

## AN EXPLORATION INTO THE WOODEN FURNITURE INDUSTRY THROUGH THE THEORETICAL LENS OF PORTER'S CLUSTER- A CASE STUDY OF KHAIRPUR MIRS

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### Abstract

*Furniture industry of Pakistan is considered as one of the high potential yet neglected clusters. This industry is famous for its elaborate wooden carvings on the blocks of Sheeshum and Rosemary. The leading furniture making areas of Pakistan are Chiniot, Gujrat, Peshawar, Lahore and Karachi. However, Pakistan's share in the international wooden furniture market is insignificant, despite the fact that the country has a history of craftsmanship and innovation in the field of wooden furniture. Especially Sindh region which specializes in wood furniture making have not been explored for its potential in increasing the furniture export. Further, there is a dearth of literature pertaining to their geographical clustering as well as the causes of the underdevelopment of interior Sindh's wooden furniture industry. In response to this gap, this case study research a) conducts geographical mapping of Khairpur Mirs wooden furniture industry through GIS, and b) constructs a SWOT Matrix in light of Porter's Cluster Theory on the basis of thematic analysis. The findings highlight that the location of the business units is at Station Road from Khaki Shah pull to Nimm More (approximately 1 km area) with around 150 to 200 furniture houses/ manufacturers. This research identifies the causes of underdevelopment of wooden furniture cluster in Khairpur on the basis of which participant driven solutions are proposed. Finally, this research presents policy recommendations to improve this small scale industry's potential for socio economic growth.*

**Keywords:** Furniture cluster; sheeshum and rosemary; GIS, cluster mapping; SWOT Matrix

### Introduction

Pakistan has great potential to build and revive most of its sectors, which can in turn bring in great revenues. These include the real Estate, furniture, and Automobile Sector. Among these, the most neglected sector is country's furniture industry. The country's share in the international wooden furniture market is insignificant, despite the fact that the country has a history of craftsmanship and innovation in the field of wooden furniture. Therefore, Pakistan needs to tap in to this unexplored sector. Especially Sindh regions which specialize in wood furniture making have not been explored for their potential in increasing the furniture export. Karachi, despite being categorized as a furniture cluster

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does not have any information regarding its operations. Hence, It is imperative to study the furniture firms of Resource rich yet neglected regions of Sindh like Khairpur, in light of Porter's cluster theory which emphasizes on the factors for the formation of a cluster to better understand the working of this cottage industry. Such studies will help creating awareness regarding the modus operandi of wooden furniture cluster and will later help the researchers and policy makers to help suggest and implement their commercialization protocol.

Historically, the novice state of Pakistan was one of the poorest countries in the world and lacked a proper industrial base, with the absence of machinery, infrastructure, technical expertise and consequently no significant industrial or commercial groups to protect themselves or speak in their interest. However, being a naturally agrarian economy, there were few cotton textile mills (cotton and jute were among the primary export items in raw form), sugar mills and a small number of tea processing and cement manufacturing capacity to name a few<sup>1</sup>.

Hence, from early on, the governments and policy makers recognized the need for promoting industrialization for economic growth, and strived for the implementation of sound economic policies and reforms like favorable exchange rate and trade policies which resulted in the decade of development (between 1958 to 1968). Precisely, in this period, agriculture, export, large scale manufacturing and country's Gross Domestic Product growth depicted positive and upward trends. Since then, the Pakistan's manufacturing sector has remained on the path of development albeit at a slow pace. Every government has an agenda towards promotion of industrial development part of which is to create industrial estates out of the major cities of the country. Recent establishment of a few industrial cities in Punjab is a positive action in this direction<sup>2</sup>.

Therefore, the promotion of industries has been a major agenda of developing countries, and Pakistan is no exception. Specifically, labor-intensive industries, such as knitwear, woven products, surgical equipment, footwear, toys, and plastic parts, create substantial employment opportunities and play a pivotal role in reducing poverty<sup>3</sup>. Pakistan is a major Asian player in the garments export market and the garments sector is one of the largest sources of low-cost employment creation<sup>4</sup>. The country has great potential to build and revive most of its sectors, which can in turn bring in great revenues. These include the real Estate, furniture, and Automobile Sector. Among these, the most neglected sector is country's furniture industry which is famous for its elaborate wooden carvings on the blocks of Sheeshum and Rosemary. The wooden furniture industry represents 95 percent of the total furniture market in the country. The leading furniture making areas of Pakistan are Chiniot, Gujrat, Peshawar, Lahore and Karachi. In terms of exports, Karachi comes

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<sup>1</sup> Wizarat, S., *The Rise and Fall of Industrial Productivity in Pakistan*. (Karachi: Oxford University Press, 2002)

<sup>2</sup> Mahmood, K., Ahmed, R., & Jaffri, N., Urban Development and Industrial Clustering in Pakistan: A Study Based on Geographical Perspective. *Journal of Basic & Applied Sciences*, Vol.12, (2016), pp.32-40

<sup>3</sup> Sonobe, T., & Otsuka, K., *Cluster-Based Industrial Development: An East Asian Model*. (Basingstoke, UK: Palgrave Macmillan, 2006).

