduced infant mortality rate by 0.15% and improved life expectancy by 0.03%.

[McKenzie and Rapoport \(2006\)](#) pointed out that migration improves children health outcomes, increasing birth weights and lowering infant mortality, where lots of improvement say, in health variables (infant mortality and birth weights) through a remittance. In addition, it is shown that two further impacts on health; (1) high opportunity cost of time and (2) receive some forms of health inputs. Evidence for this effect is seen in children in migrant households receiving their good feed and full dose of vaccines. A more significant positive influence is observed in terms of parental health knowledge. Mothers in migrant families are found to be a have advanced levels of health information and similarly, knowledge spillovers in non-migrant households mothers.

[Hildebrandt and McKenzie \(2005\)](#) found positive evidence of migration on health outcomes due to remittances increases which show an increase in birth weights and reductions in infant and mortality. Children health is highly correlated with the mother knowledge about health. The paper also provides routes through which these networks affect child health, and it is also revealed that the migration trails can consequence in mounting health information.

This health knowledge enhances the health outcomes through different channels. They find the comparative advantage of the children of migrants and non-migrants, children of migrants household are more fed, and fully vaccinated and taken to a Physician in early year of life. In a nutshell, the overall literature gives the evidence that remittances seem to improve health and educational in particular and improve standard of living of migrants in general. Similarly, [Ratha \(2013\)](#) argues that remittances could play a crucial role as a powerful antipoverty force because they tend to raise the incomes of households in the developing world. In short, remittance may affect health through different channels.

3 Methodology

3.1 Description of Data and Sources

The data for our empirical model include 5 countries for 26 years data from 1990 to 2015. Our empirical model includes one educational indicator and three health indicators as dependent variables. For education, we use 1) average year schooling. For health, we

use 1) Fertility Rate (number of children that would be born to each woman), 2) Infant Mortality (death rate during the first year of life) and 3) Life Expectancy at Birth.

For consistency, data on education and health dependent variables are obtained from World Development Indicators (WDI) but educational variable is provided by Barro and Lee; independent variables (Education and Health Spending, Physicians, GDP per capita, Unemployment Rate, Rural Population) were obtained using the World Banks World Development Indicators and remaining instrumental variable obtained from World Development Indicators. Table 2 shows the complete list of variables along with their definitions and summary statistics. The complete list of countries used in the analysis is shown in the Appendix.

For each of the dependent variables to be estimated, we include a common set of explanatory and control variables. These includes 1) Remittances (% GDP), 2) Net Outward Migration, 3) GDP per capita (in 2010 \$US), 4) Unemployment Rate, 5) Rural Population and 6) Infant Mortality Rate (for the education estimates). Further, we include educational and health specific determinants for each respective variable, including 1) Public Education Expenditures (% of GDP), 2) Public Health Expenditures (% of GDP), and 3) Number of Physicians (per 1000 population). For all estimations, we include yearly time variable to capture the time trend not explained with country-specific factors.

Data on educational variable and number of Physicians are available in irregular pattern. Therefore, in order to make them continue for every year from 1990 to 2015, we extrapolate them using Stata 14 software.

3.2 Model and Methodology

This chapter builds up an econometrics framework and informed about suitable methodology. In first part, we describe few applications of the random effect (RE), unobservable individual effect, unobservable time effect and idiosyncratic term in model. This study first uses the Random Effect approach. Similarly, alternative test is Fixed Effect which is based on two main assumptions. First, the intercept is permitted to vary from individual (country) to individual (country) but constant over time. Second, the slope parameters are assumed to be invariable in both dimension (unobservable individual (μ_i) and time dimensions (t)). Same as, Random Effect which is based on two main assumptions slope and intercept are fixed in both unobservable individual and time dimensions and reminder disturbance stochastic with $\epsilon_{it} \text{ IID } (0, \sigma_\epsilon^2)$. Another assumption of the Fixed effect model, unobservable individual is the time-invariant but other macro variables are time variant variable.

