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Impact of Institutional Quality on Trade Performance of Small and Medium Enterprises in Pakistan

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Abstract
The trade economy is dependent upon the institutional quality of the country. It affects the ease of doing business in the economy. It is plausible to think that, how institutional quality can affect the trading performance of Pakistan. Small & medium enterprises (SMEs) are playing the role of the backbone of the trade sector in Pakistan. Contribution SMEs can be significantly improved, by improving the supporting macroeconomic indicators. This paper studies the short-run and the long-run association between SME trade growth and cost of production, relative prices, and Institutional quality in Pakistan. It also examines the Environmental Kuznets curve (EKC) hypothesis, between SME trade growth and institutional quality in Pakistan. This study utilizes secondary data, which is taken from multiple secondary sources, including the SMEDA, Pakistan Economic Survey, and world development indicators. The biannual data is assembled up for 38 observations from (2000 to 2019). This study uses Auto Regressive Distributive Lag (ARDL) bound testing method to examine the short run and long run connections between SMEs' trade growth and macro-economic variables, like; relative prices, Cost of production. Gross Domestic Product, exchange rate, and institutional quality. These variables are selected from the available literature. The study finds that the short-run response of SMEs trade is not significant, but it significantly responds to macro-economic indicators in long run. The institutional quality has a non-linear relationship with SMEs trade growth. This indicates that the pollution heaven hypothesis holds valid even for the case of institutional quality and SMEs trading performance. The study focuses on the optimality of institutional quality for the optimal performance level of SMEs in Pakistan.

Keywords: Institutions, Economic growth, SMEs enterprise, Trade

JEL Classification: F10, F19, O43

1. Introduction
Institutional quality is important for the economic growth of any economy. Institutional quality reinforces economic growth and vice versa. Good quality institutions can help in regulating smooth economic transactions at a lower cost (Acemoglu, 2012). Institutional quality indicates laws enforcement, individual rights, and good quality of government. It also indicates regulations and services. It is essential to understand the association between institutional quality and economic development through the proper mechanisms. The quality of institutions can show a significant role in driving the productivity of an economy (Shahbaz et al. 2013). There is a significant statistical relationship between small &medium enterprises (SMEs) growth and institutional quality improvement. It will be interesting to empirically examine, whether or not institutional-quality growth affects the trading performance of SMEs in Pakistan. Studies have shown that SME's trading performance is associated with multiple factors: cost of production, relative prices, exchange rate, industrial GDP, and other explanatory variables like institutional quality and political instability.

According to Hall & Jones (1999), weak institutions or governance involve undesirable externalities, which are associated with negative effects on economic growth and development. Weak institutions lead to higher transaction costs and reduce the exports of SMEs Enterprises because of high price tails in the markets. According to Shah & Syed (2018), there exist 3.2 million business SME enterprises in working Pakistan, which accounts for 99 percent of total businesses and adds up to 33 percent to the total value-added to the economy. Akhtar & Malik (2000) argued that Pakistan's trade performance is stagnant because of relatively lower price elasticity in the region. Now, it is possible to logically extend the argument to global trade. According to Wei & Shleifer (2000) institutions play important role in re-organizing the internal trust to deal with multiple governing systems. The efficiency of institutions can help in getting and implementing domestic property rights, which is an important factor of internal trade in terms of cost. (Acemoglu, 2012) in his book, "why nation Fails" argued that institutions are the backbones of an economy. It reduces the uncertainty of information asymmetry and exchange rate, which is important to enhance trade across borders. Trade across borders is faced with incomplete information and weak institutions intensify it further. Milgrom et al. (1990) argued that institutions are humanly designed constraints that rearrange human interactions, within the country as well as across countries. Institutions are rules set for interaction in society for any specific kinds of transactions or dealings, which help to reduce the unobservable uncertainties. The concept of institutional quality and economic growth relationship is increasingly becoming important to improve human life.

This research specifically investigates the short-run association and long-run relationship between institutional quality index score growth and SMEs' contribution toward trade as a percentage of total trade volume in Pakistan. Since each variable is not static at the level and first difference but the level of integration is different, the study uses the ARDL bounds testing approach to test Environmental Kuznets Curve type hypothesis between institutional quality and SMEs' contribution toward trade. The study included a squared term of institutional quality score to see whether the relationship between institutional quality and trade performance of SMEs is linear or nonlinear.

The motive behind the testing nonlinear relationship is to explore, how far institutional-quality growth is better for SMEs trading because highly strict institutional rules may reduce the influence of SMEs in the market and thus reduce the excitement of businessmen to invest. It is also debated that strict institutions reduce the ease of doing business by implementing environmental quality standards and other health quality standards, which increases the cost of production and prices of goods in the market. This indicates that according to the law of demand high prices reduce the demand for goods in the market while keeping other variables constant. Relative prices are included in the model to explore the perspective of the supply-side and this study is based on supply-side factors analysis for SMEs performance in association with other factors including institutional quality and cost factors.

