

Ahmed, Rizwan Raheem; Vveinhardt, Jolita; Štreimikienė, Dalia

Article

The direct and indirect impact of pharmaceutical industry in economic expansion and job creation: Evidence from bootstrapping and normal theory methods

Amfiteatru Economic Journal

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Ahmed, Rizwan Raheem; Vveinhardt, Jolita; Štreimikienė, Dalia (2018) : The direct and indirect impact of pharmaceutical industry in economic expansion and job creation: Evidence from bootstrapping and normal theory methods, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 20, Iss. 48, pp. 454-469, <https://doi.org/10.24818/EA/2018/48/454>

This Version is available at:

<https://hdl.handle.net/10419/196443>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

THE DIRECT AND INDIRECT IMPACT OF PHARMACEUTICAL INDUSTRY IN ECONOMIC EXPANSION AND JOB CREATION: EVIDENCE FROM BOOTSTRAPPING AND NORMAL THEORY METHODS

Rizwan Raheem Ahmed¹, Jolita Vveinhardt² and Dalia Streimikiene^{3*}

¹⁾ Indus University, Block-17, Gulshan, Karachi, Pakistan

^{2) 3)} Lithuanian Sports University, Sporto Str. 6, LT-44221, Kaunas, Lithuania

Please cite this article as:

Ahmed, R.R., Vveinhardt, J. and Streimikiene, D., 2018. The Direct and Indirect Impact of Pharmaceutical Industry in Economic Expansion and Job Creation: Evidence from Bootstrapping and Normal Theory Methods. *Amfiteatru Economic*, 20(48), pp. 454-469.

DOI: 10.24818/EA/2018/48/454

Article History

Received: 15 November 2017

Revised: 10 February 2018

Accepted: 8 April 2018

Abstract

The objective of this research article is to examine the role of Pakistan's pharmaceutical industry in job creation opportunities, with the sacred intention to eradicate poverty, and expansion in economic activities. This research is quantitative in nature, and the data is directly gathered through closed-ended questionnaires from 300 respondents. Besides predictors', four mediating variables have also been taken into consideration that contribute indirectly in job creation opportunities. Bootstrapping and Normal theory methods have been employed in order to examine the impact of predictors' and mediating variables. The result of this research confirmed that pharmaceutical industry plays a vital role in job creation in Pakistan. It is further concluded that the pharmaceutical industry has a direct and significant impact in job creation by providing indigenous and direct job opportunities in sales, marketing, and other supporting departments for both skilled and unskilled workers. Pharmaceutical industry also provides indirect job opportunities through other industries, which are very much linked with this industry, such as: pharmaceutical distributors, dealers, retailers, wholesalers, hotel industry, and event management industry. It is also determined that pharmaceutical industry is acting like knowledge and skills imparting institutions. Therefore, skilled-based training and organizational learning are major mediating variables that transform unskilled people into human assets, which further trigger the future job prospects. Since pharmaceutical industry is one of the biggest industries in Pakistan, providing plenteous opportunities of new jobs with consistent growth. Thus, mediating variables such as motivation and interpersonal influence also preceded an active role in new job creation.

Keywords: job creation, pharmaceutical industry, bootstrapping method, normal theory method.

JEL Classification: B23; C12; I3; J2; L6

* Corresponding author, **Dalia Streimikiene** – dalia.streimikiene@lei.lt

Introduction

According to Kamath and Hoovinahole (2016) national and transnational pharmaceutical companies play an important role not only in quality medicines, but also expand economic activities in developing countries. However, major focus of healthcare companies is, to provide quality health services and medicines, but at the same time they also contribute to expand economic prospects through job creation, training and capacity building, and shaping public policies in developing countries. Because of generic medicines and rapid expansions in their operations local companies have competitive advantage, and better playing field; therefore, they have been able to increase their production, and phenomenal growth in sales revenues. Thus, national pharmaceutical companies are providing plenteous new jobs openings to their citizens (Shastri, 2016). As compared to other industries, pharma industry is distinctive in the ways it generates economic opportunities through direct, indirect and spillover effects. According to Sztankovszky et al. (2015), the pharmaceutical industry has also engaged in institutions building, providing capacities through several resources, including technical assistance, strategic planning directions, and financial assistance. Thus, these activities help to enhance infrastructure facilities for institutions, which further generate hundreds of new employments in developing countries. Pharmaceutical industry is also very much linked to other industries, therefore, its spillover effect further creates new job opportunities and positive impact on overall economy of developing nations (Awino, 2016). Another role of pharmaceutical industry is Rule-shaping, this is entirely indirect form of economic expansion and its influence is long-term. Hence, in this way, pharmaceutical industry further helps to creates ample opportunities of new jobs in an indirect and long-term in developing countries (Pennec and Raufflet, 2016; Sztankovszky et al., 2015).

Relevance of the research. It is certain that pharmaceutical industry, as one of the biggest industries in Pakistan, which provides significant job opportunities in urban and rural centers. Pharmaceutical industry also provides abundant job opportunities in an indirect manner through other industries, such as: pharmaceutical distributors, dealers, wholesalers, retailers, hotel industry, chemical raw material and Event management industry etc., as shown in Figure 1 (Chowdhry, 2014). According to the researches, about 450,000 people are directly and 4 million people are indirectly employed by this sector but in actuality more than 30 million families are being benefited from it (Shahryar, 2013). The major focus of this industry is based on the knowledge, and its steady growth that contributing mainly to the economy of the country (Pennec and Raufflet, 2016; Hafeez and Akbar, 2015). According to Meskill (2015) human resource development is a major mediating factor that transforms unskilled people into human assets, which further generates the job opportunities for skilled workers in other industries in a long-term, as shown in Figure no. 1.

Objective of the research. This research is an extensive exploration of the role of national pharmaceutical industry in job creation in a direct and indirect approach through interceding factors. Another important aspect of this paper is to study the role of local pharmaceutical in overall expansion of the economy. As we have discussed pharmaceutical industry are also regarded as institutions for capacity building. This role is invisible, therefore, we have also examined capacity building role through mediating variables.

Significance of this research. This kind of research has been conducted first time in Pakistan in which the researchers evaluated the role of Pharmaceutical Industry as employment generator and its impact has been examined as direct and indirect job creator

sector. In this research paper, we have not only study the direct impact of pharmaceutical industry in job creation but also incorporated the spillover effect through other industries, which are actively promoted and engaged in job creation because of pharma sector (Sztankovszky et al., 2015). In this paper the researchers have used number of variables as independent variables, mediating variables and a dependent variable. Moreover, these variables further segregated in different dimentions as shown in Figure no. 2.

