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Determinants of SME export performance

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C H R O N I C L E	A B S T R A C T
	The purpose of the current study was to investigate the determinants of small and medium manufacturing enterprises' export performance empirically in the context of Pakistan. The study adopted survey method to collect forty-five (45) responses from small and medium manufacturing firms through E-mail survey. The study produced four determinants of SME export performance, such as entrepreneurial orientation (EO), total quality management (TQM), business network (BN) and export market orientation (EMO). Thus, internal consistency reliability and discriminant validity were examined of the study instruments through panel expert's opinion and the small sample size was investigated using statistical software SPSS-21 and smartPLS-3. The results of the study confirmed that scale reliability and validity and moreover, current study found a positive relationship between TQM and SME export performance. On the other hand, the study also found insignificant relationship between EO, BN, EMO and SME export performance. Furthermore, the study recommended future study should validate the current study research framework on large sample size.

1. Introduction

Exporting is considered important activity for the development of countries' economy (Imran et al., 2017). The export activity maximizes the country's foreign exchange and revenue reserves (Malhotra & Kumari, 2016). However, the term performance is not new in the strategic management study, such as the export performance of the house. Export performance includes export effectiveness, export efficiency, and continuous export engagement in exporting (Shoham, 1998) and can be measured either to investigate the financial variable or non-financial variables (Zou & Stan, 1998). In respect to small and medium enterprises (SMEs) export performance has been investigated by various studies that how the SMEs providing value to owners, customers and country (Gupta et al., 2017). Overall, the SMEs current business scenario is under high competitive pressure due to more sophisticated market and shifting customer preferences (Stouraitis et al., 2017). In respect of developing nations such as Pakistan SMEs contribute 78 percent to non-agricultural labour force, 30 percent to gross domestic product (GDP), and 25 percent to exports business, respectively (Raziq et al., 2017).

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Furthermore, in view of comparison with neighbouring countries, the Pakistan SMEs contribution to GDP is higher than India (37.5 percent), less than China (60 percent) (Thaver & Alamgir, 2014) and less than Iran (50 percent), respectively (Abdin, 2017). Additionally, Dar et al. (2017) reported that Pakistan's SMEs are performing low as compared to other developing countries, for instance, Malaysia, Thailand, China, Taiwan and Indonesia. Regardless, the nature of the nation's economy, SMEs make a great contribution to innovation, regional development and social cohesion, which in turn significantly contribute to the GDP, employment and exports as well (Abdul et al., 2011; Rehman, 2016; Shaikh et al., 2011). However, in today's highly competitive business environment that SMEs are seeking for strategies to improve their performance specifically in term of exports contribution, especially in context of Pakistan, whereas SMEs are performing low export performance (Imran et al., 2016). Numerous studies investigated the antecedents of SME export performance such as export orientation (Filatotchev et al., 2009); firm size, business experience and export intensity (Majocchi et al., 2005); development capabilities (Lefebvre et al., 1998); perceived uncertainty, Business networks (Babakus et al., 2006); cooperative strategy, knowledge intensity (Haahti et al., 2005); entrepreneurial orientation, firm management commitment (Mostafa et al., 2005); human capital (Javalgi & Todd, 2011); social networks (Zhou et al., 2007); trade promotion (Wilkinson & Brouthers, 2006); marketing strategy (Lages & Montgomery, 2004); innovation (D'Angelo, 2012); information technology (Zhang et al., 2008); government assistantship (Shamsuddoha et al., 2009) and relationship quality (Ural, 2009).

More importantly, as per literature, some of factors have considered influential contributory role in SME export performance, such as entrepreneurial orientation (Amin et al., 2016; Boso et al., 2016; Cadogan et al., 2016b; Felzensztein et al., 2015; Imran et al., 2018); export market orientation (Cadogan et al., 2016b; Imran et al., 2017; Samson & Mahmood, 2015; Singh & Mahmood, 2013); business network (Ajayi, 2016; Imran et al., 2017; Serrano et al., 2016; Shneor et al., 2016; Yan et al., 2017) and total quality management (Abeykoon & de Alwis, 2016; M. Imran et al., 2018; Imran et al., 2018; Lages et al., 2009). Furthermore, entrepreneurial orientation (EO) is a managerial capability which firms embark on innovation, proactiveness and risk-taking initiatives to sustain the competitive advantage, which leads to higher export performance (Imran et al., 2017; İpek, 2017). More specifically, EO behaviors for manufacturing firms are real important to help the execution of total quality management (TQM) for improving and increased the manufacturing productivity and competitive advantage (Demirbag et al., 2006; M. Imran et al., 2018; Rahman, 2001). Furthermore, SMEs are largely dependent on business network for access to international markets (Musteen et al., 2014). Moreover, in respect of export market orientation (EMO) that identify and meets the international customer's desires through products which leads to higher export performance (Cadogan et al., 2016a).

Therefore, the limited studies have been investigated the combine effect of entrepreneurial orientation, export market orientation, business network and total quality management on SME export performance, especially in the context of Pakistan (Chen et al., 2016). Furthermore, the resource base view theory suggested that the bundle of resources lead to sustainable advantage which leads to higher export performance (İpek, 2017). Thus, the current study is going to investigate the influence of entrepreneurial orientation, export market orientation, business network, total quality management on SME export performance in the context of Pakistan where observed the low SME export performance.

2. Literature review

The role of small and medium business in countries exports cannot deny. Any country exports relaying on small and large firm's participation. According to Dana, 2016 country exports can have enhanced very fast through large participation of SMEs. In particular, SMEs are easy to start the business, required low capital, easy to manage, the source of innovation and risk-taking for new opportunities (Dar et al., 2017). These features are gaining countries' intention to produce more and more small and medium business, which are beneficial for country exports (Rehman, 2016). Such as China they increased the export

volume through large participation of small and medium business, nowadays China is the biggest exporter in the world (Muller et al., 2015). The participation of Pakistan' SMEs in exports is very low such as 30% of GDP and 25% in country exports (Yoshino & Wignaraja, 2015). All the same, this contribution is very low compared to a regional competitor such as in terms of GDP contribution is higher than India's (37.5%) and behind of China's (60%) and Japan's (55%) and Iran (50%) respectively. Declining in exports, causing trade deficit and failure to fulfil trade quota and it is now becoming a burden on the economy (Hamza, 2016; Munir, 2016).