Institutional quality is considered the most important variable for the economic growth of any country. The small and medium enterprises' trade performance and institutional quality can be tested for Pakistan with time series econometric models. This can be an addition to the existing literature, by adding a case study of Pakistan, which presents the long-run and short-run dynamics of SME trade and institutional quality nexuses in Pakistan. This is an empirical study, which reveals the econometrical logic behind the non-linear relationship testing between Institutional quality and SME growth in terms of trade and commerce in Pakistan. It is quite clear that SMEs are contributing a significant amount of output in the production, trade, and employment sections of the economy. It is predicted that highly strict institutions also reduce the performance of SME firms. Therefore, it is important to examine the unsolved puzzle of the empirical relationship between institutional quality growth and SMEs' growth or performance. Solving this puzzle will help us to understand what level of strictness and rules implementation the SMEs can absorb for a positive influence. The study focuses on the estimation of the relationship between SMEs growth and the Institutional quality index score of Pakistan and studies the determinants of SMEs' trade performance in presence of good governance and institutions. The study has also attempted to test the EKC hypothesis between institutional-quality growth and SMEs' performance growth over time in Pakistan. This paper is organized in a way that section one provides an introduction and background of the topic, followed by the literature in the section carried out under specific themes. The third section is

the theoretical background of the given topic and the section for is the explanation of the data and methods of this research. Section 5 is about results with some discussions and section 6 is the conclusion and policy implications.

2. Literature Review

2.1. Institutional quality and economic growth

There are tons of studies available, which indicate a strong affiliation between institutional quality and economic growth. The study by Valeriani & Peluso (2011) established a strong relationship between a country's institutional growth and economic development. The study used panel data and conducted a pooled regression analysis, focusing on the trade potential of the economy. The study of James & Halit (2006), explored the association between Institutional quality and economic growth with a specific focus on the Maintenance of the rule of law or democratic institutions. The study found a significantly positive association between institutional quality and Economic growth, through trade improvement mechanisms.

Another study used the panel data approach focusing on trade openness, where the study of (Nawaz et al. (2014) verified that institutional quality and economic growth are positively and significantly associated in developing and developed countries. This indicates that institutional quality improvement is better for economic growth no matter whether the economy is underdeveloped or developed. Low violence, good law, and order situation, democratic with a high score, and other institutional implementations have shown a positive association with trade growth of small and medium enterprise trading capacity and growth. In the case of Pakistan, policymakers are still struggling with the quality of institutions. The scores of the institutional quality index in Pakistan are below the average score of all the Asian countries. The paper of Chong & Calderon (2000) estimated the bidirectional Causality between institutional measures and economic growth and establish a significant association between economic growth and improved institutional quality across the different income groups and countries. Reporting all these studies indicates that it is a long-established, existence of a statistically significant relationship between economic growth and institutional quality and vice versa. In previous literature institutional quality has been advocated for the growth of a country. It is important to explore the mechanism, which increases economic growth with the help of improved institutional quality. How institutional quality brings in the input factors that improve the economic growth of different sectors in the economy along with ultimately increasing the aggregate economic growth of an economy.

2.2 Institutional quality and trade growth

The literature on the implications of institutions for trade growth is quite diversified in terms of different methods used for the analysis conducted on time series, panel, and cross-sectional data sets. The author came across different approaches while reading the literature on institutional quality and trade relationships for an instance, a published study of LiPuma et al. (2013) examined the effect of institutional quality on exports in emerging world economies. The study specifically explored the exporting performance of firms working in emerging economies. This study used a panel data approach with fixed effect and random effect models. The study used the housemen test to determine, which model should be the best fit in the case of a given data set and a random effect model was preferred.

Theoretically, this study used a contingency model of firm age and size effects in presence of good institutions. The study found a significant association between institutional-quality growth and export growth of larger-scale firms. Shah et al. (2011) also explored the association between SMEs' exporting performance and economic growth in Pakistan, which indicates that SMEs are significantly contributing to the Pakistan economy. The study of Méon & Sekkat (2008) specified the importance of Institutional quality in terms of the specification of institutions and products association. The study further focused on what type of institutions and which type of trade policy for further development should be preferred.

The study of Bankole et al. (2015) examined the impact of telecommunication infrastructure and institutional quality on trade efficiency in Africa, which indicates the importance of telecommunications for trade efficiency. The study established a partially significant relationship between institutional quality and telecommunication for the efficiency of the trade sector in African countries. The study of Maruta (2019) added an important factor of trade aid along with institutional quality to explore the effects on trade. The interaction term of aid and institutional quality has positive implications for the growth trade. The study found that quality institutions bring in additional aid to develop trading capacity and hence increase the trade of the economy.

The study of Lin et al. (2020) added that the role of institutional quality on the performance in the export of coconut products has been a significant example of SME products trade can be observed. Better institutions will make and ease for doing small businesses and will improve the quality of products through monitoring and evaluation. It is thus very obvious that institutional quality and trade are positively associated in developing countries. Stronger institutions lead to expansion of trade, which can be either due to productivity growth or it can be because of per capita income growth. The productivity growth will increase the exports of an economy and income growth will increase the imports of the economy.