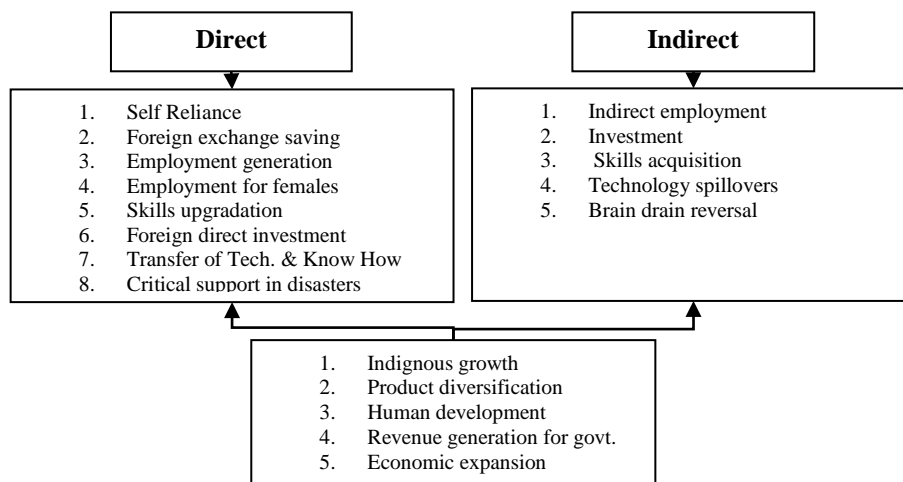


Figure no.1: Benefits of Local Pharmaceutical Manufacturing sector

Source: Adapted from Chowdhry, 2014

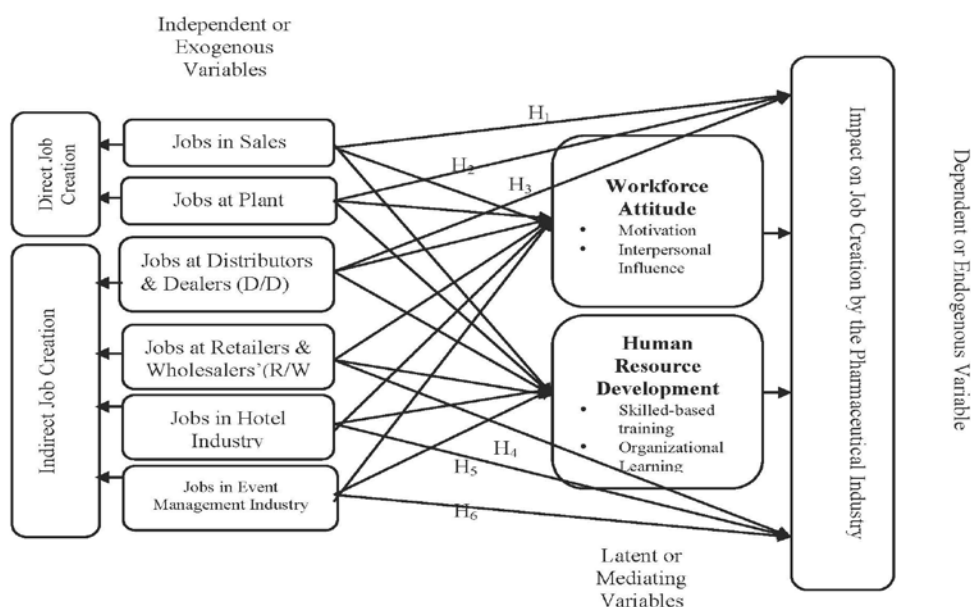


Figure no 2: Research model of the study

1. Theoretical review and framework

Direct job creation: pharmaceutical industry. Pharmaceutical Companies are direct source of new employment generation and currently accommodate more than 0.45 million people in different sections of the industry. Therefore in this way pharmaceutical industry is one of the major sources of direct job creator in overall economy in Pakistan (Shahryar, 2013).

Jobs prospect: sales and marketing. The Sales Jobs are scattered across the country where any other industry is not established except pharmaceuticals (Islam et al., 2016; Aamir and Zaman, 2011). Thus, the researchers have developed the H₁ hypothesis, which is linked on previous discussion and mentioned in Table no. 1.

Jobs creation: plants (technical, non-technical & administrative). The jobs at plants, where jobs to technical, non-technical, administrative, skilled and unskilled workers are offered (Babar et al., 2016). Hence, the researchers have developed the H₂ hypothesis, which is based on this discussion, and stated in Table no. 1.

Indirect job creation: pharmaceutical industry. Pharmaceutical industry also provides bounteous job opportunities in an indirect manner through other industries, which are very much linked with pharma sector (Babar et al., 2016).

Jobs creation: Distributors and Dealers. Every pharmaceutical company needs regional distributors, and dealers. An important point for this category of indirect job creation from these distributors, dealers and suppliers spread across country (Chowdhry, 2014). Hence, the researchers have developed the H₃ hypothesis, and cited in Table no. 1.

Jobs prospects: Retailers and Wholesalers. Pharmaceutical retailers and wholesalers spread in every corner of the country. Therefore, the retailers and wholesalers are one of the most prominent sources, providing indirect income generating opportunities (Azhar et al., 2009). Hence, the researchers have developed the H₄ hypothesis, which is based on the above discussion and mentioned in Table no. 1.

Job openings: Hotel industry. Pharmaceutical companies have enormous operation and regularly conducting training sessions, meetings, national and international conferences, and other scientific activities. These events not only revived the hotel industry but further boosted the new businesses of small hotels, motels, guesthouses etc. in Pakistan (Islam et al., 2016). Thus, the researchers have established the H₅ hypothesis, which is based on this previous discussion and shown in Table no. 1.

Job opportunities: Event management industry. According to Kamath and Hoovinahole (2016), the concept of event management is much extended in pharmaceutical industry. Therefore, pharmaceutical companies provide all the event management jobs to these companies (Islam et al., 2016). Therefore, the researchers have developed the H₆ hypothesis, which is based on above discussion and stated in Table no. 1.

Table no 1: Hypothesized relationship b/w predictors & dependent variable

Hypotheses	Relationship		
H ₁	Sales Jobs†	ž ž	Job creation
H ₂	Jobs at Plant†	ž ž	Job creation
H ₃	Jobs at D/Dealer†	ž ž	Job creation
H ₄	Jobs at R/Wholesaler†	ž ž	Job creation
H ₅	Jobs at Hotel Industry†	ž ž	Job creation
H ₆	Jobs in Event Mgmt. †	ž ž	Job creation

Note: † = Predictor; DV = Job Creation; EMI = Event Management Industry; HI = Hotel Industry; R/W = Retailer/Wholesaler; D/D = Distributor/Dealer; PJ = Jobs at Plant; SJ = Sales Jobs; Direct Effect = ž ž

Mediation analysis and job creation of pharmaceutical industry. Structural equation modeling (SEM) can be employed on mediating variables, which has also been used in this research. The researchers have incorporated four psychological variables, which contribute in human action and decisions. Pharmaceutical companies perform like an institution, which provides essential technical and skills trainings on periodic basis and transform the raw employee into human asset (Becker and Gerhart, 1996). Thus, the researchers have incorporated skilled-based training, organizational learning, motivation and interpersonal influence as mediating variables (Chowhan, 2016; Hafeez and Akbar, 2015).

Skilled-based training (Human resource development). Skilled-based training and development program enable the employees to impart the required knowledge, skills and attitudes in order to achieve the goals (Jensen et al., 2016). In order to come up to the level where business demands can be catered in future training and development has proven its importance (Chalfin et al., 2016; Apospori et al., 2008). The fact that skilled-based training and development plans provide, increase in the work quality and productivity. According to Hauff et al. (2016) the training may not have a direct impact on the employee performance, but in fact, it is an indirect factor that focuses on the improvement of employee performance. On the basis of the above-discussed theoretical framework and further evidence provide by Ogbonnaya and Valizade (2016), Hypotheses H_{7A}, H_{7B}, H_{7C}, H_{7D}, H_{7E}, and H_{7F} have been generated for the mediating effect of Skilled-based training on the relationship of independent variables with dependent variable as mentioned in Table no. 2.