Pakistan SMEs have a potential and opportunity to improve their performance, specifically in term of export participation (Nation, 2016). Moreover, Government of Pakistan taking priority steps for the betterment of SMEs, they believe SMEs has potential to achieve the country highest export target mission 2025, it estimated around 30 billion USD exports per year (LCCI, 2017). Currently, Pakistan total export is FY 2016 $ 17.32 billion, which is very low compared to previous years such as in FY 2014 exports was recorded as 21.21 $ billion, in FY 2015 it dropped to $ 19.55 billion, and further decreased in FY 2016, which is lowest in Pakistan history of the modern era (PBS, 2016). Nevertheless, there are many factors influencing the SME export performance (Chen et al., 2016). The previous studies found an absence of total quality management (Haroon & Shariff, 2016; Latif et al., 2014; Saeed & Hasnu, 2011), market orientation (Asad et al., 2016; Hussain et al., 2016) in the manufacturing sector of Pakistan. Moreover, they indicated that owners of SMEs and Government of Pakistan should consider these factors for SME better performance.

De Clercq and Zhou (2014) stated that entrepreneurial orientation is a process to capture the product and market introduction, market risk and seek the new opportunities for fast success. Most of the studies operationalized the entrepreneurial orientation in three dimensions such as introduction, risk-taking and proactiveness (Ajayi, 2016; Covin & Miles, 1999; Ahimbisibwe & Abaho, 2013; Imran et al., 2017). Moreover, various researchers have shown that entrepreneurial orientation is one of the main contributory resource in SME export performance (Abiodun & Rosli, 2014; Fernández-Mesa & Alegre, 2015; Samson & Mahmood, 2015).

Export market orientation is the steadfast ability to understand the market changes regarding customer needs and wants, this ability providing source of market competitive advantage which attain to superior firm export performance (Styles et al., 2006). The operationalization of the export market orientation focused on three behavioural dimensions such as export market information generation, export market information dissemination and export market responsiveness (Cadogan et al., 2009). There are many studies found positive links between export market orientation and SME export performance, they establish a main contributing resource in SME export performance (Cadogan et al., 2016a; Chang & Fang, 2015; Chung, 2012).

Business network is the firm resource, which is providing a path to access for market information, advanced technology, new knowledge, human and financial capital (Ginting, 2015). The business network intervening the connections among organizations and cooperation between individuals and firms (Brass et al., 2004). "If SMEs are to survive increasing global competition, they must rely on the benefits of scale and scope economies, only possible through cooperative organizations, such as bonds and networks" (Dana et al., 1999). Nevertheless, business network operationalization as in four dimensions which are information acquisition, opportunity enabling, strong tie relationship resources mobilization and weak tie relationship resources mobilization (Thornton et al., 2013, 2014, 2015). In conditions, the business network contribution in SME export performance investigated some of the researcher and they initiate that business networks highly beneficial for SME export performance (Ajayi, 2016; Ginting, 2015; Jin & Jung, 2016).

Furthermore, total quality management is a process to improve the firm's products, procedures, and services to achieve the customer satisfaction at a low cost, which lead to higher export performance (M

Imran et al., 2018; Kanji, 1990). The operationalization of total quality management is not thus far developed, subsequently, researchers operationalized the TQM on the theme of TQM practices, some of studies operationalized base on TQM models such as Malcolm Baldrige National Quality Award (MBNQA) and European Foundation for Quality Management (EFQM) (Jafari, 2013). Moreover, a most famous model which got more intention is a European Foundation for Quality Management (EFQM), this is more applicable in the valuation of the firm performance (M. Imran et al., 2018; M Imran et al., 2018; Shafiq et al., 2017). Nevertheless, some of the researchers found a positive connection between total quality management and export performance and further they suggested that TQM can be an influential resource for SME export performance, especially in context of Pakistan (Abeykoon & de Alwis, 2016; M. Imran et al., 2018; M Imran et al., 2018; Lages et al., 2009). Hence, the current study proposes the following hypothesis:

H₁: There is relationship between EO and SME export performance

H₂: There is relationship between TQM and SME export performance

H₃: There is relationship between BN and SME export performance

H₄: There is relationship between EMO and SME export performance

3. Research methodology

The survey identified the six thousand nine hundred ninety-four (6994) manufacturing small and medium exporting companies in the Pakistan. By referring the Krejcie and Morgan (1970) table, study was selected three hundred sixty-four (364) manufacturing exporting SMEs for the study sample size. The study used the structured questionnaire with seven-point Likert scale. Moreover, the unit of analysis considered the firm level and targeted the company export manager as survey respondent (Calantone et al., 2004). The study scale adapted from past studies such as total quality management (Shafiq et al., 2017); entrepreneurial orientation (Boso et al., 2012); export market orientation (Cadogan et al., 2001) and business network (Thornton et al., 2014). Furthermore, the content and face validity was conducted to remove and fix any doubts regarding questionnaire/scale reliability and validity that make sure the scale is easy to read and relevant to industry characteristics. However, study conducted the reliability test to use the Cronbach alpha criteria (Sekaran & Bougie, 2016) to validate the scale reliability. The SPSS 21 statistical software was employed to conduct the Cronbach alpha reliability analysis. Furthermore, the experts' opinion was taken regarding the scale face and content validity i.e. items are clear and items measure the right construct. Experts included senior's lecturer, assistant professor from the School of Business Management, Universiti Utara Malaysia, Malaysia, and professor from school of business administration, South China University of Technology, China. Further, few questionnaires were given to SMEs owner-manager. However, a total of three hundred sixty-four (364) e-mails sent to targeted manufacturing exporting SMEs and only forty-five (45) firms responded to the survey with a response rate of 12.36%.