2.3 Institutional quality and SMEs growth

Many departments and institutions are working for the development and growth of SMEs sector in Pakistan, which include the Government of Pakistan at the top position, followed by the State Bank of Pakistan, SME Finance Department, Financial Stability Department, International Monetary Funds (IMF), World Bank, Asian Development Bank (ADB), US-AID, and others include commercial banks and national saving centers. It is argued that better institutions lead towards a good economy, where every sector is expected to grow with a proportional rate of investment, with possible struggles and opportunities in the economy. It is also argued that good institutional quality increases SMEs and their contribution to the economy. In this case institutional quality is the quality of rule of law, law and order situation, polity score and governance quality and other indictors of formal institutions. The researchers have also explored SMEs growth and institutional quality in different contexts. The study of Deng & Zhang, (2018) examined the role of Institutional quality and internationalization of emerging market firms, also known as SMEs. The study was conducted on the Chinese SMEs sector, which found that institutional quality with innovations has led the SMEs growth and sustainability in China. The findings can be replicated for Pakistan, where weaker institutions are restricting SMEs growth in the international markets.

The argument of resources distributions is dominated while arguing about SMEs and their contribution to the economy. It is argued that the institutions are developed form of cooperative and supportive ideas that fosters the growth of SMEs in the economy. The study Manolopoulos et al. (2018) explored the mechanism behind the resources distribution and the role of home institutions for the growth of SMEs exports and their relationships with stakeholders. The study found that institutions are working for the reallocation of state resources among other sectors and SMEs to enhance the growth of the trade sector. Krasniqi and Mustafa (2016) added that a small firm's growth in a post-conflict environment has only been the reason, where human capital and institutional quality have played an important role to sustain and develop it. The role of managerial capacities cannot be denied, which are subjected to the availability of human capital on a firm level. The implications of human capital for SME growth and development can be seen in terms of semi-skilled and skilled workers in the sector. This has become possible due to good quality institutions and their wise approach to reallocating such types of resources to increase the efficiency of the SMEs sector in Pakistan.

2.4 Small & Medium Enterprises trade growth and its influencing factors

There are many factors, which influence the role and losses of SME enterprises in the economy. These factors are investment, profitability, ease of doing business, taxes, and security in the region. Some other factors include the cost of production, demand for SME products indicated through relative prices, and Institutions' development can be very helpful to improve the productivity of SMEs in Pakistan. SMEDA

is collaborating with development organizations working across the world. The government of Pakistan has connected SMEDA with Japan international Cooperation agency also known as JICA to develop training programs for SME employees and managerial authorities to develop skills and market approaches in the Pakistan SMEs sector. The major partner's list also includes the Training and Development Centers of the Bavarian Employers Association Germany and local experts (Pakistan Economic Survey 2018-19). According to Akram et al. (2011), access to loans and financial support can be enhanced through institutional-quality growth and cooperation across different sectors in Pakistan. Studies have identified some of the influencing factors on a micro level, using primary data; collected through a survey. Other studies have shown that innovation led to growth, access to markets also leads to SMEs trade growth, and finally, the cost of production is important for the trading decision on SMEs level businesses in Pakistan.

3. Theory behind the trade, institutional quality, and economic growth

The theory of trade and economic growth explains the mechanism and channels which lead to the economic growth of an economy through trade or restrict the real economic growth of people of the economy. There are two sides to this discussion, one side is positive and the other side negative in terms of the relationship between these important economic variables. It is a conventional view about trade and economic growth relationship, that trade plays a role as an engine of economic growth (Maneschi, 1992). Because it reduces the cost of production due to the exchange of much-needed inputs at lower prices as compared to the cost required for the production of those inputs for the hosting economy.

It is argued that trade helps to provide raw materials and semi-finished goods to industries, which helps the sector to grow faster as compared to the same industry in the close economy. It helps the industry to adopt new technologies from all across the world, which are economically feasible. Point no second to note that trade also helps to transfer the information about the use and utilization of new technology, it helps in the transmission of new ideas, new skills, and qualities of entrepreneurship. And last but not the least, trade helps economies to gain capital gains. It is the transfer of capital from developed countries to developing countries in many different forms Farahane & Heshmati, (2020).

This is the basic channel through which trade is expected to have positive effects on economic growth in the long run. In the short run, the returns on product sales determine the economic gains from trade. Some other studies indicate that trade can reduce the local supply of products and thus increase the prices in the economy, which ultimately reduces the purchasing power parity of a household in the economy. However, the positive view strongly dominates the debate. Now that it is established that trade expansion has positive effects on the economy, through the flow of ideas and innovation skills across borders Grossman & Helpman, (2015). There must be some specific factors, which influence the trading infrastructure of the economy. The author of "why nations fail" argued that Institutions are the most important tools to develop economies (Acemoglu, 2012).

The theory behind the institutional quality and economic growth, which is driven by the SMEs can be explained through the linkages between investment, production, restrictions, trade opportunities, and institutional quality. The quality of institutions is an indicator of less corruption, less violence, good law and order situation with better governance in the economy. The good quality of these indicators creates a conducive environment for SMEs size businesses, which flourish to become more productive. Highly productive SMEs are expected to enter into trade and grow over the years with a good level of competitiveness. According to (North, 1981) institutions are the rules of the game and organizations are the players, which play the game inside the rules and regulations. The SMEs are expected to perform better as institutional quality increases, but it is also a matter of worry to consider that bureaucratic quality leads to stringent laws and regulations on businesses which can bounce back the performance level of those SMEs, which have limited investment capabilities.