<sup>4</sup> Memon, A., Pakistan's Knitwear Industry Faces Many Challenges, *Pakistan Textile Journal*, vol. 67(1), (2018), pp.58-60.

first, followed by Lahore and Peshawar<sup>5</sup>. Moreover, a number of households in Hala, Kashmore, Noshero Feroz, Sukkur, Khanewal and Dera Ghazi Khan employ traditional workmanship. Swati furniture, for instance, has broad sets and geometrical floral designs carved in various styles of wood work.

Pakistan's share in the international wooden furniture market is insignificant (approximately \$3 billion) whereas the size of global furniture market is tremendous (around \$600 billion)<sup>6,7</sup>. It is a meager contribution taking in to account that the country has a history of craftsmanship and innovation in the field of wooden furniture. Also, the volume of export can be elevated to \$5 billion and above in the next five years if the government makes its development and promotion a priority. Therefore, the potential of this unexplored sector needs to be tapped.

Especially Sindh regions which specialize in wood furniture making have not been explored for their potential in increasing the furniture export. In particular, despite being categorized as a furniture cluster, there is no published information regarding Khairpur Mirs, operations and issues. Therefore, it is important to determine the spatial location of the Khairpur Mirs' furniture cluster along with its production and value chain process to understand the working of this furniture cluster. Moreover, the obstacles in the development of this cluster also need to be discerned as this will help to draft a road map to improve its performance and contribution in the local economy.

Since they are densely agglomerated in a particular locality, the theoretical lens of Porter's cluster theory is applied which emphasizes on the factors for the formation of a cluster. This perspective will facilitate in understanding the working of this cottage industry<sup>8</sup>. Such studies will help creating awareness regarding the physical location and modus operandi of wooden furniture cluster and will later facilitate the researchers and policy makers to help suggest and implement their development and commercialization protocol.

Therefore, considering above discussion, firstly this study is to identify Khairpur's furniture cluster including the suppliers, manufacturers, and business owners on the Sindh's map (spatial mapping). Once, the physical location of this cluster is determined and reported, the second step is to determine the production process and value chain of this industry. In the third step, SWOT matrix of the furniture cluster is developed on the basis of thematic analysis of interviews. This facilitates in ascertaining the causes of under-development of wooden furniture cluster in Sindh. Finally, policy recommendations are discussed to address the cluster's issues and mitigate their weaknesses and threats meanwhile capitalizing their strengths and opportunities.

However, dearth of secondary data on Sindh's wooden furniture cluster made this research challenging for the researcher. The strength of this work is mainly dependent on the access

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<sup>5</sup> Arifeen, M., Prospects and fears for Pakistan's furniture industry. *The Express Tribune* (2010, June 7).

<sup>6</sup> Ahmed, R., With world furniture trade at \$23.2bn, Pakistan Needs to Tap into This Unexplored Sector. *The Nation*, (2017, July 19)

<sup>7</sup> Ahmad, K., *The Odyssey of Pakistani Furniture Sector*. (Oct 2019), Retrieved from Pakistan & Gulf Economist: <https://www.pakistangulfeconomist.com/2019/10/07/the-odyssey-of-pakistani-furniture-sector/>

<sup>8</sup> Motoyama, Y., What Was New About the Cluster Theory? What Could it Answer and What Could it not Answer, *Economic Development Quarterly*, Vol. 22(4), (2008), pp.353-363

to primary data. Time limitation along with the resistance from the respondents proved to be a daunting task. However, trust building with them through repeated interactions improved the quality of data. The significance of this research is multi-fold; in order to build a case for the development of this sector in a localized context, the study will highlight the furniture cluster of Khairpur Mirs on the country's map. This will formalize and demonstrate its existence. Then on the basis on the perceptions of the business owners/entrepreneurs of this industry, modus operandi of the cluster (production process and value chain) is documented and finally, the challenges are brought to light to be addressed through policy intervention.