4. Results and discussion

4.1 Validity Analysis

Expert opinion was held considering the scale face and content validity that items can read clarity and items can measure the right build. Based on expert's opinion some of items were rewrite and double barrel questions solved correctly. The final questionnaire can be viewed in the appendix (1).

4.2 Reliability Analysis

The reliability test was conducted and found the all construct reliable within the Cronbach alpha threshold, the value of the constructs recorder more than 0.70. The current study calculated the Cronbach-Alpha to find out, "internal consistency" of the data. According to George and Mallery (2003) presented the rule of deciding the Cronbach alpha value range, "α> 0.9- Excellent, α< 0.8- Good, α< 0.7- Acceptable".

In the study of Sekaran and Bougie (2016) stated that the value of Cronbach alpha less than 0.60 is poor, at range of 0.70 is acceptable, and 0.80 value is considered good". Thus, all constructs Cronbach alpha values found more than threshold value 0.70. The results can be seen in table (1).

Table 1
Reliability Test

Construct	Number of items	Cronbach's alpha
SME export performance	9	.917
Entrepreneurial Orientation	13	.917
Export Market Orientation	13	.823
Business Networks	16	.933
Total Quality Management	30	.941
Total	81	

Furthermore, descriptive analysis was examined the industry and respondent characteristics. However, according to figure one that with respect to the nature of the business, 35.6% firms engaged in the textile business, 11.1% in surgical business, 6.7% in sports, 2.2% of leather products, 13.3% of Automobile parts, 13.3% in Electrical appliances such as Fans, and 17.8% involved in the furniture business.
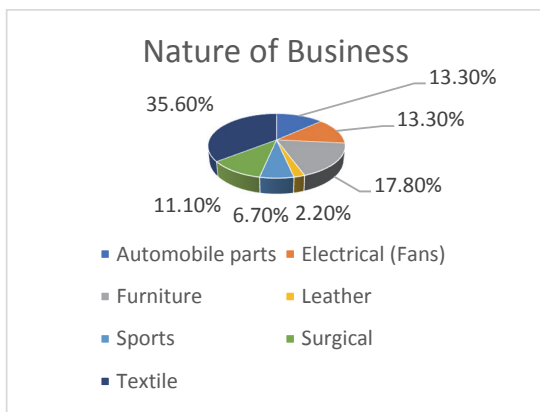

Fig. 1. Nature of Business
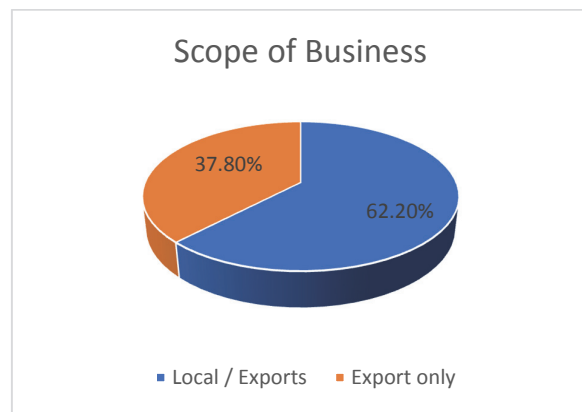
Fig. 2. Scope of business

Moreover, figure two stated the business scope 62.2% firms doing both kinds of business, mean export and local market and 37.8% firm only focused the export business. Moreover, figure three presented the respondent age, 28.9% of respondent age recorded between 31 to 40 years, 26.7% observed between 41 to 50 years, 28.9% noticed between 20 to 30 years and 15.6% funded above 50 years.

Fig. 3. Age of respondent

Fig. 4. Gender of respondent

Fig. 5. Education of respondent

In figure four explained the respondent gender, 86.7% founded male and only 13.3% belonged to a female, mean this resulted shown the male dominant culture.
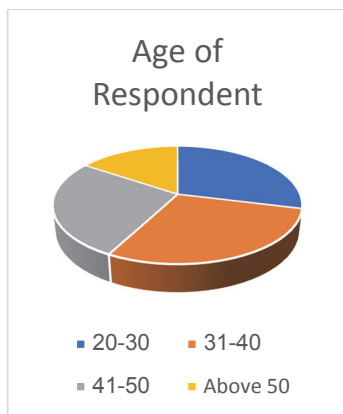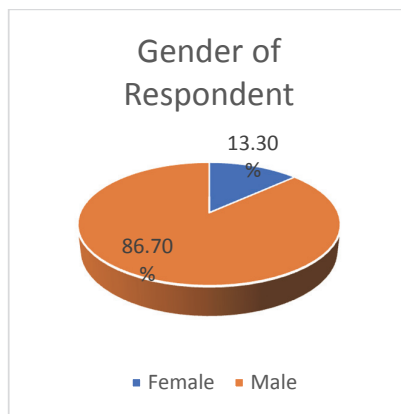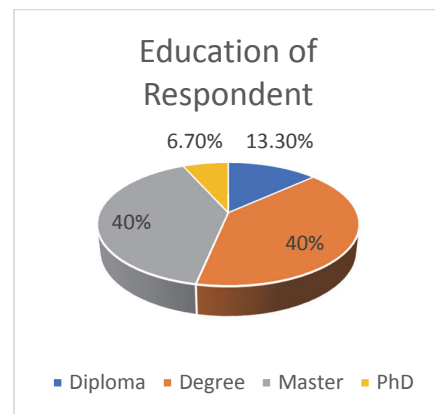
In last figure five presented the respondent educational level, most of the respondent responded to master and degree level, which is 40%, 40% respectively. However, 13.3% respondent education level is diploma, 6.7% are PhD level.

4.3 Measurement Model Assessment

SmartPLS 3 was employed to evaluate the measurement model. PLS-SEM evaluated in two-steps, such as measurement model and structural model. The measurement model validated the constructs reliability and validity and structural model evaluated the relationship between constructs.