The Institutions theory explains, why changes occur and why organizational arrangement and practices become embedded. A study by Greenwood et al. (2015) argued that institutional gravity is highly influential to cause changes. The emerging rules and new rules are presented with an enforcement mechanism, which creates pressure on organizations, directly and indirectly, leading to the changes. The example can be taken from simple market rules, where new rules can change the behavior of agents,

firms, and associations. The introduction of environmental standards can modify the growth potential of small organizations in the short run. In this case, institutional changes are expensive to adopt and will cause a decline in economic output because there is a tradeoff between reducing emissions and output growth.

In the second situation, rules changes are widely adopted and accepted, an example of trouser ban among female employees in Pakistani workers has removed and none of the women is required to resign upon marriage, which was once very common rule and accepted but now these new rules changes are accepted and appreciated. This way the institutions can change the path of economic growth. According to (North, 1981) institutions are human-made rules regulations, which restrict executive powers, support disciplinary actions, and define human interactions. Institutions work as engines of systematically controlled or stimulated growth. It helps the economy to work smoothly. The economic growth and Institutional quality interaction have been discussed by (Acemoglu, 2012). The author of "why nations fail" argued that institutions are the backbone of the economy. This indicates that the economy works with proper rules and regulations in a better way as compared to unregulated economies.

4. Data and methodology

The study is designed to examine the empirical relationship between institutional quality and exports growth of SMEs in Pakistan. It is important to understand to what extent the institutions matter for SMEs exports growth. Is there exist a linear relationship between SMEs exports growth and institutional quality? To answer all these policy-oriented questions, secondary data constructed methods and techniques are used. This chapter is designed to provide an insight into the detailed methodology of the study to readers and reviewers. The chapter includes Data details, sampling details, techniques, and model details used in this study to achieve the stated objective and answer the research questions.

4.1 Data of the study

The study is based on secondary data, which is taken from, statistical yearbooks ok Pakistan, SMEDA, SBP, and Pakistan Economic survey and reports of selected SMEs in Pakistan. The data of this study is a time series for all the selected variables. The data of the study are treated before the final estimation. The bi-annual data is taken from 2000- to 2019 because 2020 was abnormal crises year.

4.2 Important variables of the study

- Trade performance of SMEs is measured as a percentage of SMEs contribution towards trade, which is taken from SMEDA and State banks. This is a continuous variable and is treated as the dependent variable of the study. Which is indirectly the current value of aggregated and disaggregated exports of the SMEs sector in Pakistan (SMEDA) (SBP).
- Institutional quality is measured through an index score, developed by (WDI) world development indicators, which measures bureaucratic quality, law and order situation, democracy, better governance, corruption control, and violence. Reducing the negative terms intensity in the economy means goo institutional quality,
- Institutional quality squared term is included to track linearity of the relationship between institutional quality and SMEs trade growth in Pakistan. (Author's calculation)
- RP is relative prices which is the ratio of uniting value of SMEs exports to wholesale prices index of Pakistan (Hussain et al., 2020).
- Industrial GDP is used as an indicator proxy for the production capacity as we don't have direct data set available for the production capacity of SMEs (Hussain et al., 2020).
- COP is symbol which represents the cost of production. The producer price index is used as the cost of production of SMEs products (Hussain et al., 2020).
- Exchange rate is taken as an indicator of risk associated with unpredicted fluctuation in taxes and interest rate and other macroeconomic indicators of the economy (Shahbaz et al., 2013).
- Investment facilitation/Domestic investment is an indicator of capital formation domestically, which is a significant contributor to the economic growth of SMEs in Pakistan. Economic theory explains

investment as a driving factor of capital formation, which can be a good proxy in an econometric model when direct data for capital formation is not available for SMEs in Pakistan.

- Investment facilitation is taken from Pakistan Economic survey in PKRs Millions This study uses both indicators.

4.3 Model of the study

The study is based on the Auto-Regressive Distributive Lag (ARDL) model, because it helps readers and policymakers to provide an understanding of both, the long-run and short-run relationship dynamics of institutional quality and SMEs trading performance.

Exports' contribution towards trade as a percentage is taken as an indicator of the trading performance of SMEs' or export growth is taken as the dependent variable. SMEs' trade performance is the function of institutional quality, industrial GDP growth, cost of production, relative prices, and relative exchange rate and investment facilitation

The following model is given in the Cointegrating form,

$$\sum_{i=0}^{n} TpSME_t = \alpha_t + \beta INDGdp_t + \beta EXCR_t + \beta_4 ACoPU_t + \beta_1 RP_t + \beta_2 INSTQ_t + \beta_3 INSTQ_t^2 + \beta INVFC_t + e_t \quad (1)$$

ARDL form:

$$\begin{aligned}\Delta TPSME_t = \alpha_t &+ \sum_t \beta 1 \Delta\theta TPSME_{t-1} + \sum_t \beta 2 \Delta\theta INDGdp_t + \sum_t \beta 3 \Delta\theta EXCR_t + \sum_t \beta 4 \Delta\theta COP_t \\ &+ \sum_t \beta 5 \Delta\theta INSTQ_t + \sum_t \beta 6 \Delta\theta INSTQ_t^2 + \sum_t \beta 7 \Delta\theta lnRP_{t-1} + \sum_t \beta 8 \Delta\theta INVFC_t \\ &+ \lambda_{In} TPSME_t + \lambda_{In} INDGdp_t + \lambda_{In} EXCR_t + \lambda_{In} COP_t + \lambda_{In} INSTQ_t + \lambda_{In} INSTQ_t^2 \\ &+ \lambda_{In} RP_t + \lambda_{In} INVFC_{t-1} + \mu_t\end{aligned}$$