## Literature Review

The research relevant to cluster concept has evolved from the philosophy of firm's agglomeration which is the result of four empirical observations regarding the commonalities of a cluster. The common characteristics of interdependent firms include the fact that they were mostly localized in a particular region, by occupying only certain areas. Those companies who work in cluster have higher economic life as compared to isolated firms and the innovation process of clustered firms is more accentuated<sup>9</sup>. This precisely happen due to increased efficiency through reduced financial time, less transportation costs due to being localized in a region, availability of skilled labor force inhabiting nearby areas and easier transfer and flow of information and sharing of technology and infrastructure. Therefore, these firms despite being in competition eventually end up in development of their cluster.<sup>10, 11</sup>

Michael Porter in his book *The Competitive Advantage of Nations*<sup>12</sup> formulated one of the most significant definitions of a cluster as geographical concentration of inter-linked or associated organizations and institutions in a particular industry or connected industries across a district, region or countries. These related and interlinked institutions include suppliers of raw materials, infrastructure providers, spare parts and intellectual services providers, supporting institutions like financial institutions (banks), scientific, educational or research centers<sup>13</sup>. Clusters thrive due to specialization and cooperation at vertical and horizontal level at different production stages. Industries / institutions share their technology, production inputs, infrastructure and even their manpower as a collaborative effort to gain competitive advantage despite presence of a healthy competition. Government also plays a part in the development of clusters through institutions like trade associations, financial companies, universities and technical support.<sup>14,15</sup>

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<sup>9</sup> Malmberg, A., & Maskell, P. The elusive concept of localization economies – Towards a Knowledge-based Theory of Spatial Clustering. *Annual Conference*. (New York: AAG, 1991)

<sup>10</sup> Porter, M., The Competitive Advantage of Nations. *Harvard Business Review*, (1990, March)

<sup>11</sup> Arifeen, M., Prospects and Fears for Pakistan's Furniture Industry. *The Express Tribune*, (2010, June 7)

<sup>12</sup> Khuwaja, J., *Furniture Industry in Pakistan*. Pakistan, (2016)

<sup>13</sup> Njøs, R; Jakobsen, S. E., Wiig Aslesen, H., & Fløysand, A., Encounters Between Cluster Theory, Policy and Practice in Norway: Hubbing, Blending and Conceptual Stretching, *European Urban and Regional Studies*, 24(3), (2017), pp.274-289.

<sup>14</sup> Boja, C., Clusters Models, Factors and Characteristics . *International Journal of Economic Practices and Theories*. Vol.1(1), (2011), pp.34-43

<sup>15</sup> Trigkas, M., Papadopoulos, I., & Karagouni, G., Economic Efficiency of Wood and Furniture Innovation System, *European Journal of Innovation Management*, Vol.15(3), (2012), pp.150-176.

Porter in his writings have explicated the concept of cluster in which he has described them as geographically close or concentrated groups of companies in a similar, complimentary, and supplementary business. These complimentary businesses would include the backward and forward linkages with suppliers, retailers, wholesalers.

Even the customers and the competitors presence required in the porter's theory regarding industrial clusters. So there are two important points in his definition; one is spatial proximity between the firms in the similar, complementary and supplementary business and the other aspect is the horizontal, vertical linkages and relations among those firms along with their support institutions such as governments, non-government organizations industry and academia. Support institutions are necessary because they provide research and development, trainings, education and expertise. The presence and a certain level of interconnectedness among aforementioned entities, in his opinion, leads to lower cost, healthy competition emerging from more competitiveness among firms and innovation within the firms which lead to their increased productivity and performance.

This theory is not completely new or different from the previous theories provided by other researchers but still, it is one of the widely known and discussed in the industrial cluster concept. This is because of Porter's comprehensive, easy and direct style which makes it easier for the students to understand, businesses and firms to apply and policy makers to suggest improvements. Two aspects in his theory which are different from other theories or perspectives included the idea of cluster dynamism and presence of competitiveness among firms in the cluster. First aspect pertains to the idea that the diamond is dynamic instead of static. In essence, it has two meanings: one that firms that cluster, sometimes de-cluster as well and break away from proximity due to various reasons, hence, no state is permanent. The other meaning falls in the domain of their interconnectedness. The relationships and linkages among the clustered firm change over time so cluster is dynamic itself. The second new element was of competitiveness. According to Porter, presence of competitors is also important in the cluster development and evolution by differentiating on the basis of cost or quality.