4.3.1 Internal consistency and convergent validity

Nevertheless, in respect of measurement model analyses the constructs internal consistency to use the Cronbach alpha, rho and composite reliability criteria, these all three criteria have 0.70 threshold values (Nunnally & Bernstein, 1978). Thus, the current study internal consistency of the construct found above 0.70 values in all three measures. Furthermore, convergent validity of the construct evaluated using the average variance and items loading methods to validate the constructs. The current study found the all constructs AVE values greater than 0.50 and as well as all items observed more than threshold values and meeting the AVE values of all constructs (Hair et al., 2014). The results of internal consistency and convergence validity can be seen in Fig. 6 and Table 2.
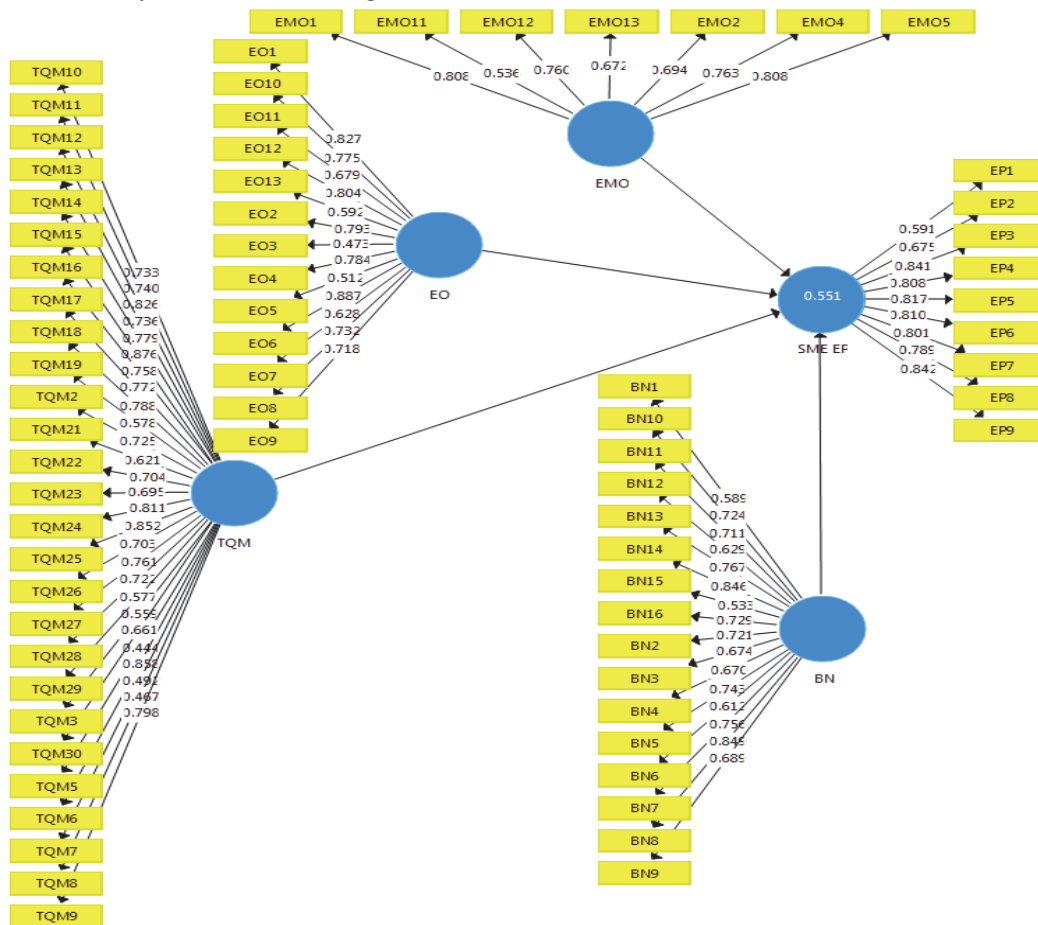

Fig. 6. Measurement model

Table 2
Internal consistency and convergent validity

Constructs	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
EO	0.920	0.940	0.931	0.516
TQM	0.961	0.969	0.965	0.511
BN	0.933	0.944	0.941	0.500
EMO	0.846	0.854	0.885	0.527
SME EP	0.920	0.938	0.932	0.607

4.3.2 Discriminant Validity

The discriminant validity was analysed to determine the model external consistency. There are three criteria to validate the discriminant validity such as Fornell and Larcker, cross loading and Heterotrait-Monotrait ratio of correlations (HTMT). According to Fornell and Larcker (1981) stated that the value of the variables was compare with the square root of AVE's. Finally, as explained in table 3 all the correlations among the variables are lower than square root-averages (AVEs) as which are bolded in crosswise.

Table 3
Fornell and Larcker

	BN	EMO	EO	SME EP	TQM
BN	**0.707**				
EMO	0.76	**0.726**			
EO	0.479	0.713	**0.718**		
SME EP	0.537	0.682	0.62	**0.779**	
TQM	0.691	0.645	0.498	0.617	**0.715**

In respect of cross loading, Chin (1998) stated that each indicator loading should be greater than all its cross-loadings. Otherwise, "the measure in question is unable to discriminate as to whether it belongs to the construct it was intended to measure or to another (i.e., discriminant validity problem)" (Chin, Peterson, & Brown, 2008). However, achieve the cross loading and results can be seen in Table 4. Furthermore, the Heterotrait-Monotrait ratio of correlations (HTMT) is a new method for assessing discriminant validity in PLS-SEM, which is one of the key building blocks of model evaluation (Henseler, Ringle, & Sarstedt, 2015). If discriminant validity is not established, researchers cannot be confirmed that the results of structural model are real, or whether they are merely the result of statistical inconsistencies. The HTMT criterion clearly outperforms standard approaches to discriminant validity assessment such as fornell and Larcker criterion and cross-loadings, which are largely unable to detect a lack of discriminant validity (Hair Jr, Hult, Ringle, & Sarstedt, 2016). However, HTMT ratio should not be more than one (1), thus current study found the all HTMT values less than one (1) and validated all study constructs discriminant validity, results of HTMT values can be seen in Table-5.