Organizational learning (Human resource development). As discussed by Aranda et al. (2016) the importance of organizational learning makes organizations to focus on this aspect more and come up with concrete strategies and solutions (Chao et al., 2016; Gomez et al., 2005). However, organizational learning is to be considered the indirect factor to accomplish the organizational strategic objectives (Nezam et al., 2016). First theory discusses that the organizational learning is a continuous process in which organizations learn and evolved new knowledge (Aragón et al., 2014). Second theory demonstrates that organizational learning is actual the organizational orientation, which is important to learn and also it defines the organizational capability (Sarder, 2016; Camps and Luna-Aroca, 2012; Gomez et al., 2005). Based on the above discussed theoretical framework H_{8A}, H_{8B}, H_{8C}, H_{8D}, H_{8E}, and H_{8F} have been shaped for the mediating effect of organizational Learning on the relationship of independent variables with dependent variable as stated in Table no. 2.

Motivation (workforce attitude). Motivation is a psychological force that directs the behavior of the employees towards the fulfillment of the organizational objectives (Cotti et al., 2016; Gilbert, 2016; Kreitner and Kinicki, 1992). Organizations are offering good tangible and intangible benefits to the employees in order to motivate them for the achievement of organizational objectives (Rukuižienė and Bocharov, 2016; Mitchell, 1973). According to the previous researches, individual difference model of employment and job performance defines that the motivation and personality are the foremost elements, which actually stimulate the job performance (Rukuižienė and Bocharov, 2016). The concept of achievement motivation in previous studies refers to three intrinsic achievement motivation factors, which are job ethic, excellence and mastery (Lee, 2016; Cassidy and Lynn 1989). Based on these discussions and theoretical framework Hypotheses H_{9A}, H_{9B}, H_{9C}, H_{9D}, H_{9E}, and H_{9F} have been developed for the mediating effect of motivation on the relationship of independent variables with dependent variable as shown in Table no. 2.

Interpersonal influence (workforce attitude). According to Ollivere (2016) the opinion leadership involves people, who are masters of forming the opinions and changing the behaviors of the individuals. The influence shown by opinion leaders is limited to ones interests, but sometimes it impacts other factors too (Olivere, 2016; Myers and Robertson, 1972). The Individuals who are high in influencer characteristics mainly have higher levels of self-esteem (Clark and Goldsmith, 2005). Based on the discussed theoretical framework and evidence provided by Aktan and Chao (2016), Hypotheses H_{10A}, H_{10B}, H_{10C}, H_{10D}, H_{10E}, and H_{10F} have been formed for the mediating effect of Interpersonal Influence on the relationship of independent variables with dependent variable as cited in Table no. 2.

Table no. 2: Hypothesized relationship of mediations

Hypotheses		Relationship			
H _{7A}	Sales Jobs†	→→→	SBT	→→→	Job Creation
H _{7B}	Jobs at Plant†	→→→	SBT	→→→	Job Creation
H _{7C}	Jobs at D/D†	→→→	SBT	→→→	Job Creation
H _{7D}	Jobs at R/W†	→→→	SBT	→→→	Job Creation
H _{7E}	Jobs at HI†	→→→	SBT	→→→	Job Creation
H _{7F}	Jobs at EMI†	→→→	SBT	→→→	Job Creation
H _{8A}	Sales Jobs†	→→→	OL	→→→	Job creation
H _{8B}	Jobs at Plant†	→→→	OL	→→→	Job Creation
H _{8C}	Jobs at D/D†	→→→	OL	→→→	Job Creation
H _{8D}	Jobs at R/W†	→→→	OL	→→→	Job Creation
H _{8E}	Jobs at HI†	→→→	OL	→→→	Job Creation
H _{8F}	Jobs at EMI†	→→→	OL	→→→	Job Creation
H _{9A}	Sales Jobs†	→→→	Motiv.	→→→	Job Creation
H _{9B}	Jobs at Plant†	→→→	Motiv.	→→→	Job Creation
H _{9C}	Jobs at D/D†	→→→	Motiv.	→→→	Job Creation
H _{9D}	Jobs at R/W†	→→→	Motiv.	→→→	Job Creation
H _{9E}	Jobs at HI†	→→→	Motiv.	→→→	Job Creation
H _{9F}	Jobs at EMI†	→→→	Motiv.	→→→	Job Creation
H _{10A}	Sales Jobs†	→→→	Motiv.	→→→	Job Creation
H _{10B}	Jobs at Plant†	→→→	Inter. Infl.	→→→	Job Creation
H _{10C}	Jobs at D/D†	→→→	Inter. Infl.	→→→	Job Creation
H _{10D}	Jobs at R/W†	→→→	Inter. Infl.	→→→	Job Creation
H _{10E}	Jobs at HI†	→→→	Inter. Infl.	→→→	Job Creation
H _{10F}	Jobs at EMI†	→→→	Inter. Infl.	→→→	Job Creation

Note: † = Predictor or Exogenous variable; Job creation = Endogenous or dependent variable; SBT=Skilled based training; OL=Organizational learning; Motiv. = Motivation; Inter. Infl.=Interpersonal influence; EMI = Event management industry; HI = Hotel industry; R/W = Retailer/wholesaler; D/D = Distributor/dealer; PJ = Jobs at Plant; SJ = Sales Jobs; Indirect Effect (Mediation) = →→→

2. Empirical results and findings

Structural equation modeling (SEM) was employed to examine the multiple mediating effects of skilled-based training, organizational learning, motivation and interpersonal influence on the relationship of exogenous variable with endogenous variable (Job creation). Based on the Figure no. 3, the six exogenous variables of this research are jobs in sales, jobs at plant, jobs at distributors/dealers, jobs at retailers/wholesalers, jobs in hotel and event management industry. These variables form causal relationship with endogenous

variable (Job creation), but skilled-based training, organizational learning, motivation and interpersonal influence are cause and effect variables (Murali et al., 2016).

Sample description. Three hundred and twenty five respondents of all groups (employees of pharmaceutical industry, distributors/dealers, retailers/wholesalers, hotel & event management industry) were approached and 300 respondents have answered on voluntary basis. The response rate was 92.31%. The sample size was higher than the minimum sample size suggested by some studies based on structural equation modeling (Anderson and Gerbing, 1988).