- $\beta\theta$ indicates the coefficient of short-run change dynamics
- ʎ indicates the long-run coefficients in the model
- $TPSME_{t-1}$ indicates the accumulative average trade performance of SMEs in Pakistan over the years on a Biannual frequency.
- $INDGdp_t$ indicates the industrial gross domestic product, which indicates the SME production capacity in Pakistan.
- $EXCR_t$ indicates the exchange rate, which is taken against the dollar value and this is taken as an indicator of risk for fluctuation in macroeconomic indicators in Pakistan
- COP_t the cost of production at time t, which is taken as a proxy for the producer price index in Pakistan.
- $INSTQ_t$ indicates an institutional quality index score for the country
- $INSTQ_t^2$ indicates the squared term of institutional quality score to track the linearity of the relationship between variables of the study.
- $lnRP_{t-1}$ relative average price growth rate of goods, exported every year by SMEs in Pakistan.
- $INVFC_t$indicates the investment facilitation taken from Pakistan economic survey.
- $\mu_t$is the error term

The data is first tested against all the required diagnostic, which indicates that some variables are stationary at a level and some at stationary at first difference. The literature suggests ARDL for time series data, panel data, and cross-sectional data in this type of situation. This model is the best fit suggested, for available data. The study has used Unite root test to determine level integration and stationarity of the data, which is followed by the tests for autocorrelation Augmented Dicky Fuller and Variance Inflation Factor test for multi-collinearity in the data. The study conducted used the autoregressive distributive lag ARDL Bound testing method to explore the long-run as well as the short-run association between institutional quality and trading performance of SMEs in Pakistan. The study has used a nonlinear ARDL because the association between institutional quality and trading performance of SMEs is predicted as non-linear in long run in the current study. The justification for the ARDL approach as previously discussed, the study has used this model because the integration of data

variables is not at the same level but different level. However, no variable was stationary at the second difference.

5. Results and discussion

This chapter includes the descriptive statistics of selected variable, empirical results of given variables in the short-run as well as the long-run, and finally some graphs and tables which supports the results of the study with respective objectives of the study. The study first explains the descriptive statistics with both statistical and economic interpretations, followed by the interpretation of empirical findings.

5.1 Descriptive statistics of institutional quality indicators

The results shown in table 5.1 of the study indicate that the average score of internal conflicts in Pakistan is comparatively high, which indicates a weak institutional quality indicator as the frequency of internal conflict is high enough in Pakistan. The quality of governance in Pakistan is moderate, which can increase to 4 points at maximum. The corruption score indicates a slightly higher than moderate corruption rate. High law and order score indicates a bad situation in the economy and Pakistan, the index score indicates that the law-and-order situation has exceeded the moderate threshold of 3.00 over the last few years on average and it is not a good sign for a developing economy. The last indicator of ethnic tension indicates that in Pakistan ethnicity has been a little bit brutal to each other, where the frequency of tensions remains above the moderate level.

Table 5.1 institutional quality disaggregated scores on average from 1990-to 2019

Ds	Internal Conflicts	Bioethical Quality	Corruption	Law and Order	Ethnic Tensions
Mean	9.4	2.5	3.1	4.07	4.10
Median	9.91	2.5	3	4	4.5
Maximum	12	4	6	6	6
Minimum	1	0	0	0.5	0
Std. Dev.	1.96	1.0	1.36	1.4	1.3

5.2 Descriptive statistics on SMEs distribution across provinces in Pakistan

The results shown in table 5.2 of the study show the distribution of SMEs across different provinces of Pakistan, where Punjab has the highest percentage of SMEs enterprises comparatively in Pakistan. A total of 55 percent of SMEs are found in Punjab province, which is because of the high population and other opportunities. An interesting outcome is that Punjab SMEs contribute 47 percent to the trade volume but ironically lower as compared to the percentage of SMEs working in the province. The efficiency of Punjab SMEs is still a question mark for many policymakers, but drawbacks are mostly reported from SMEs in South Punjab, which has problems accessing major exporters in the national markets.

Khyber Pakhtunkhwa is holding up to 19.2 percent of total SMEs in Pakistan, with a total trade contribution of 18 percent. The data shows that KPK SMEs have also lower contributions as compared to shareholding in the market. It is argued that northern areas like Chitral, Waziristan, and other remote areas find it hard to access exporters at reasonable prices, and high-quality handicrafts are made in these areas, which can be exported to many countries. The example of a handicraft design made by a girl from district Chitral in KPK was selected in the international fashion show, which can be taken as a piece of evidence for the export quality but away from the markets. These types of communication issues restrict SMEs to access the right place to get the right price and thus, remained undervalued in most cases. The SMEs growth in Baluchistan is stagnant for the last few decades and remains the second-lowest in the country. Only 5.7 percent of SMEs are recorded from Baluchistan, but the trade contribution of these

five percent SMEs is almost double the ratio of their market share. 10 percent of traded goods are coming from SMEs in Baluchistan. The secret behind the success of SMEs in Baluchistan is access to borders directly and most of the goods are still traded illegally in these areas around the Iran border and other adjacent countries' borders from Baluchistan.