The Hausman specification test justifies fixed effect and random effect models ([Hausman, 1978](#)). If indi-

Table 2: Definition and Descriptive Statistics

| Variables | Definition | Mean | Min | Max | S.D |
|-----------------------------|---|--------|--------|---------|--------|
| Dependent variables | | | | | |
| Year of schooling | Education index | 4.44 | 2 | 8.63 | 1.88 |
| Life Expectancy | Number of years from birth if prevailing patterns of mortality remain constant | 65.65 | 54.19 | 74.93 | 74.93 |
| Infant Mortality | Number of infants dying before reaching one year of age, per 1,000 live births | 55.28 | 7.46 | 106.1 | 28.31 |
| Fertility Rate | Number of children born to a mother if she lives to the end of her childbearing years | 3.32 | 2.01 | 6.04 | 1.02 |
| Independent variable | | | | | |
| Real Remittances | Remittances (% of GDP). | 6.27 | 0.73 | 31.75 | 5.93 |
| Public Education Spending | Spending on education (% of GDP). | 2.73 | 1.42 | 5.34 | 0.79 |
| Health Spending | Spending on Health (% of GDP). | 3.86 | 2.14 | 6.72 | 1.15 |
| Number of Physicians | Physicians (per 1,000 people). | 0.46 | 0.04 | 1.26 | 0.25 |
| GDP per capita | GDP per capita (constant 2010 US\$). | 1026.4 | 357.35 | 3637.53 | 703.46 |
| Unemployment Rate | Unemployment, total (% of total labor force). | 5.22 | 1.4 | 14.7 | 2.62 |
| Rural Population | Rural population (% of total population). | 75.74 | 61.24 | 91.14 | 7.77 |

vidual effects are uncorrelated with the other explanatory variables (Ho is accepted), a fixed effect model produces biased estimators, violating one of the Gauss-Markov assumptions; so otherwise a random effect model is preferred. When the panel data is balanced, because the same time periods are available for all cross section units; expect fixed effects to work well. Or else, the random effect estimator will be more appropriate (Wooldridge, 2010). Here we will not use the Fixed effect model because there is some problem in the variable, some variable changes are sluggish movement, such as, average year of schooling and life expectancy etc. That is why, Fixed effect model as well as Hausman test is not applicable in this model.

Similarly, A two-way error component model has two group variables, one individual variable (μ_i) or one time variables (λ_t). However, Serrasqueiro and Nunes (2008) argued that developing countries differ in terms of their political regimes, their colonial background, their geographical locations and climatic conditions, their ideologies and religious affiliations etc. these things captured in the forms of unobservable individual (μ_i). Secondly, it (λ_t) could account for strike year effects that disorganize production and affect its price, all of which could affect consumption behavior (Baltagi, 2008).

According to our research question, we are interested to analyze the value of remittances on specific health and education outcomes. For the purpose, we use panel data approach for South Asian countries. The econometric model for the study is specified as follows:

$$Outcome_{it} = \alpha + \beta_1 R_{it} + \beta_x X_{it} + u_i + \lambda_t + \epsilon_{it}$$

Where R_{it} represents remittances received by coun-

try i in year t ; X_{it} is the set of explanatory variables for country i in year t including GDP per capita, rural population, public expenditures on education and health, unemployment rate; u_i represents the regional dummies of South Asia Regions (Bangladesh, India, Nepal, Pakistan and Sri Lanka) introduced to control the geographic characteristics in the model; λ_t represents a time trend variable and ϵ_{it} idiosyncratic error. One of the primary issues seen in existing literature is potential endogeneity with respect to remittances. A common critique is that such studies capture correlations between remittances and education and health variables rather than revealing a causal relationship between increased remittances and improved education or health. To address this concern, we employ two econometric models to estimate equation (1) we start with a random effect GLS estimation with a balanced panel data in order to maximize the use of available observations. Complete data is available for all selected countries during the years 1990 to 2015. We also used the random effects specification as it allows us to use time invariant country level explanatory variables.

Similarly, they also have problem of endogeneity in the random effect equation. However, we solve this problem with the instrumental variables techniques. The econometric model for the study is specified as follows:

$$Outcome_{it} = \alpha + \beta_x X_{it} + U_{it}$$

Here X_{it} have a problem of endogeneity and classical assumption $cov(X_{it}, U_{it})=0$ is dropped. Now this

Table 3: Random Effects GLS Estimates of the Effects of Remittances on Education and Health

| Variables | Education Indicator | | Health Indicator | |
|------------------------|---------------------------|----------------------|----------------------|------------------------|
| | Average Year of schooling | Life Expectancy | Infant Mortality | Fertility rate |
| | (1) | (2) | (3) | (4) |
| Real Remittances | 0.0321*** (0.0122) | 0.632*** (0.043) | 0.632*** (0.043) | 0.103*** (0.018) |
| Education expenditures | -0.427*** (0.0733) | | | |
| Health expenditures | | 0.364 (0.315) | 0.364 (0.315) | 0.474*** (0.133) |
| Physicians | | 11.31*** (1.970) | -11.31*** (1.970) | -2.771*** (0.830) |
| GDP per Capita | 0.0027*** (0.0002) | 0.0189*** (0.001) | 0.0189*** (0.001) | -0.0038*** (0.0004) |
| Unemployment rate | -0.0580*** (0.0133) | -0.093* (0.053) | -0.093* (0.053) | -0.045** (0.022) |
| Rural population | 0.0025 (0.0064) | -0.248*** (0.059) | 0.248*** (0.059) | 0.076*** (0.024) |
| Infant mortality | -0.046*** (0.003) | | | |
| Constant | 6.762*** (0.832) | 72.92*** (3.996) | 72.92*** (3.996) | 1.182 (1.684) |
| Observations | 125 | 125 | 125 | 125 |
| Number of country | 5 | 5 | 5 | 5 |
| R2 | 0.90 | 0.81 | 0.84 | 0.89 |