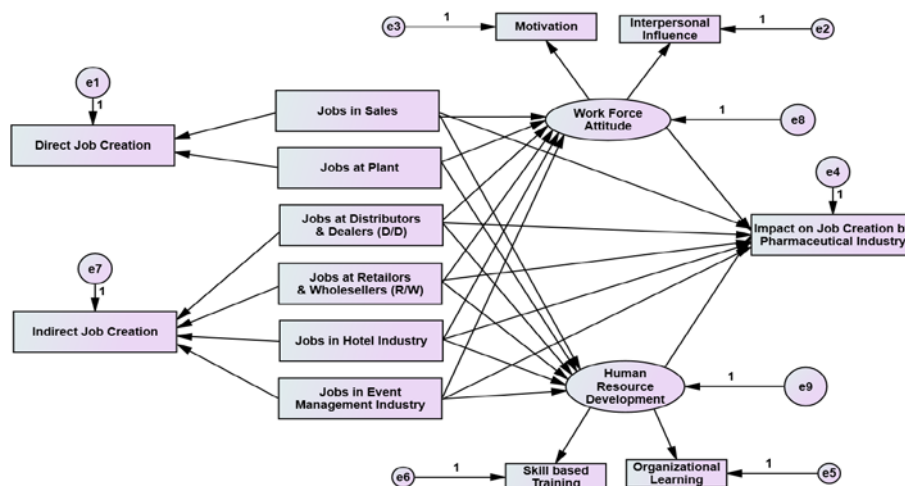


Figure no. 3: SEM model of the study

Validities and Reliabilities of the constructs. According to Cronbach (1951) and Leech et al. (2011) resultant reliabilities should be very good ($\alpha \geq 0.90$), good ($\alpha \geq 0.80$) and acceptable ($\alpha \geq 0.70$.) and it is concluded from the results shown in Table 3 the individual Cronbach's and composite reliabilities are $\alpha > 0.70$ (cut-off for confirmatory research), which shows all the constructs have internal consistency. According to Leech et al. (2011) the average variance extracted (AVE) should be over 0.5 and results shown the square root of AVE for each item is greater than 0.5 and also greater than the construct's correlations with other constructs, which again confirmed good convergent and discriminant validity.

Descriptive Statistics of Initial Constructs. The data should follow the normality pattern, which is a pre-requisite for the administration of Structural equation modeling. Therefore, for this requirement of normality the data of 300 respondents were converted into standardized z-score and it is found all the cases are within the prescribed range of ± 3.5 . The results of standard deviation, Skewness and Kurtosis for each constructs are within the prescribed range ± 1.5 , which further strengthen for data's normality pattern (Byrne, 2009; Rutherford et al., 1988). According to Kline et al. (2000) correlation of each pair should be less than 0.85 and results suggested the data justified the discriminant validity requirement.

Fit Measures. According to Balakrishnan et al. (2016) there are more than 20 fit indices and no agreement which to report for measuring the hypothesized model. According to Balakrishnan et al. (2016) and Byrne (2009) these measures have been characterized into

four indices categories. In this research all four indices categories are reported, 1) absolute fit index, 2) Relative fit index, 3) Noncentrality based index and 4) Parsimonious fit index. Complete cut off results for all the indices have been stated in Table no. 3.

Confirmatory Factor Analysis. The results of Confirmatory factor analysis, which were tested on the basis of theory for all the factors and indicators presented in Table no. 4. The summarized CFA results of all the constructs are followed the limit for Absolute fit index $GFI > 0.95$ except Job at HI and EMI. Relative fit indices for all the constructs show $NFI > 0.90$ except Jobs at HI and EMI once again. $IFI > 0.95$ for all the constructs except for Jobs at HI, although, $TLI > 0.95$ for all the constructs except Jobs at HI and OL. Similarly Non-centrality-based indices show $CFI > 0.95$ for the entire constructs except Jobs in EMI. $RMSEA \leq 0.05$ value indicates approximately close model fitness and values between 0.05 and 0.10 indicate reasonable error of approximation, $RMSEA < 0.05$ for all the constructs except Jobs in HI and EMI, however, $RNI > 0.95$ for all the constructs except for Jobs in EMI and OL. Finally in Parsimonious Fit indices $PCFI > 0.75$ for all the constructs except for Jobs in EMI, whereas, $PNFI > 0.75$ for entire constructs except for Jobs in HI and EMI, though, $PGFI > 0.75$ for all the constructs except for Jobs in HI and EMI, which indicate good model fitness according to Hooper et al. (2008). According to the Hooper et al. (2008) values of the Normed chi-square of 2.0, 3.0, or even as high as 5.0 have been considered as indicating reasonable fit. Therefore, Table no. 4 shows the calculated values of normed Chi-square for all the constructs show reasonable model fitness.

Hypotheses: testing and results

Effects of predictors on dependent variable. Table no. 5 shows the results of Hypotheses, which are relevant to the relationship of independent variables on dependent variable. H_1 is accepted because ($p < 0.01$ & $\beta = 0.2375$), H_2 also accepted since ($p < 0.01$ & $\beta = 0.1775$), H_3 again accepted because ($p < 0.01$ & $\beta = 0.1764$), H_4 , H_5 and H_6 are also accepted because ($p < 0.01$ & $\beta = 0.3496$), ($p < 0.01$ & $\beta = 0.2249$) and ($p < 0.01$ & $\beta = 0.2186$), hence jobs in sales, plants, retailer & wholesalers, distributors & dealors, hotel Industry and event management industry have a significant impact on overall job creation. The results are further substantiated through LLCI and ULCI because all the β values located between LLCI and ULCI, therefore, it is further validated that all the Hypotheses H_1 , H_2 , H_3 , H_4 , H_5 and H_6 are accepted and all the predictors have a significant impact on dependent variable.

Tests of significance for multiple mediation effects. The results are obtained through Hayes (2012) macro for SPSS that not only measures the direct effect of predictors on Job creation as discussed in the previous section but also produces the results of four mediating variables. The output from bootstrapping method provides the 95% bias-corrected bootstrapped confidence interval if ZERO lies within the Biased Corrected Confidence Interval (BCCI) range (LL = Lower Limit and UL = Upper Limit) of the Confidence interval then the TRUE indirect effect would be ZERO (no mediation). If zero does NOT occur between LL and UL then the researcher concludes that the indirect effect of the mediator is significant.

Table no. 3: Fit indices reported in this study

Construct	Absolute Fit Indices					Relative Fit Indices			Noncentrality-based Indices			Parsimonious Fit Indices		
	χ^2	Df	χ^2/df	Probability	GFI	NFI	IFI	TLI	CFI	RMSEA	RNI	PCFI	PNFI	PGFI
Criteria	Low	N/A	< 5.0	<0.05	> 0.95	> 0.90	> 0.95	> 0.95	> 0.95	<0.05	> 0.95	> 0.75	> 0.75	> 0.75

Note. χ^2 =Chi Square; χ^2/df =Relative Chi Square; df=degree of freedom; CFI=Comparative Fit Index; NFI=Normed Fixed Index; IFI=Incremental Fixed Index; TLI=Tucker-Lewis Index; GFI=Goodness of Fit Index; RNI= Relative Noncentrality Index; RMSEA= Root Mean Square Error of Approximation; PNFI=Parsimony-adjusted Normed Fit Index; PCFI=Parsimony-adjusted Fit Index; PGFI=Parsimony-adjusted Goodness of Fit