For more than 20 years, cluster theory has been serving as a foundation for implementation of policies pertaining to regional development in developing countries. Additionally, development projects apply their own understanding of industrial cluster through 'hubbing' and 'blending with other related concepts and this understanding is facilitated by national cluster policies<sup>16</sup>.

One of the related concepts to industrial clusters is small and medium enterprises (SMEs) and well established SMEs are considered as indispensable for the national progress and development. They contribute to the economy by employment creation, poverty alleviation, human resource development and sectoral innovation. On account of the colossal significance of a thriving SMEs sector, government of Pakistan should response, prioritize and focus on its development by drafting comprehensive action plan to make it globally competitive. It needs to address issues like the inaccessibility to global market,

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<sup>16</sup> Njøs, R., Jakobsen, S. E., Wiig Aslesen, H., & Fløysand, A. Encounters between Cluster Theory, Policy and Practice in Norway: Hubbing, Blending and Conceptual Stretching. *European Urban and Regional Studies*, 24(3), (2017), pp.274-289.

HRD challenges like paucity of skilled workforce and dearth of financial assistance, pitiable infrastructure, dearth of entrepreneurial skills, outdated production facilities, low level of capabilities, incompetent workers, a complex taxation system, and difficulties to get loans from financial institutions, and mismanagement of intangible resources<sup>17</sup>.

Furniture industry in Pakistan is categorized as small and medium enterprises wherein production is mainly labor intensive<sup>16</sup>. There has been a moderate influx of literature related to furniture cluster around the world. Various authors have covered multiple dimensions of the operations of the wooden furniture cluster of different regions. For instance, the importance of adoption of innovation practices in the production process as well as staff training and Research and development is discussed<sup>17,18,19</sup>.

Whereas, identification of the active versus in active clusters in the developed economies, has been done by various authors<sup>20</sup> e.g. for Polish furniture cluster, Malaysian furniture cluster (a developing nation cluster) which is termed as low-tech industry is also highlighted to investigate the various types, sources and barriers to innovation in this industry<sup>19</sup>. Moreover, researchers have ascertained various innovation actors and their connections/linkages for technological innovation in this sector<sup>21</sup>.

Moreover, on a fundamental level, cluster profiling and mapping of various regions are also elaborated in the past literature. For instance, the importance of furniture clusters in Poland's economy and their cluster initiatives have been discussed.

The ability of Cottage, Small and Medium Enterprises (CSME) to grow the industrial base and increase the volume of foreign trade has made them a national development priority, especially in terms of moving the country to a more sophisticated manufacturing base. Furniture industry of Pakistan is one such industry of Pakistan which is categorized as Cottage, Small and Medium Enterprises (CSME).

Pakistan has a long tradition in producing traditional style wooden furniture and well known because of its artistic work. This sector is highly fragmented with 85 – 95 % of the manufacturing units belonging to the “Non Organized Sector” with individual and copied design. The furniture sector only makes a marginal contribution to the formation of GDP, representing just a small percentage. Industrial clusters are spread across the country. Gujrat and Chiniot are the larger furniture manufacturing (traditional style) cities,

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<sup>17</sup> Raza, S., Minai, M. S; Zain, A. Y; Tariq, T. A; & Khuwaja, F. M. Dissection of Small Businesses in Pakistan: Issues and Directions. *International Journal of Entrepreneurship*, 22(4), (2018), pp.1-13.

<sup>18</sup> Boja, C. Clusters Models, Factors and Characteristics. *International Journal of Economic Practices and Theories*, (2011)

<sup>19</sup> Trigkas, M., Papadopoulos, I., & Karagouni, G., Economic Efficiency of Wood and Furniture Innovation System. *European Journal of Innovation Management*, Vol.15(3), (2012), pp.150-176.

<sup>20</sup> Mrozek, M., & Herbec, M., Active and Inactive clusters in Polish Furniture Industry: The Industrial Network Approach. *Intercathedra*. Vol.29(3), (2013), pp.85-94

<sup>21</sup> Ng, B., & Thiruchelvam, K. The Dynamics of Innovation in Malaysia's Wooden Furniture Industry: Innovation Actors and Linkages, *Forest Policy and Economics*, Vol.14, (2012), pp.107-118

followed by Karachi, Lahore, Sargodha, Rawalpindi and Peshawar (Sargodha because of Lacquer art work “SILLANWALI”)<sup>22</sup>.

The total clusters that are officially identified or have recorded data include Chiniot, Gujrat, Sargodha, Rawalpindi, Peshawar, Lahore and Karachi. The only cluster documented from Sindh province is Karachi with little data of the pertinent companies. The rest of the furniture market is not been studied or documented in a systematic way.