Table 4
Cross Loadings

	BN	EMO	EO	SME EP	TQM
BN1	**0.589**	0.439	0.233	0.139	0.396
BN10	**0.724**	0.574	0.299	0.438	0.420
BN11	**0.711**	0.663	0.346	0.438	0.339
BN12	**0.629**	0.610	0.289	0.323	0.461
BN13	**0.767**	0.561	0.261	0.439	0.572
BN14	**0.846**	0.598	0.491	0.525	0.582
BN15	**0.533**	0.495	0.543	0.258	0.499
BN16	**0.729**	0.658	0.427	0.487	0.579
BN2	**0.721**	0.539	0.29	0.351	0.551
BN3	**0.674**	0.426	0.341	0.299	0.534
BN4	**0.670**	0.482	0.255	0.337	0.538
BN5	**0.743**	0.55	0.494	0.445	0.538
BN6	**0.612**	0.396	0.322	0.149	0.482
BN7	**0.756**	0.532	0.362	0.336	0.469
BN8	**0.849**	0.552	0.279	0.414	0.505
BN9	**0.689**	0.405	0.14	0.311	0.392

Table 4 (Continued)

Cross Loadings

	BN	EMO	EO	SME EP	TQM
EMO1	0.536	**0.808**	0.553	0.412	0.51
EMO11	0.451	**0.536**	0.359	0.411	0.368
EMO12	0.616	**0.76**	0.445	0.59	0.397
EMO13	0.398	**0.672**	0.557	0.538	0.448
EMO2	0.611	**0.694**	0.441	0.459	0.378
EMO4	0.624	**0.763**	0.585	0.42	0.605
EMO5	0.608	**0.808**	0.651	0.552	0.569
EO1	0.272	0.556	**0.827**	0.611	0.455
EO10	0.225	0.458	**0.775**	0.231	0.393
EO11	0.095	0.385	**0.679**	0.24	0.094
EO12	0.417	0.602	**0.804**	0.475	0.347
EO13	0.516	0.659	**0.592**	0.629	0.606
EO2	0.386	0.575	**0.793**	0.585	0.45
EO3	0.102	0.151	**0.473**	0.258	-0.064
EO4	0.364	0.444	**0.784**	0.366	0.337
EO5	0.465	0.314	**0.512**	0.276	0.161
EO6	0.49	0.624	**0.887**	0.498	0.509
EO7	0.417	0.539	**0.628**	0.421	0.245
EO8	0.228	0.484	**0.732**	0.308	0.386
EO9	0.093	0.432	**0.718**	0.275	0.146
EP1	0.026	0.318	0.195	**0.591**	0.032
EP2	0.086	0.227	0.328	**0.675**	0.271
EP3	0.435	0.524	0.521	**0.841**	0.518
EP4	0.475	0.497	0.407	**0.808**	0.399
EP5	0.321	0.433	0.508	**0.817**	0.578
EP6	0.533	0.564	0.506	**0.81**	0.503
EP7	0.517	0.708	0.642	**0.801**	0.602
EP8	0.602	0.639	0.499	**0.789**	0.608
EP9	0.406	0.618	0.514	**0.842**	0.466
TQM10	0.475	0.429	0.283	0.309	**0.733**
TQM11	0.381	0.463	0.487	0.453	**0.740**
TQM12	0.46	0.417	0.381	0.433	**0.826**
TQM13	0.336	0.382	0.328	0.326	**0.736**
TQM14	0.411	0.482	0.386	0.502	**0.779**
TQM15	0.521	0.608	0.537	0.701	**0.876**
TQM16	0.443	0.475	0.262	0.516	**0.758**
TQM17	0.432	0.434	0.256	0.418	**0.772**
TQM18	0.585	0.553	0.361	0.55	**0.788**
TQM19	0.465	0.327	0.144	0.289	**0.578**
TQM2	0.535	0.676	0.689	0.491	**0.725**
TQM21	0.559	0.468	0.382	0.437	**0.621**
TQM22	0.586	0.461	0.179	0.443	**0.704**
TQM23	0.485	0.449	0.273	0.379	**0.695**
TQM24	0.729	0.609	0.364	0.446	**0.811**
TQM25	0.504	0.422	0.274	0.436	**0.852**
TQM26	0.491	0.439	0.38	0.358	**0.703**
TQM27	0.453	0.318	0.276	0.42	**0.761**
TQM28	0.446	0.428	0.395	0.472	**0.722**
TQM29	0.613	0.348	0.107	0.373	**0.577**
TQM3	0.379	0.419	0.435	0.324	**0.559**
TQM30	0.442	0.296	0.262	0.402	**0.661**
TQM5	0.54	0.529	0.336	0.429	**0.444**
TQM6	0.651	0.671	0.534	0.604	**0.858**
TQM7	0.447	0.402	0.399	0.324	**0.492**
TQM8	0.483	0.192	0.12	0.247	**0.467**
TQM9	0.407	0.351	0.461	0.335	**0.798**