Table no. 4: Confirmatory factor analysis

Construct	Absolute Fit Indices					Relative Fit Indices			Noncentrality-based Indices			Parsimonious Fit Indices		
	χ^2	df	χ^2/df	Probability	GFI	NFI	IFI	TLI	CFI	RMSEA	RNI	PCFI	PNFI	PGFI
Jobs in Sales	4.028	1	4.028	0.028	0.969	0.950	0.970	0.951	0.970	0.032	0.952	0.757	0.825	0.798
Jobs at Plants	5.023	2	2.511	0.042	0.971	0.901	0.960	0.952	0.956	0.005	0.955	0.822	0.780	0.890
Jobs in D/D	4.978	2	2.489	0.025	0.951	0.932	0.994	0.961	0.996	0.041	0.967	0.899	0.866	0.912
Jobs in R/W	5.982	2	2.991	0.045	0.966	0.918	0.969	0.991	0.990	0.049	0.976	0.922	0.935	0.758
Jobs in HI	6.750	2	3.375	0.041	0.679	0.802	0.918	0.787	0.965	0.062	0.957	0.911	0.621	0.711
Jobs in EMI	4.011	1	4.011	0.052	0.759	0.860	0.959	0.955	0.745	0.058	0.891	0.700	0.701	0.704
Impact on Job Cr	6.211	2	3.105	0.032	0.980	0.949	0.952	0.966	0.989	0.002	0.995	0.877	0.789	0.956
Skill-based Tr.	4.979	2	2.489	0.020	0.967	0.914	0.990	0.971	0.990	0.019	0.953	0.830	0.828	0.977
Org. Learn.	4.216	2	2.108	0.050	0.952	0.910	0.995	0.856	0.995	0.039	0.758	0.835	0.770	0.811
Motivation	6.510	2	3.255	0.064	0.977	0.922	0.994	0.967	0.994	0.038	0.981	0.931	0.760	0.812
Inter. Influence	16.51	4	4.128	0.005	0.954	0.975	0.995	0.951	0.996	0.044	0.951	0.889	0.786	0.899
Criteria	Low	N/A	< 5.0	<0.05	> 0.95	> 0.90	> 0.95	> 0.95	> 0.95	<0.05	> 0.95	> 0.75	> 0.75	> 0.75

Note. χ^2 =Chi Square; χ^2/df =Relative Chi Square; df=degree of freedom; CFI=Comparative Fit Index; NFI=Normed Fixed Index; IFI=Incremental Fixed Index; TLI=Tucker-Lewis Index; GFI=Goodness of Fit Index; RNI= Relative Noncentrality Index; RMSEA= Root Mean Square Error of Approximation; PNFI=Parsimony-adjusted Normed Fit Index; PCFI=Parsimony-adjusted Fit Index; PGFI=Parsimony-adjusted Goodness of Fit

Table no. 5: Direct effect (Predictors on dependent variable)

Direct Relationship			Effect (β)	SE	T	P	LLCI	ULCI	Decision
H ₁ : SJ†	→	Job Creation	0.2375	0.0580	4.0984	0.0001	0.1235	0.3516	Accepted
H ₂ : PJ†	→	Job Creation	0.1775	0.0447	3.9727	0.0001	0.0896	0.2655	Accepted
H ₃ : JDD†	→	Job Creation	0.1764	0.0433	4.0738	0.0001	0.0912	0.2617	Accepted
H ₄ : JRW†	→	Job Creation	0.3496	0.0370	9.4600	0.0000	0.2768	0.4223	Accepted
H ₅ : JHI†	→	Job Creation	0.2249	0.0439	5.1267	0.0000	0.1386	0.3112	Accepted
H ₆ : JEMI†	→	Job Creation	0.2186	0.0423	5.1641	0.0000	0.1353	0.3019	Accepted

Note: † = Predictor; DV = Job creation; EMI = Event management industry; HI = Hotel industry; R/W = Retailer/wholesaler; D/D = Distributor/dealer; PJ = Jobs at Plant; SJ = Sales Jobs

Bootstrapping method for Indirect effect (Mediation). Table no. 6 shows the multiple mediating effects of skilled-based training (SBT), organizational learning (OL), motivation and interpersonal influence on the relationship of SJ with job creation by using bootstrapping method. Since, zero does not place between BootLLCI and BootULCI and all (β s) do lies between BootLLCI and BootULCI, therefore, it is concluded that all four mediating variables have significant effects on SJ. Thus, finally concluded that Hypotheses H_{7A} , H_{8A} , H_{9A} & H_{10A} are accepted. Table no. 6 further shows the only two mediating variables SBT, and OL have a significant effect on the relationship of PJ with job creation by using bootstrapping method. Since zero does not occur between BootLLCI and BootULCI also (β s) for these variables do lies between BootLLCI and BootULCI, therefore, it is substantiated that these mediating variables have significant effect on PJ. Hence, it is concluded that Hypotheses H_{7B} , & H_{8B} are accepted. It is further observed from Table 6, H_{9C} has accepted because zero does not locate between BootLLCI and BootULCI and corresponding β also within the range of BootLLCI and BootULCI. Finally H_{7E} and H_{8F} are also accepted and both mediating variables have a significant effect because zero does not place between BootLLCI and BootULCI and β s for both mediating variables are within the range of BootLLCI and BootULCI.

Therefore, it is finally concluded that SBT has a significant effect in relationship between HI and Job creation; moreover, OL has a significant effect in a relationship of EMI and Job creation. The other results exhibited that there are no mediating effects of OL on the relationship of Job Creation with exogenous variables (JDD, JWR & JHI) and SBT on JDD, JWR & JEMI, and motivation on PJ, JRW, JHI & JEMI, and interpersonal influence does not have any effect on either of exogenous variables except SJ. Thus, the Hypotheses H_{7C} , H_{7D} , H_{7F} , H_{8C} , H_{8D} , H_{8E} , H_{9B} , H_{9D} , H_{9E} , H_{9F} , H_{10B} , H_{10C} , H_{10D} , H_{10E} , and H_{10F} have rejected.

Normal theory method for specific indirect effects (Mediation). The results derived from Normal theory method (Sobel, 1982) are same, as the researchers have already obtained through bootstrapping method. Since $p < 0.05$ in all the cases ($p = 0.0172$, $p = 0.0264$, $p = 0.0147$ & $p = 0.0243$). Moreover, indirect effect is significant with $\beta = 0.2585$, $\beta = 0.1558$, $\beta = 0.2421$ & $\beta = 0.1503$. It is further validated through Z-values because all the Z-values > 1.96 ($z = 2.9844$, $z = 2.6032$, $z = 2.5034$ & $z = 2.1076$). Therefore, it is concluded that Hypotheses H_{7A} , H_{8A} , H_{9A} & H_{10A} are accepted. Table 6 further shows that only two mediating variables SBT, and OL have a significant effect on the relationship of plant jobs with job creation through Normal theory method. Since $p < 0.05$ in these two cases ($p = 0.0314$ & $p = 0.0190$). It is further substantiated through β s values ($\beta = 0.3880$ & $\beta = 0.2300$) that these two mediating variables have a significant effect only on Plant Jobs. It is further validated through Z-value because the Z-values > 1.96 ($z = 2.0395$ & $z = 2.2293$). Thus, finally it is concluded that Hypotheses H_{7B} , & H_{8B} are accepted. It is further determined from Table 6, H_{9C} has accepted because $p < 0.05$ ($p = 0.0364$) and Z-value > 1.96 ($z = 2.0673$) and further validated through $\beta = 0.1502$, which has a significant indirect effect on the relationship of variables. H_{7E} and H_{8F} are also accepted and both mediating variables have significant effect because $p < 0.05$ ($p = 0.0352$ & $p = 0.0363$). Hence, it is finally concluded that SBT has a significant effect ($\beta = 0.2685$) in relationship between HI & Job creation and OL has a significant effect ($\beta = 0.2471$) in a relationship of EMI and Job creation. Further results exhibited that OL does not have any mediation effect on the relationship of job creation with exogenous variables (JDD, JWR & JHI) and SBT on JDD, JWR & JEMI, and motivation on PJ, JRW, JHI & JEMI, and interpersonal influence does not have any effect

on either of exogenous variables except SJ. Therefore, the Hypotheses H_{7C}, H_{7D}, H_{7F}, H_{8C}, H_{8D}, H_{8E}, H_{9B}, H_{9D}, H_{9E}, H_{9F}, H_{10B}, H_{10C}, H_{10D}, H_{10E}, and H_{10F} have rejected.