Sindh owns 17 percent of SMEs directly established inside Sindh province. Out of 17 percent, SMEs more than 70 percent of SMEs are established in one city of Sindh known as Karachi. The city of combined eight districts in a row makes it the biggest city of Pakistan, which is a hub for business in terms of access to roads and waterways as well as to air transport. These factors have made it possible that fewer shareholder has a higher contribution to the trade. It is easy for Sindhi communities to transport goods to other countries at a low cost and gain higher prices in return. Gilgit Baltistan has the lowest percentage of SMEs but the most effective SMEs in Pakistan in terms of trade contribution. These SMEs from GB are mostly home base SMEs, producing verities of products, especially Fruits fusions and Handcrafts. The share in the trade market for GB SMEs is higher than the percentage of SMEs owned by GB province, however, it is still in the making stage, it will get flourished in a short period because of its efficiency and hardworking labor force. The distribution of SMEs in Pakistan is changing over time due to the increasing opportunities and redistribution policies of the government of Pakistan.

Table 5.2 provinces wise distribution of SMEs in Pakistan

Province	Percentage of SMEs owning	Trade contribution as a percentage
Punjab	55	47
KPK	19.2	18
Baluchistan	5.7	10
Sindh	17.0	19
GB	3.1	6

5.3 Results for the unite root test

The results shown in table 5.3 indicates unite root test at level, first difference, and second difference. The results of the study indicate that SMEs' trade growth, industrial GDP, and Cop are integrated at *1(1)* and real exchange rate and institutional quality are integrated at order zero *1(0)*

Table 5.3 unite test results for Augmented Dickey-Fuller

Variable	Level	First difference	Second difference
SMEs Trade Growth	-3.034	-3.042	-3.034
Industrial Gdp	-1.348	-4.392	-1.348
Exchange Rate	-3.627	-3.390	-3.389
Cop	-5.628	-5.892	-5.002
R-Prices	-1.287	-1.892	-1.282
Inst-Qu	-2.971	-2.963	-2.987
Inv-Fc	-1.893	-1.633	-1.276

5.4 Results for the Long Relationship between Institutional Quality and SMEs Trade Growth

The results shown in table 5.4 of the study indicate there exists a statistically significant relationship between own lag terms and SME trade, which means the positive variation in SMEs trade growth is partially explained by their past years' values. However, the other lag values of the dependent variable do not explain statistically significant variation in SME trade growth. Industrial Gross domestic product is positively and significantly associated with SMEs growth. In other words, SME growth increases with an increase in industrial GDP. The industrial GDP is an indicator of SME production capacity. An increase in production capacity will lead to an increase in SME contribution toward Trade accounts in the economy of Pakistan. All lag value indicates past years' values which are statistically significant with P. value less than 0.05 and t statistics greater than 2.00.

SMEs trade growth is negatively associated with exchange rate fluctuations, which indicates the risk associated with uncertainties in macroeconomic indicators of the economy. The relationship between SME trade growth and the Exchange rate is negative and significant with the current year value of the exchange rate in Pakistan. This indicates the theory of money value and purchasing power parity. An increase in the exchange rate means the value of Pakistani rupees has increased, which reduces the demand for SME goods because exports become more expensive with the growing price of the currency. SMEs trade growth in the current year is certainly associated with the Cost of production but statistically insignificant for the rest of the lag years. This indicates that the producer price index increase will decrease the trade contribution of SME but statistically the relationship is not significant other than the current values of COP in the case of Pakistan. An increase in the cost of production leads to high prices and reduces the demand for products in competitive market economies. The results shown in table 5.4 indicate that Institutional quality and SMEs trade are statically associated. An increase in institutional quality score increases the SMEs trade growth initially as we can see the linear term of institutional quality is significant and positively affecting the SME trade growth, but the square term of the institutional quality indicates a negative sign of coefficient, which mean very strict institutions are not good for SME trading contribution in Pakistan. Initially, it helps SME to access loans and compete in the market but after reaching a certain limit of quality, strictness, and control the small enterprises cannot afford to meet certain requirements of the international market. Relative prices indicate positive linkages with SMEs trade growth. The results indicate that increase in relative prices of SMEs products in foreign markets or export markets encourages SMEs to trade a higher volume of goods to receive higher economic returns. Investment facilitation positively affects the SMEs trade growth because access to financial support enhances the production efficiency of SMEs. Investment facilitation is a specific incentive for SMEs as a result of which SMEs can adopt new technologies and techniques to improve the skills and productivity of the labor force as well as machinery at work.