Table 5

HTMT

	BN	EMO	EO	SME EP	TQM
BN					
EMO	0.848				
EO	0.498	0.764			
SME EP	0.524	0.718	0.579		
TQM	0.739	0.709	0.502	0.595	

4.4 Structural Model Assessment

After the measurement model evaluation, the current study runs the structural model / inner model to accept and reject the proposed hypothesis. The structural model assessment to use the path coefficient, the coefficient of determination (R2), effect size (f2), cross-validated redundancy (Q2) criteria. In a path coefficient assessment that evaluated the relationship between constructs to accept and reject the proposed hypothesis. However, for the direct relationship assessment was performed (with 5000 sub-sampling for 397 responses) to determine the beta-values and T-values. The current study was analyzed four (04) direct relationships and found the support for H2, and remaining such as H1, H3, H4 rejected. The hypothesis accepted on based on t-value, which observed greater than the threshold value of 1.96 accepted and those are less than t-value 1.96 rejected. The results presented in table 6 and figure 7.
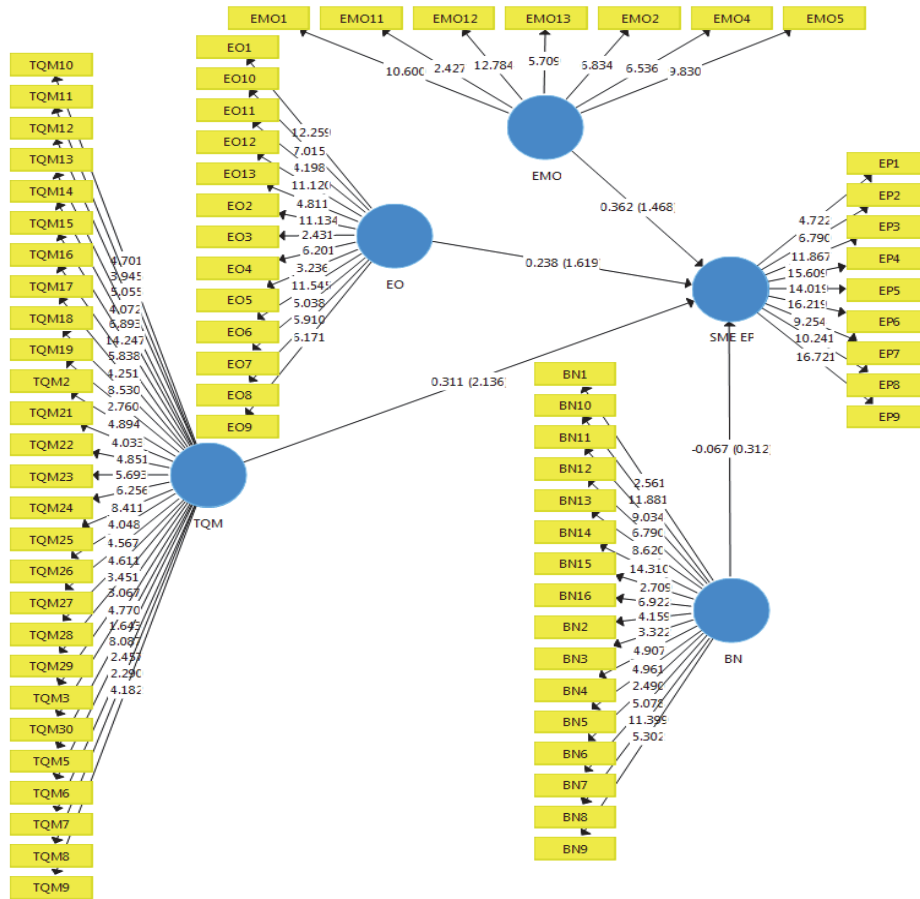

Fig. 7. Structural model

Table 6
Path co-efficient

Hypothesis	Beta	Standard Deviation	T Statistics	P Values
H1: EO → SME EP	0.238	0.147	1.619	**0.106**
H2: TQM → SME EP	0.311	0.146	2.136	**0.033**
H3: BN → SME EP	-0.067	0.215	0.312	**0.755**
H4: EMO → SME EP	0.362	0.247	1.468	**0.143**

Note: **p<0.1, *p<0.05, ns= not significant (p>.05) (Two Tail)

The coefficient of determination (R^2) is a major part of a structural model assessment. The R^2 is a measure of model's predictive accuracy and the value of R^2 consider as 0.25 (weak), 0.50 (moderate), and 0.70

(strong) respectively (Hair et al., 2014). In our case, the EO TQM, BN and EMO explained 55% of SME export performance and called moderate contribution, the results can be seen in the table-7.

Furthermore, the effect size is explained as the exogenous variable contribution into endogenous variable R^2 values. The values of f^2 are considered as small (0.02), medium (0.15) and large (0.35) respectively (Cohen, Cohen, West, & Aiken, 2013). The current study found the effect size as EO-EP (0.060) small, TQM-EP (0.103) medium, BN-EP (0.003) small and EMO-EP (0.076) small, respectively. The effect size values can be seen in Table-7.

The cross-validated redundancy (Q^2) is a means for assessing the structural model predictive relevance. According to Hair Jr et al. (2016) stated that Q^2 value larger than zero for an endogenous construct indicates the path model's predictive relevance of this construct. However, the current study model Q^2 value more than zero and found model predictive relevance. The results can be seen in table- 7.

Table 7
Effect size (f^2), predictive relevance (R^2) and cross-validated redundancy (Q^2)

Exogenous Variable	f^2	R^2	Q^2
	EP		
Entrepreneurial Orientation	0.060		
Total Quality Management	0.103	0.551	0.278
Business Network	0.003		
Export Market Orientation	0.076		

4.5 Importance performance matrix analysis (IPMA)

Importance-performance matrix analysis (IPMA) assessment is helpful for researchers who employ PLS-SEM to extend their findings (Hair et al., 2014). In an IPMA, latent variable scores are used to range from 0 to 100, whereby 0 indicates the lowest performance, 100 represents the highest performance, and 50 refers to the average performance. To calculate the importance and performance values of independent variables, the current study ran the IPMA algorithm of software SmartPLS 3 (Ringle, Wende, & Becker, 2015) and results reported in Table-9. Nevertheless, the performance values of entrepreneurial orientation (59.830), total quality management (72.534), Business network (67.201) and export market orientation (62.503) found, respectively, thus all constructs in the study lying the average performance values. The results can be seen in Table 8.

Table 8
Importance-performance matrix analysis

	Importance	performance
Entrepreneurial Orientation	0.238	59.830
Total Quality Management	0.311	72.534
Business Network	-0.067	67.201
Export Market Orientation	0.362	62.503

5. Conclusion

The current study variables have developed for decades of years, but still there are no regular and exact definitions of these variables, even many of researchers has been done about the effects and influence of total quality management (TQM), entrepreneurial orientation (EO), business network (BN) and export market orientation (EMO) on firm performance, however, many areas are still needed to be further explored, such as firm export performance, especially in context of Pakistan.
In this current study that investigated the relationship between TQM, EO, BN, EMO and SME export performance of the manufacturing sector in Pakistan. The findings of the study show that contributory role of TQM in SME export performance and this positive significant results between TQM and SME

export performance is consistent with previous studies (M. Imran et al., 2018; M Imran et al., 2018). On the other side, the present study found the insignificance relationship between EO, BN, EMO and SME export performance, thus these relationships result shown the least interest towards better SME export performance. Thus, manufacturing sector firms of Pakistan should reconsider the EO, BN and EMO strategies and considered these factors during decision making to SME export performance. Secondly might be possible the insignificant results between EO, BN, EMO and SME export performance happened due to very small sample size. However, these insignificant relationships are consistent with previous studies as well (Frishammar & Andersson, 2009; Mac & Evangelista, 2016; Shneor et al., 2016). However, according to Baron and Kenny (1986), the third variable such as a moderator or mediator should be employed if there is an inconsistent relationship was existing between criterion and predictor variables. Therefore, future studies should be considered the third variable between EO, BN, EMO and SME export performance to explain the relationship in detail. Furthermore, the current study suggests to firm managers should consider the TQM during decision making and should implement.