Table no 6: Bootstrapping Method and Normal theory Method (Sobel Test) for specific indirect effects (Mediation)

Mediation				Bootstrapping Method				Normal Theory Method				Decision
				Effect (β)	Boot SE	Boot LLCI	Boot ULCI	Effect (β)	SE	Z	Prob.	
H _{7A} :	SJ	→	SBT	0.2585	0.0313	0.0513	0.3236	0.2585	0.0293	2.9844	0.0172	Accept
H _{8A} :	SJ	→	OL	0.1558	0.0327	0.0521	0.1825	0.1558	0.0262	2.6032	0.0264	Accept
H _{9A} :	SJ	→	Motiv.	0.2421	0.0239	0.1241	0.3143	0.2421	0.0421	2.5034	0.0147	Accept
H _{10A} :	SJ	→	Int. Inf.	0.1503	0.0232	0.0182	0.2037	0.1503	0.0292	2.1076	0.0243	Accept
H _{7B} :	PJ	→	SBT	0.3880	0.0212	0.0097	0.3934	0.3880	0.0190	2.0395	0.0314	Accept
H _{8B} :	PJ	→	OL	0.2300	0.0180	0.0099	0.2619	0.2300	0.0197	2.2293	0.0190	Accept
H _{9B} :	PJ	→	Motiv.	0.0002	0.0040	0.0061	0.0113	0.0002	0.0045	0.0548	0.9563	Reject
H _{10B} :	PJ	→	Int. Inf.	0.0000	0.0028	0.0069	0.0057	0.0000	0.0029	0.0087	0.9930	Reject
H _{7C} :	JDD	→	SBT	0.0091	0.0125	0.0095	0.0419	0.0091	0.0108	0.8391	0.4014	Reject
H _{8C} :	JDD	→	OL	0.0037	0.0054	0.0042	0.0183	0.0037	0.0060	0.6133	0.5364	Reject
H _{9C} :	JDD	→	Motiv.	0.1502	0.0032	0.0104	0.2043	0.1502	0.0030	2.0673	0.0364	Accept
H _{10C} :	JDD	→	Int. Inf.	0.0009	0.0043	0.0149	0.0053	0.0009	0.0039	0.2232	0.8234	Reject
H _{7D} :	JRW	→	SBT	0.0042	0.0078	0.0056	0.0280	0.0042	0.0062	0.6730	0.5010	Reject
H _{8D} :	JRW	→	OL	0.0009	0.0033	0.0046	0.0096	0.0009	0.0039	0.2413	0.8093	Reject
H _{9D} :	JRW	→	Motiv.	0.0001	0.0027	0.0042	0.0076	0.0001	0.0026	0.0537	0.9572	Reject
H _{10D} :	JRW	→	Int. Inf.	0.0012	0.0032	0.0142	0.0020	0.0012	0.0032	0.3723	0.7097	Reject
H _{7E} :	JHI	→	SBT	0.2685	0.0134	0.0154	0.2882	0.2685	0.0128	2.5313	0.0352	Accept
H _{8E} :	JHI	→	OL	0.0030	0.0041	0.0019	0.0159	0.0030	0.0045	0.6585	0.5102	Reject
H _{9E} :	JHI	→	Motiv.	0.0020	0.0041	0.0163	0.0026	0.0020	0.0041	0.4993	0.6176	Reject
H _{10E} :	JHI	→	Int. Inf.	0.0018	0.0043	0.0027	0.0177	0.0018	0.0041	0.4375	0.6617	Reject
H _{7F} :	JEMI	→	SBT	0.0091	0.0081	0.0294	0.0036	0.0091	0.0084	1.0841	0.2783	Reject
H _{8F} :	JEMI	→	OL	0.2471	0.0052	0.0220	0.2501	0.2471	0.0055	2.8664	0.0363	Accept
H _{9F} :	JEMI	→	Motiv.	0.0009	0.0031	0.0123	0.0023	0.0009	0.0034	0.2644	0.7914	Reject
H _{10F} :	JEMI	→	Int. Inf.	0.0005	0.0030	0.0105	0.0032	0.0005	0.0030	0.1772	0.8593	Reject

Note: Level of confidence for all confidence intervals in output: 95.00

3. Discussions

A review of the literature on the relationship between exogenous variables on the one hand, and endogenous variable on the other hand, skilled-based training, organizational learning, motivation and interpersonal influence seem to support the idea that these factors may mediate the relationship between exogenous variables and job creation opportunities. The results of the study are consistent with previous researches, which were conducted to establish the mediation relationship of these variables (Hakkak et al., 2016; Chen and Huang, 2009). Multiple mediation analysis indicated skilled-based training, and organizational learning have a significant mediating relationship of plant jobs with job

creation. The results are consistent with the previous researches and support the previous literature (Nezam et al., 2016; Gomez et al., 2005; McGill and Slocum, 1993). Results of mediating relationship of all four variables, which is concluded in our research, are also consistent with empirical studies on previous literature (Chen and Huang 2009). The result of undertaken study shows that training is a key tool in enhancing the organizational capability of the firms (Ogbonnaya and Valizade, 2016). Organizational learning has a positive impact in a relationship of Event management industry and Job creation. Motivation has a significant mediating effect in relationship between Jobs at distributors/dealers and Job Creation. These results are also consistent with previous literature (Cotti et al., 2016; Aragón et al., 2014; Camps and Luna-Aroca, 2012). In brief, there is substantial literature examining the relationship between various conceptualizations of motivation as mediator in performance (Peterson and Meissel, 2015). The result of fourth mediating variable, interpersonal influence is also in lined with previous researches (Aktan and Chao, 2016; Ogbonnaya and Valizade, 2016).

Conclusion

The results and above discussion concluded that pharmaceutical industry is playing a vital role in job creation for Pakistani economy. Pharmaceutical industry has a direct and significant impact on job creation by providing indigenous job opportunities in sales, marketing, and other supporting departments for both skilled and unskilled workers. Pharmaceutical Industry is also providing job opportunities indirectly through other industries, such as: pharmaceutical distributors, dealers, retailers, wholesalers, Hotel industry, and Event management industry. It is further concluded that pharmaceutical industry is acting like knowledge and skills imparting institutions. Therefore, mediating variables, skilled-based training, organizational learning, motivation and interpersonal influence also mediate their role in further job creation. Since skilled-based training and organizational learning are major mediating variables that transform unskilled people into human assets, which further triggers the current and future job opportunities. Since, pharmaceutical industry providing ample opportunities in job creation and it is one of the biggest employment providing industries of Pakistan. Therefore, other two mediating variables, motivation and interpersonal influence also have a significant impact on human behavior, which further stimulate and have a vital role in new job creation within and outside the industry in a long-term. Existing and potential employees get influences from these factors and industry further grows and more job opportunities multiply.