Table 5.4 Empirical results

Dependent Variable: SMEs Trade Growth)
Method: ARDL
Model selection method: Akaike info criterion (AIC)
Selected Model: ARDL (4, 4, 4, 4, 4, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SMEs Trade Growth) (-1)	-0.839897	0.2151	-3.903145	0.0598
SMEs Trade Growth) (-2)	-0.003789	0.2712	-0.013967	0.9901
SMEs Trade Growth) (-3)	0.705574	0.2351	3.144956	0.0880
SMEs Trade Growth) (-4)	-0.931841	0.2142	-3.488183	0.0733
Ind GDP	5.956765	2.4695	2.426489	0.0360
Ind GDP (-1)	7.338705	3.6805	5.030795	0.0094
Ind GDP (-2)	6.047605	4.6005	7.312003	0.0199
Ind GDP (-3)	0.000183	3.7705	4.849017	0.0400
Ind GDP (-4)	0.000180	5.5305	3.248494	0.0831

Exchange Rate	-0.000128	4.3005	-2.974154	0.0069
Exchange Rate (-1)	-0.000118	5.7805	-2.044822	0.1775
Exchange Rate(-2)	7.198905	7.7605	0.926866	0.4518
Exchange Rate(-3)	0.000208	6.2005	3.348294	0.0788
Exchange Rate(-4)	0.000193	8.3905	2.296620	0.1485
COPt	-2.094590	1.9786	-3.191480	0.0033
COP (-1)	-16.26505	1.8948	-0.509901	0.6608
COP (-2)	-52.39626	2.0257	-0.988095	0.4273
COP (-3)	-48.44868	1.6661	-0.937808	0.4473
COP (-4)	-11.33715	1.8945	-0.517738	0.6562
INSQU	1.040644	0.009180	4.427504	0.0474
INSQU (-1)	1.009747	0.011554	-3.843626	0.0577
INSQUsq	-0.003285	0.015510	-0.211786	0.8519
INSQUsq (-1)	-0.039886	0.018894	-2.111015	0.0692
INSQUsq (-2)	-0.050034	0.011276	-4.437231	0.0872
R-PRICE (-1)	0.319458	0.262594	1.216545	0.3479
R-PRICE (-2)	1.003041	0.228697	4.385902	0.0483
R-PRICE (-3)	0.327270	0.175183	1.868167	0.2027
INV-FC	2.202202	0.133899	4.510109	0.0001
INVFC (-1)	1.645483	0.330640	4.976656	0.0381
R-squared	0.999981	Mean dependent var		62.78258
Adjusted R-squared	0.999709	S.D. dependent var		29.69254
S.E. of regression	0.506286	Akaike info criterion		0.606698
Sum squared resid	0.512651	Schwarz criterion		1.948170
Log likelihood	19.59619	Hannan-Quinn criter.		1.043984
Durbin-Watson stat	2.659170			
*Note: p-values and any subsequent tests do not account for model selection.				

5.5 Long run results in a bond test setting

The results shown in table 5.5 of the bound test indicate that variable of the study's independent variables and SME trade growth are bounded together in long run in the presence of good institutional quality in Pakistan. The results indicate the associated equilibrium is statically significant in the case of institutional quality and SME trade growth. Thus, we confirm that there exists a long-run relationship between SME trade growth and institutional quality growth in Pakistan.

Table 5.5 Long-run hypothesis testing

ARDL Bounds Test Included observations: 38: Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	1.663964	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	1.81	2.93
5%	2.14	3.34
2.5%	2.44	3.71
1%	2.82	4.21

5.6 Short Dynamic between SMEs Trade Growth and Macroeconomic Indicators of Pakistan

The results of the study shown in table no 5.6 show a short-run relationship between SME trade growth and given variables, including industrial GDP, exchange rate, cost of production, relative prices,

investment facilities, and institutional quality in Pakistan. The results indicate that there exists a positive and statistically significant relationship between SME trade growth and industrial GDP in the short run. The current year value of the exchange rate is not significantly associated with SMEs growth, but lag values are reallocating SMEs' trade growth in the case of Pakistan. Cost of production doesn't reallocate the SMEs' trade growth in Pakistan because in the short run producer can stretch up to break-even points to run the industry, where the firm earns only fix costs and opportunity costs for owners. All other variables except institutional quality do not affect the SME trade growth in Pakistan. Neither direct values of institutional-quality growth nor squared term of institutional quality growth is significant in the short run but in long run, these variables are significant in the case of Pakistan.

Thus, it is confirmed that the effects of institutions can be captured in the long-run analysis, in terms of SME trade growth and further linkages in Pakistan. The R-value indicates the model is a good fit in the combination of these variables for the short run as well as long-run estimation in the case of Pakistan. Besides these facts, it is surprising that institutional quality in the short run also indicates a weak significant and negative association with SME enterprise trade growth in the case of Pakistan.

Table 5.6 Short Dynamic between SMEs trade growth and macroeconomic indicators

Dependent Variable: SMEs Trade Growth) Method: ARDL Included observations: 32 after adjustments Maximum dependent lags: 4 (Automatic selection) Model selection method: Akaike info criterion (AIC) Selected Model: ARDL(2, 3, 0, 4)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D SMEs trade growth	0.393291	0.171424	2.294259	0.0333
Ind DGDP	0.601038	0.173588	3.462451	0.0026
Ind DGDP (-1)	1753334.	1509271	1.161709	0.2597
D-EXCHANGE RATE	54458728	16183844	3.365006	0.0033
D-EXCHANGE RATE (-1)	-1.074372	32084561	-3.329067	0.0035
D-COPT	55145156	17712497	3.113347	0.0057
DR-PRICES	-125144.2	58758.03	-2.129823	0.0465
DR-PRICES (-1)	-2464230.	954260.3	-2.582345	0.0183
DINSQUL	117831.0	924719.9	0.127423	0.8999
DINSQUL (-1)	-630381.6	927945.7	-0.679330	0.5051
DINSQUL (-2)	-1094179.	831645.1	-1.315680	0.2039
INSQUL (-3)	-1552824.	793086.4	-1.957951	0.0651
C	74029243	49768462	1.487473	0.1533
R-squared	0.972619	Mean dependent var		98187207
Adjusted R-squared	0.955325	S.D. dependent var		25535078
S.E. of regression	5397182.	Akaike info criterion		34.13186
Sum squared resid	5.534364	Schwarz criterion		34.72731
Log likelihood	-533.1097	Hannan-Quinn criter.		34.32923
F-statistic	56.24233	Durbin-Watson stat		2.137805
Prob(F-statistic)	0.000000			
*Note: p-values and any subsequent tests do not account for model selection.				