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Appendix 1

Instrument Validity results

Variables	Adopted Scale	Adapted Scale	Author
SME export performance	**This export venture** has been very profitable.	Our firm export has been very profitable.	Zou, Taylor, and Osland (1998)
	This export venture has generated a high volume of sales.	Our firm export has generated a high volume of sales.	
	This export venture has achieved rapid growth.	Our firm export has achieved rapid growth.	
	This export venture has improved our global competitiveness.	Our firm export has improved our global competitiveness.	
	This export venture has strengthened our strategic position.	Our firm export has strengthened our strategic position.	
	This export venture has increased our global market share.	Our firm export has significantly increased our global market share.	
	The performance of this **export venture** has been satisfactory.	The export performance of our firm has been satisfactory.	
	This export venture has been successful.	Our firm export has been successful.	
	This export venture has fully met our expectation.	Our firm export has fully met our expectation.	
Entrepreneurial orientation	Our company has produced more new **products/services** for our export markets than our key export market competitors during the past five years.	Our company has produced more new products for our export markets than our key export market competitors during the past five years.	Boso, Cadogan, and Story (2012)
	On average, each year we introduce more new **products/services** in our export markets than our key export market competitors.	On average, each year we introduce more new products in our export markets than our key export market competitors.	
	Industry experts would say that we are more **prolific** when it comes to introducing new **products/services** in our export markets	Industry experts would say that we are more **innovative** when it comes to introducing new products in our export markets.	

	Relative to our main export competitors, the products/services we offer in our export market(s) are
	    Revolutionary
	    Inventive
	    Creative
		Relative to our main export competitors, the products/services we offer in our export market(s) are Revolutionary	

		Relative to our main export competitors, the products/services we offer in our export market(s) are Inventive	
		Relative to our main export competitors, the products/services we offer in our export market(s) are Creative.	
	Top export managers of our company, in general, tend to invest in high-risk export projects	Top export manager of our company, in general, tend to invest in high-risk export projects.	

	This company shows a great deal of tolerance for high risk export projects	This company shows a great deal of tolerance for high risk export projects.	
	Our export strategy is characterised by a strong tendency to take risks	Our export strategy is characterised by a strong tendency to take risks.	
	Taking chances is part of our export business strategy	Taking risk is part of our export business strategy.	
	We seek to **exploit anticipated** changes in our export market ahead of our **rivals**	Our company seeks to **exploit anticipated** changes in our export market ahead of our competitors.	
	We act opportunistically to shape the export environment in which we operate	Our company acts opportunistically to shape the export environment in which we operate.	
	We consistently try to position ourselves to meet emerging export market demands.	Our company consistently tries to position ourselves to meet emerging export market demands.	
Total Quality Management	Managers view cost as more important in comparison to the quality of products.	Managers of our company view the cost as more important in comparison to the quality of products.	Shafiq et al. (2017)
	Managers present themselves as role models for the employees.	Managers of our company present themselves as role models for the employees.	
	Managers ensure that employees and suppliers (the people/companies who provide, e.g., raw materials to the company) are aware of the company's long-term plans.	Managers of our company ensure that employees are aware of the company's long-term plans.	
	Managers do not want to give authority to employees for them to take decisions about their jobs.	Managers of our company do not want to give authority to employees for them to take decisions about their jobs.	
	Managers continuously acquire and update their knowledge that is valuable for the organisation.	Managers of our company continuously acquire and update their knowledge that is valuable for the organisation.	
	Managers encourage and participate in continuous improvement initiatives.	Managers of our company encourage and participate in continuous improvement initiatives. (Leadership)	
	The views of customers (the people/companies who buy or want to buy your company's products) are considered important while designing new products.	In our company, the views of customers (the people/companies who buy or want to buy your company's products) are considered important while designing new products.	
	The views of employees and suppliers are considered while shaping the company's objectives.	In our company, the views of suppliers are considered while shaping the company's objectives.	
	The performance of competitors and best-in-class companies is assessed and analysed.	In our company, the performance of competitors and best-in-class companies is assessed and analysed.	
	Systematic measurement of losses (production losses, the losses due to rejection of finished products, etc.) is carried out.	In our company, systematic measurement of losses (such as production losses, the losses due to rejection of finished products, etc.) is carried out.	
	Information systems are in place to capture information about customers and markets.	In our company, information systems are in place to capture information about customers and markets.	