Notes: Standard errors in parentheses. Significance of coefficients at the 10%, 5%, and 1% levels are shown by *, **, and ***, respectively.

problem we solve with the two stage least squares (2sls) method. So now, stage 1 equation, we regress X_{it} on the z_{it} . So, here Z_{it} is an instrumental variable. That is the good predictor of the X_{it} .

$$X_{it} = a + b_x z_{it} + V_{it}$$

$$\hat{a} = \bar{x}_{it} - \hat{b}_x \bar{z}_{it}$$

$$\bar{x}_{it} = \hat{a} - \hat{b}_x \bar{z}_{it}$$

Now we move onto the stage 2. So,

$$Outcome_{it} = \alpha + \beta_x X_{it} + U_{it}$$

Every solution has some cost. For the problem of endogeneity, it is large problem we create little problem then that will remove the large problem. So for that reason, now we add and subtract \bar{x}_{it} in the equation that will filter the endogeneity problem and provide the unbiased estimator.

$$Outcome_{it}$$

$$= \alpha + \beta_x (\bar{x}_{it} + X_{it} - \bar{x}_{it}) + U_{it}$$

$$Outcome_{it}$$

$$= \alpha + \beta_x \bar{x}_{it} + \beta_x (X_{it} - \bar{x}_{it}) + U_{it}$$

$$Outcome_{it}$$

$$= \alpha + \beta_x \bar{x}_{it} + \beta_x (X_{it} - \bar{x}_{it}) + U_{it}$$

Table 4: 2SLS Estimates of the Effects of Remittances (Instrumented) on Education and Health

| Variables | Education Indicator | | Health Indicator | |
|------------------------|---------------------------|-----------------------|----------------------|------------------------|
| | Average Year of Schooling | Life Expectancy | Infant Mortality | Fertility Rate |
| | (1) | (2) | (3) | (4) |
| Real Remittances | 0.0656** (0.0309) | 0.930*** (0.174) | -2.908*** (0.905) | -0.0949* (0.0588) |
| GDP per Capita | 0.0026*** (0.0002) | 0.0200*** (0.0020) | -0.088*** (0.010) | -0.0015** (0.0006) |
| Education expenditures | -0.393*** (0.060) | | | |
| Health expenditures | | 0.598 (0.493) | -5.736** (2.558) | -0.573** (0.266) |
| Physicians | | -14.61*** (2.713) | 68.57*** (14.07) | 2.064** (0.915) |
| Unemployment rate | -0.0030 (0.0134) | 0.053 (0.067) | -2.227*** (0.350) | -0.0917*** (0.0228) |
| Rural population | -0.0193*** (0.0060) | -0.382*** (0.105) | 1.075** (0.547) | 0.0702** (0.0355) |
| Infant mortality | -0.0600*** (0.0037) | | | |
| year | -0.0619*** (0.0091) | -0.046 (0.082) | -0.780* (0.428) | -0.127*** (0.027) |
| Constant | 133.0*** (18.46) | 173.70 (168.5) | 1,604* (874.3) | 257.0*** (56.84) |
| Observations | 125 | 125 | 125 | 125 |
| Number of country | 5 | 5 | 5 | 5 |
| Wald Chi ² | 4029.66 | 1281.69 | 1074.65 | 278.12 |

Notes: Standard errors in parentheses. Significance of coefficients at the 10%, 5%, and 1% levels are shown by *, **, and ***, respectively.

$$\epsilon_{it} = \beta_x (X_{it} - \bar{x}_{it}) + U_{it}$$

$$\text{Outcome}_{it} = \alpha + \beta_x \bar{x}_{it} + \epsilon_{it}$$

Lastly, we use instrumental variables; two stage least squares model with our controlled variable estimation. This allows us to address the issues of endogeneity; there are the three main causes, omitted variable, measurement errors, simultaneity. We remove omitted variable and simultaneity problem with proxy variable and system of equation; but we employ the 2sls for all problems in panel model. For all of these econometric problems, we can apply instrumental variables approach (2SLS) estimations because instrumental variables are used to remove correlations between

the independent variables and error term. This instrumental variable completely holds the instrumental variables condition for instance; $cov(z, u) = 0$, $cov(z, x) \neq 0$. If both conditions are not problematic then instrumental variables is strong. When the instrumental variables are weak, the 2SLS or IV estimators could be inconsistent or have large standard errors.