5.7 Error Correction Mechanism representation for given ARDL

The results of the study shown in table 5.7 indicate an error correction mechanism. This result indicates error correction, where the study has applied major diagnostic tests but there is no evidence for serial correlation, Autocorrelation, and heteroscedasticity in the data. There is a significant long-term association between the given set of variables. The value of coefficient -0.691 indicates that deviation from the long-term equilibrium is corrected by 69% approximately over each year

Table 5.7 Error correction mechanism

Variable	Coefficient	T value	P value
Intercept	1.20	2.3	0.0032
SMEs Trade Growth	0.37	3.7	0.0021
Industrial Gdp	1.82	4.3	0.0005
Exchange Rate	-3.89	-6.8	0.0000
Cop	1.86	2.1	0.0092
R-Prices	-12.32	-5.6	0.0000
Inst-Qu	10.79	-4.2	0.0000
Inv-Fc	8.26	3.3	0.053
ECM	-0.69	-4.3	0000
R square	58.83	Akaike Info Criterion	13.62
Adjusted R square	54.78	Schwarz Criterion	10.42
Durbin Watson	1.98	F-statistic	7.28

5.8 Major findings

- SMEs in the Punjab region are contributing a significant volume of trade followed by Sindh and KPK in Pakistan. The high density of the SME population makes it easy to transport goods and services at a lower cost to buyers, which increases the efficiency of the sector from this specific region.
- The effects of institutional quality on trade performance of SMEs Enterprises have dominated in long run compared to short-run coefficients. In the long run, institutional quality is effective to increase the growth of SMEs in Pakistan but nonlinear results indicate that the EKC hypothesis is valid in the case of Pakistan.
- GDP in long run has significant implications for SME trade in Pakistan
- Lag values of Relative prices are encouraging to SME Trade in Pakistan in both the long run as well as in the short run but the current value of R prices is negatively associated with the trading performance of SMEs but weakly significant, which can be also interpreted as partially significant.
- Cost of production is negatively associated with SME trade in Pakistan, which means increasing the cost of production does not spare incentives for producers to supply in the international markets.
- Current exchange rate is positive but not statistically significant but the exchange rate of last year is significant and negatively associated with SME trade in Pakistan.

6. Conclusion

The study conducted a time series analysis to examine the relationship between SMEs growth and other macroeconomic indicators of Pakistan. The major concern of the study is to see how long institutional-quality growth is improving SME growth and trade in the international markets, which ultimately increases the economic growth in Pakistan. The study used ARDL bound testing technique and found that the long-run relationship is significant but in the short run SME trade doesn't respond to the changes in most of the given indicators but only a few instruments are effective in the short run in the case of Pakistan. The relationship between SME trade growth and institutional quality is a major concern, which indicates that institutional development is a long-term phenomenon, which takes years to develop and

the impact of such development cannot be effectively captured in the short-run for specific economic activities.

Cop of production in the short run doesn't reallocate the SMEs trade because trends of trade growth in the SMEs sector are flexible enough to absorb the shocks. But staying in losses for the long run would revise the decision of trading for most of the SMEs in Pakistan. SMEs continuously operate till the time, where the marginal cost of production is equal to the marginal revenue. In the long-run average cost of production increases from the average revenues due to continuous losses, which decrease the production of SMEs and reduces the trade of SMEs products. On the exchange rate, the study found that keeping the exchange undervalued can help the economy to increase the exports of SMEs in Pakistan. Investment facilitation has established positive implications for the SMEs sector in Pakistan which seems helpful for the trade growth of SMEs in the short as well as in long run. The study thus concluded that Economic growth through SMEs can be a feasible policy for Pakistan, but these influencing factors should be improved over the years to let the SMEs sector grow in international markets. SMEs enterprises are the backbone of Pakistan's trade sector and growth in this sector can be reallocated through improvement in the quality of institutions in Pakistan.

There are certain policy implications, which can be seen for future economic growth led by the SMEs sector in Pakistan.

- The study findings suggest that institutional quality growth has to be in the priorities list to be seen specifically for the ease of doing business and compensation to small businesses. Institutions can create boundaries to limit the role an effective SMEs and expand the role of efficient and effective SMEs in the trade sector.
- On exchange rate the price of currency should be undervalued intentionally to keep the export-led hypothesis in action for a long period and SMEs should be considered in a wrangle of currency business.
- On cop of production, I suggest letting the market decide producer behavior because intervention will create a trend which may not be possible to carry up artificially through federal budgets

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Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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