References

- Aamir, M. and Zaman, K., 2011. Review of Pakistan Pharmaceutical Industry: SWOT Analysis. *International Journal of Business and Information Technology*, [online] 1(1), pp. 114-117. Available at: <<http://www.rcci.org.pk/wp-content/uploads/2012/12/SWOT.pdf>> [Accessed 12 March 2018]
- Aktan, M. and Chao, P., 2016. Mediating Effect of Self-Congruity between Country Personality and Attitude toward Foreign Products in an Emerging Market. *2016 Global Marketing Conference at Hong Kong Proceedings*, pp. 441-445 (July 2016). <http://dx.doi.org/10.15444/gmc2016.04.07.02>

- Anderson, J.C. and Gerbing, D.W., 1988. Structural equation modeling in practice: a review and recommended two-step approach. *Psychological Bulletin*, [e-journal] 103(3), pp. 411-423. <http://dx.doi.org/10.1037//0033-2909.103.3.411>
- Apospori, E., Nikandrou, I., Brewster, C. and Papalexandris, N., 2008. HRM and Organizational Performance in Northern and Southern Europe. *International Journal of Human Resource Management*, [e-journal] 19(7), pp. 1187-1207. <http://dx.doi.org/10.1080/09585190802109788>
- Aragón, M.I.B., Jiménez, D.J. and Valle, R.S., 2014. Training and performance: The mediating role of organizational learning. *BRQ Business Research Quarterly*, [e-journal] 17(3), pp. 161-173. <http://dx.doi.org/10.1016/j.cede.2013.05.003>
- Aranda, C., Arellano, J. and Davila, A., 2016. Organizational Learning in Target Setting. *Academy of Management Journal*, [e-journal] <http://dx.doi.org/10.5465/amj.2014.0897>
- Awino, Z.B., 2016. Critical Success Factors In the Implementation of Strategy by the Multinational Corporations in the Pharmaceutical Industry: An Empirical Investigation. *Archives of Business Research*, [e-journal] 4(2), pp. 58-71. <http://dx.doi.org/10.14738/abr.42.1919>
- Azhar, S., Hassali, M.A., Ibrahim, M.I., Ahmad, M. and Masood, I., 2009. The role of pharmacists in developing countries: the current scenario in Pakistan. *Human Resources for Health*, [e-journal] 7, pp. 54. <http://dx.doi.org/10.1186/1478-4491-7-54>
- Babar, Z-U., Ibrahim, M.I.M. and Hassali, M.A.A., 2016. Pharmaceutical industry, innovation and challenges for public health: case studies from Malaysia and Pakistan. *Journal of Pharmaceutical Health Services Research*, [e-journal] 2(4), pp. 193-204. <http://dx.doi.org/10.1111/j.1759-8893.2011.00058.x>
- Balakrishnan, N., Barmalzan, G. and Haidari, A., 2016. Multivariate stochastic comparisons of multivariate mixture models and their applications. *Journal of Multivariate Analysis*, [e-journal] 145, pp. 37-43. <http://dx.doi.org/10.1016/j.jmva.2015.11.013>
- Becker, B. and Gerhart, B., 1996. The Impact of Human Resource Management on Organizational Performance: Progress and Prospects. *Academy of Management Journal*, [e-journal] 39(4), pp. 779-801. <http://dx.doi.org/10.2307/256712>
- Byrne, B.M., 2009. *Structural Equation Modeling with AMOS, Basic Concepts, Application and programming*. 2nd ed. New Jersey: La Erlbaum Associates. <http://dx.doi.org/10.4324/9780203805534>
- Camps, J. and Luna-Arocas, R., 2012. A matter of learning: how human resources affect organizational performance. *British Journal of Management*, [e-journal] 23, pp. 1-21. <http://dx.doi.org/10.1111/j.1467-8551.2010.00714.x>
- Cassidy, T. and Lynn, R., 1989. A multifactorial approach to achievement motivation: The development of comprehensive measure. *Journal of Occupational Psychology*, [e-journal] 62(4), pp. 301-312. <http://dx.doi.org/10.1111/joop.1989.62>
- Chalfin, A., Oren D., Andrew H., Zubin J., Michael L., Jens L. and Sendhil, M., 2016. Productivity and Selection of Human Capital with Machine Learning. *American Economic Review*, [e-journal] 106(5), pp. 124-127. <http://dx.doi.org/10.1257/aer.p20161029>
- Chao, C-W., Reid, M. and Hung, Y-C., 2016. Vicarious innovativeness or vicarious

- learning: The role of existing vicarious innovativeness in new product purchase intentions. *Australasian Marketing Journal*, [e-journal] 24(1), pp. 87-92. <http://dx.doi.org/10.1016/j.ausmj.2016.01.006>
- Chen, C-J. and Huang, J-W., 2009. Strategic human resource practices and innovation performance - the mediating role of knowledge management capacity. *Journal of Business Research*, [e-journal] 62(1), pp. 104-114. <http://dx.doi.org/10.1016/j.jbusres.2007.11.016>
- Chowdhry, N.J., 2014. Growth Challenges of Pharmaceutical Industry in Pakistan. In: Anon, *10th International Health Asia Exhibition & Conferences*. 16-18 September 2014, Karachi, Pakistan.
- Chowhan, J., 2016. Unpacking the black box: understanding the relationship between strategy, HRM practices, innovation and organizational performance. *Human Resource Management Journal*, [e-journal] 26(2), pp. 112-133. <http://dx.doi.org/10.1111/1748-8583.12097>
- Clark, R.A. and Goldsmith, R.E., 2005. Market mavens: Psychological influence, *Psychology & Marketing*, [e-journal] 22(4), pp. 289-312. <http://dx.doi.org/10.1002/mar.20060>
- Cotti, C.D., Haley, M.R. and Miller, L.A., 2016. Assessing the impact of different workplace flexibilities on workplace stress in the presence of varying degrees of job control. *Applied Economics Letters*, [e-journal] 1-4, published online first 9 June. <http://dx.doi.org/10.1080/13504851.2016.1176108>
- Cronbach, L.J., 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, [e-journal] 16(3), pp. 297-334. <http://dx.doi.org/10.1007/bf02310555>
- Gilbert, M.C., 2016. Relating aspects of motivation to facets of mathematical competence varying in cognitive demand. *The Journal of Educational Research*, [e-journal] 109(6), pp. 647-657. <http://dx.doi.org/10.1080/00220671.2015.1020912>
- Gomez, P.J., Lorente, J.C. and Cabrera, R.V., 2005. Organizational learning capability: a proposal of measurement. *Journal of Business Research*, [e-journal] 58(6), pp. 715-725. <http://dx.doi.org/10.1016/j.jbusres.2003.11.002>
- Hafeez, U. and Akbar, W., 2015. Impact of Training on Employees Performance: Evidence from Pharmaceutical Companies in Karachi, Pakistan. *Business Management and Strategy*, [e-journal] 6(1), p. 49. <http://dx.doi.org/10.5296/bms.v6i1.7804>
- Hakkak, M., Nawaser, K. and Ghodsi, M., 2016. Effects of intellectual capital on human resource productivity in innovative firms: mediating role of knowledge management. *International Journal of Technology Marketing*, [e-journal] 11(2), pp. 238. <http://dx.doi.org/10.1504/ijtmkt.2016.075689>
- Hauff, S., Alewell, D. and Hansen, N.K., 2016. HRM System Strength and HRM Target Achievement-Toward a Broader Understanding of HRM Processes. *Human Resource Management*, [e-journal] online first 20 July. <http://dx.doi.org/10.1002/hrm.21798>
- Hayes, A.F., 2012. PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. White paper. [online] Available at: <<http://www.afhayes.com/public/process2012.pdf>> [Accessed 12 March 2018]