Periodically (e.g. after every three months, six months, or one year), organisational performance is evaluated against the set objectives and targets.	In our company, periodically (e.g. after every three months, six months, or one year), organisational performance is evaluated against the set objectives and targets. (Strategy)
Formal processes are used regularly (attitude surveys, employees' briefing, etc.) to find out employees' opinions and views.	In our company, formal processes are used regularly (attitude surveys, employees' briefing, etc.) to find out employees' opinions and views.
Specific quality training is offered to employees.	In our company, specific quality training is offered to employees.
Employees are encouraged to update their knowledge and skills.	In our company, employees are encouraged to update their knowledge and skills.
Teamwork is a common practice within the organisation.	In our company, teamwork is a common practice within the organisation.
Employees have easy access to the relevant information.	In our company, employees have easy access to the relevant information.
Encourage the employee's opinions, suggestions about any of the activities of the organization. (People)	In our company, encourage the employee's opinions, suggestions about any of the activities of the organization. (People)
Suppliers are encouraged to develop long-term partnerships with the organisation.	In our company, suppliers are encouraged to develop long-term partnerships with the organisation.
Our organisation does not give preference to quality over cost while making purchase agreements with suppliers.	In our company does not give preference to quality over cost while making purchase agreements with suppliers.
Performance of the suppliers is evaluated periodically.	In our company, performance of the suppliers is evaluated periodically.
Updated information and resources are provided to all employees to perform their jobs.	In our company, updated information and resources are provided to all employees to perform their jobs.
The organisation tries to reduce the harmful effect of its activities on the environment.	In our company tries to reduce the harmful effect of its activities on the environment. (Partnership and resources)
Proper procedures are established to perform different jobs.	In our company, proper procedures are established to perform different jobs.
Employees are aware of the parameters (temperature, pressure, etc.) of different processes, which are needed to be controlled for effective operation.	In our company, employees are aware of the parameters (temperature, pressure, etc.) of different processes, which are needed to be controlled for effective operation.
Performance of production processes is monitored.	In our company, performance of production processes is monitored.
Development and innovation of production processes are emphasised.	In our company, development and innovation of production processes are emphasised.
The research and development (R&D) department is continuously working on the development and improvement of the products.	In our company, the research and development (R&D) department is continuously working on the development and improvement of the products.
Production processes are capable of producing products according to design specifications.	In our company, production processes are capable of producing products according to design specifications.

	Proper systems are in place to deal with customer complaints.	In our company, proper systems are in place to deal with customer complaints. (Process)	
Business network	We ask our business partners when we need information regarding any of the following: new business opportunities, competition or technology developments in the market.	Our firm asks to business partners when we need information regarding any of the following: new business opportunities, competition or technology development in the market.	Thornton, Henneberg, and Naude (2014)
	Information provided by our business partners is helpful for us to make an informed decision.	Information provided by our business partners is helpful for us to make an informed decision.	
	By speaking to our business contacts, we are able to obtain the information that is crucial to us.	By speaking to our business contacts, our firm is able to obtain the information that is crucial to us.	
	Information from our business contacts who work in a similar market can be useful for us.	Information from our business contacts who work in a similar market can be useful for us.	
	We make every effort to go out and network in order to increase our reputation in the market.	Our firm makes every effort to go out and network in order to increase our reputation in the market.	
	We recognize that the value of working well with our business partners adds to the reputation of our products or services.	Our firm recognizes that the value of working well with our business partners adds to the reputation of our products.	
	We invest in building up our reputation in the market by networking with our business partners.	Our firm invests in building up our reputation in the market by networking with our business partners.	
	We work toward becoming an effective business partner for other companies in the market (e.g., potential customers or suppliers).	Our firm works toward becoming an effective business partner for other companies in the market (e.g., potential customers or suppliers).	
	Matching our suppliers' capacity to the demands of our customers has been an important practice in our organization.	Matching our suppliers' capacity to the demands of our customers has been an important practice in our organization.	
	Our suppliers' ability is critical for us to satisfy our customers.	Our suppliers' ability is critical for us to satisfy our customers.	
	Having good relationships with both suppliers and customers has enabled us to adapt to changes in the market place.	Our firm has good relationships with both suppliers and customers, has enabled us to adapt to changes in the market place.	
	Our customer-focused approach is communicated to suppliers, so that they are aware of how we serve our customers and can contribute to the success of delivering the offerings.	Our customer-focused approach is communicated to suppliers, so that they are aware of how we serve our customers and can contribute to the success of delivering the offerings.	
	We initiate relationships with new business partners to gain local knowledge in a new market.	Our firm initiates relationships with new business partners to gain local knowledge in a new market.	
	We interact with the customers of our customers.	Our firm interacts with the customers of our customers	
	We work closely with influential parties who have relationships with our direct customers to stimulate demand.	Our firm works closely with influential parties who have relationships with our direct customers to stimulate demand.	

	Identifying our competitors' major customers helps us to getting to know the needs and requirements of potential	Identifying our competitors' major customers helps us to getting to know the needs and requirements of potential	
Export market orientation	In this company, we generate a lot of information concerning trends (e.g., regulations, technological developments, political, economic) in our export markets.	In our firm, we generate a lot of information concerning trends (e.g. regulations, technological developments, political, economic) in our export markets.	Cadogan et al. (2001)
	We constantly monitor our level of commitment and orientation to serving export customer needs.	Our firm constantly monitors our level of commitment and orientation to serving export customer needs.	
	We are slow to detect fundamental shifts in our export environment (e.g., regulation, technology, economy).	Our firm is slow to detect fundamental shifts in our export environment (e.g. regulation, technology, economy).	
	We periodically review the likely effect of changes in our export environment (e.g., regulation, technology).	Our firm periodically reviews the likely effect of changes in our export environment (e.g. regulation, technology).	
	We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.	Our firm generates a lot of information in order to understand the forces that influence our overseas customers' needs and preferences.	
	Too much information concerning our export competitors is discarded before it reaches decision makers.	Too much information concerning our export competitors is discarded before it reaches top management.	
	Information which can influence the way we serve our export customers takes forever to reach export personnel.	Information which can influence the way we serve our export customers takes forever to reach export personnel.	
	Important information about our export customers is often "lost in the system."	Important information about our export customers is often 'lost in the system'.	
	Information about our export competitors' activities often reaches relevant personnel too late to be of any use.	Information about our export competitors' activities often reaches relevant personnel too late to be of any use.	
	Important information concerning export market trends (regulation, technology) is often discarded as it makes its way along the communication chain.	Important information concerning export market trends (regulation, technology) is often discarded as it makes its way along the communication chain.	
	If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.	If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.	
	We are quick to respond to significant changes in our competitors' price structures in foreign markets.	Our firm is quick to respond to significant changes in our competitors' price structures in foreign markets.	
	We rapidly respond to competitive actions that threaten us in our export markets.	Our firm rapidly responds to competitive actions that threaten us in our export markets.	