4 Results and Discussion

Data on the selected region characteristics are presented in Table 2. Country-level estimates show that the Nepal has the highest Remittance (21.66%), followed by the Bangladesh (10.81%), Sri Lanka (8.32%) and India and Pakistan has small number in the Figure 1. On the other hand, except Nepal and Bangladesh all other countries show very less variation in education and health spending in last two decades. Same as, total populations in South Asian countries grow continuously with an increasing rate. Data on the summary statistics for each of the dependent and independent

are presented in Table 2.

Estimation results for one educational and three health variables are provided in Tables 3 and 4. Table 3 presents the random effects GLS estimates, Table 4 presents the estimates from the 2SLS instrumental variables approach. Random effects GLS estimates have some econometric problem in regression such as high R^2 and some variable are insignificant etc. For this reason, we focused on the results from the 2SLS estimates in Table 4. The results 2SLS are mostly as per expectations except educational dependent variable. Comparing coefficients across the educational dependent variable, the key variable remittance was found insignificant in study. With respect to the health indicators, a remittance proves to be strong determinant for fertility rate, infant mortality rates and life expectancy variables.

We get unexpected results for the educational attainment for children but results of the study against the expectation. Reasons may be that; remittances are more likely to have a greater effect on secondary education, when there is greater tendency for older children to leave school to work (Zhunio et al., 2012). We expect that remittances are more likely to affect educational outcomes for older children where opportunity costs in terms of labor effort are higher. Further, our overall findings suggest that a higher level of remittances escalate life expectancy and reduces fertility and infant mortality rate.

As shown by the regression output in column 1 in Table 4, GDP is positively correlated with a community education attainment. GDP is significant at 1% and remittance is significant 5%, respectively. On the other hand, educational expenditure and rural population, unemployment rate, infant mortality and time trend variables are negatively correlated with education at different levels but remittance is positive significant in educational model.

In column 2 results are the expected ones, remittance, GDP are positively correlated with communities life expectancy and number of physicians and ruler population are negative correlated with communities life expectancy but public health expenditures, unemployment rate and time effect is insignificant in case South Asia region. In column 3 numbers of physicians and ruler population are positively significant and remittance and GDP, public health expenditures, number of physicians, and unemployment rate are negatively significant at highly levels with communities infant mortality. In this case there is rural population variable is negative significant. Finally, it is also alluring to note that, the number of physicians and rural population are positively related to the fertility rate but remittances, GDP, public health expenditures unemployment rate and time trend coefficients are remain negative and significant with communities fertility rate at different levels.

Besides the important role of remittances in explaining education and health outcomes, higher GDP, unemployment rate and rural population led to improved educational index. Further, the regional variables and time trend all confirm to expectations. Same as, higher remittances, GDP, health expenditures and number of physicians infant mortality rate have a positively significant role in health determinants. In short, our overall findings suggest that a higher level of remittances have significant effect on education but increases life expectancy and reduces infant mortality rates and fertility rate.

5 Conclusion

Using a sample of South Asian countries, our analysis concludes that the results from regional studies on the relationship between remittances and development outcomes such as education and health are robust after controlling for economic characteristics (GDP per capita, rural population, public expenditures on education and health, Number of Physicians, unemployment rate) and time trends. For many countries, including South Asia, remittances are among the most important sources of external financing and this instrument proves to be a strong correlated with development indicators (Abbasi and Hashmi, 2000; Acosta et al., 2007; Amuedo-Dorantes and Pozo, 2011; Frank and Hummer, 2002; Lu and Treiman, 2007). A higher level of real remittances is correlated with life expectancy, lower infant mortality and lower fertility but insignificant with education.

In our region, there are limited studies that highlight the role of remittances on the education and health outcomes. Migrant income has grown swiftly in current years and remittances have showed a stable additional source of external finance. According to the literature, the consequence of remittances on education is also ambiguous. Therefore, children who live in remittance-receiving households complete more years of education than other children but in case of South Asian regions remittances no importance has been observed for average year of schooling. Similarly, this instruments improved health status particularly Life Expectancy, Infant mortality and Fertility rate of the family members.

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CONTRIBUTOR'S GUIDELINES

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