- Hooper, D., Coughlan, J. and Mullen, M., 2008. Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, [e-journal] 6(1), pp. 53-60. <http://arrow.dit.ie/cgi/viewcontent.cgi?article=1001&context=buschmanart>
- Islam, Z.U., Bangish, S.B., Muhammad, H. and Jehan, A.S., 2016. The Impact of HR Practices on Job satisfaction: A Case Study of Hotel Industry in Pakistan. *The Journal of Asian Finance, Economics and Business*, [e-journal] 3(1), pp. 43-48. <http://dx.doi.org/10.13106/jafeb.2016.vol3.no1.43>.
- Jensen, J.A., Cobbs, J.B. and Turner, B.A. 2016. Evaluating sponsorship through the lens of the resource-based view: The potential for sustained competitive advantage. *Business Horizons*, [e-journal] 59(2), pp. 163-173. <http://dx.doi.org/10.1016/j.bushor.2015.11.001>
- Kamath, A. and Hoovinahole, S., 2016. A study of adherence of drug promotional literatures from various clinical specialties to the World Health Organization ethical criteria for drug promotion. *Journal of Pharmaceutical Negative Results*, [e-journal] 7(1), pp. 37. <http://dx.doi.org/10.4103/0976-9234.177063>
- Kline, T.J.B., Sulsky, L.M. and Rever-Moriyama, S.D., 2000. Common method variance and specification errors: A practical approach to detection. *The Journal of Psychology*, [e-journal] 134(4), pp. 401-421. <http://dx.doi.org/10.1080/00223980009598225>
- Kreitner, R. and Kinicki, A., 1992. *Organizational Behavior*. USA: Richard D. Irwin Inc.
- Lee, D-H., 2016. Analyzing the motivation, perceived performance, and satisfaction of exhibition attendees. *International Journal of Tourism and Hospitality Research*, [e-journal] 30(4), pp. 45-55. <http://dx.doi.org/10.21298/ijthr.2016.04.30.4.45>
- Leech, N.L., Barrett, K.C. and Morgan, G.A., 2011. *SPSS for intermediate statistics: Use and interpretation*. 4th ed. s.l: Lawrence Erlbaum Association Inc. <http://dx.doi.org/10.4324/9780203821848>
- McGill, M.E. and Slocum, J.W. 1993. Unlearning the organization. *Organizational Dynamics*, [e-journal] 22(2), pp. 67-79. [http://dx.doi.org/10.1016/0090-2616\(93\)90054-5](http://dx.doi.org/10.1016/0090-2616(93)90054-5)
- Meskill, D., 2015. Psychological testing and the German labor market, 1925 to 1965. *History of Psychology*, [e-journal] 18(4), pp. 353-366. <http://dx.doi.org/10.1037/a0039383>
- Mitchell, T.R., 1973. Motivation and Participation: An Integration, *The Academy of Management Journal*, [e-journal] 16(4), pp. 670-679. <http://dx.doi.org/10.2307/254699>
- Murali, S., Pugazhendhi, S. and Muralidharan, C., 2016. Modelling and investigating the relationship of after sales service quality with customer satisfaction, retention and loyalty – A case study of home appliances business. *Journal of Retailing and Consumer Services*, [e-journal] 30, pp. 67-83. <http://dx.doi.org/10.1016/j.jretconser.2016.01.001>
- Myers, J.H. and Robertson, T.S., 1972. Dimensions of opinion leadership. *Journal of Marketing Research*, [e-journal] 9(1), pp. 41-46. <http://dx.doi.org/10.2307/3149604>
- Nezam, M.H.K., Ataffar, A., Isfahani, A.N. and Shahin, A., 2016. Human capital and new product development performance efficiency – the mediating role of organisational learning capability. *International Journal of Innovation and Learning*, [e-journal] 20(1), pp. 26. <http://dx.doi.org/10.1504/ijil.2016.076670>

- Ogbonnaya, C. and Valizade, D., 2016. High performance work practices, employee outcomes and organizational performance: a 2-1-2 multilevel mediation analysis. *The International Journal of Human Resource Management*, [e-journal] iss. February, pp. 1-21. <http://dx.doi.org/10.1080/09585192-2016.1146320>
- Ollivere, B., 2016. Key opinion leaders. *Bone and Joint* 360, [e-journal] 5(4), pp. 1-1. <http://dx.doi.org/10.1302/2048-0105.54.360456>
- Pennec, M.L. and Raufflet, E., 2016. Value Creation in Inter-Organizational Collaboration: An Empirical Study. *Journal of Business Ethics*, [e-journal] 1-18, online first 12 January. <http://dx.doi.org/10.1007/s10551-015-3012-7>
- Peterson, E.R. and Meissel, K., 2015. The effect of Cognitive Style Analysis (CSA) test on achievement: A meta-analytic review. *Learning and Individual Differences*, [e-journal] 38, pp. 115 -122. <http://dx.doi.org/10.1016/j.lindif.2015.01.011>
- Rukuižienė, R. and Bocharov, V.J., 2016. Monitoring Indicators to Measure the Level of Work Motivation in Industrial and Non-Industrial Organizations. *Regional Formation and Development Studies*, [e-journal] 19(2), pp. 117-125. <http://dx.doi.org/10.15181/rfds.v19i2.1288>
- Rutherford, G.S.W., Hair, J.F., Anderson, R.E. and Tatham, R.L., 1988. Multivariate data analysis. *The Statistician*, [e-journal] 37(4/5), pp. 484. <http://dx.doi.org/10.2307/2348783>
- Sarder, R., ed. 2016. Creating Competency Models. In: R. Sarder, ed. 2016. *Building an Innovative Learning Organization : A Framework to Build a Smarter Workforce, Adapt to Change, and Drive Growth*. Hoboken, New Jersey: John Wiley & Sons, Inc. doi: 10.1002/9781119235200.ch05
- Shahryar, K.B., 2013. 30 Million families getting benefit from the Pharmaceutical Industry of Pakistan. *Pakistan Herald* [online] Available at: <<http://www.pakistanherald.com/Articles/30-Million-families-getting-benefit-from-the-Pharmaceutical-industry-of-Pakistan-3273>> [Accessed 12 March 2013].
- Shastri, P.N., 2016. 2015 Pharmaceutical Industry Roundup. *Journal of Pharmacovigilance*, [e-journal] 4(2), pp. 1000e151. <http://dx.doi.org/10.4172/2329-6887.1000e151>
- Sobel, M.E., 1982. Asymptotic confidence intervals for indirect effects in structural equation models. In: S. Leinhardt ed., 1982. *Sociological Methodology*. Washington, DC: American Sociological Association, pp. 290-312. <http://dx.doi.org/10.2307/270723>
- Sztankovszky, L.Z., Soponaru, C. and Astarastoe, V., 2015. Pharmacists' and Doctors' Perception of Pharmaceutical Representative's Ethical Practices of Drug Promotion in Romania: A Comparative Study. *Postmodern Openings*, [e-journal] 6(1), pp. 189-199. <http://dx.doi.org/10.18662/po/2015-0601.13>