Only one report titled “Furniture Pakistan” by Pakistan Industrial Development Corporation (PIDC) mentions the wooden furniture sector of Mehrabpur and Haala from Sindh which in reality offer unique and original wooden furniture designs. This problem signifies lack of exposure, commercialization and lack of government support towards the wooden furniture cluster of Sindh<sup>23</sup>.

Moreover, Gujrat wooden furniture cluster is the only documented wooden furniture cluster of Pakistan and it is an initiative of Small and Medium Enterprise Development Authority (SMEDA). According to a report, Cluster Profile: Wooden Furniture Cluster Gujrat, (2010), sale of furniture per year from Gujrat is approximately \$50 million with a growth rate of around 10%. Moreover, it is consisted of approximately 350 units and provides employment opportunities to more than 8000 labor. The type of cluster integration which Gujrat cluster exhibits is vertical integration (backward and forward linkages) and furniture is sold in both finished form and also in semi-finished state. Much of the production is consumed locally. Among the leading exporters include United Kingdom, United States of America, Saudi Arabia and the Middle East which is in total estimated at \$4.5 million. Despite its contribution in the economy, there is reportedly no specialized furniture training institute in Gujrat with the exception of a small wood working service centre. This also reflects that it is mostly the inherent instead of acquired skill and craft of the people which dominate in the wooden furniture industry case<sup>24</sup>.

This also reflects that it is mostly the inherent skill and craft of the people which dominate in the wooden furniture industry case<sup>25</sup>. Further, due to government’s apathetic attitude, businessmen and entrepreneurs attached with this industry face issues leading to abysmal export status of quality furniture. Resources are scarce and competition is tough due to

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<sup>22</sup> Nizialek, I. The importance of furniture clusters in Poland, *Forestry and Wood Technology*. Vol.83, (2013), pp. 275-278

<sup>23</sup> Khuwaja, J., *Furniture Industry in Pakistan*. Pakistan, (2016)

<sup>24</sup> Dasanayaka, S., & Sardana, G., Development of Small and Medium Enterprises through Clusters and Networking: A Comparative Study of India, Pakistan and Sri Lanka . *International Journal in Economics and Business Administration*. Vol.3(2), (2015), pp.84-108

<sup>25</sup> Qureshi, M. F., Kamran, A., Khan, M. A., & Desai, M.A., *Factors Affecting Furniture Purchase in Pakistan*. In *International Conference on Management Science and Engineering Management*, Springer, Cham, (2020), pp. 32-47

influx of Chinese furniture<sup>26</sup>. Small and Medium Enterprises Development Authority can issue matching grant to furniture industry on a priority basis to support the industry.<sup>27,28</sup>

The organizations and associations which are relevant to furniture industry for its development, commercialization and export include Furniture Pakistan Company (FPC) 2007, Pakistan Furniture Council (PFC) 2011, All Pakistan Furniture Export Association (APEFA) 2008, All Pakistan Furniture Maker Association (APFMA), and Pakistan Industrial Development Corporation whereas no data is present on the regional associations for furniture and statistics are missing on total number of manufacturing units, furniture show rooms and total number of furniture exporters. He also asserts that although above mentioned institutions are working towards the progress but their efforts have yet to bear fruit.

Moreover, the training institutions in this domain include Swedish Institute founded in 1957, Karachi (not offering any furniture related course currently), Pak German Woodworking Institute established in 1971, National College of Arts provide diploma and degree level courses and running national level furniture Design and manufacturing program.<sup>29</sup>

There is a paucity of scholarly or managerial literature till date regarding furniture clusters of Pakistan, their geographical location and their issues. Only few relevant studies on the profiling of wood-based furniture industry cluster are published in the context of Pakistan which are in the form of reports and they focus on the Punjab region like Chiniot and Gujrat<sup>30</sup>. No literature in the form of reports, articles or books discuss the wooden furniture cluster of Sindh region with the objective to address their issues and promote their development and exportability.

### **Theoretical Framework**

The operations of the interior Sindh's furniture sector will be applied and tested on the following model by Michael Porter to officially categorize the industry as cluster. This documentation helps to conduct the SWOT analysis of furniture sector and identify ways to improve its potential performance.

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<sup>26</sup> Dawn, *Govt Urged To Support Furniture Industry*. Retrieved from Dawn, (2020, March 20), <https://www.dawn.com/news/1542262>

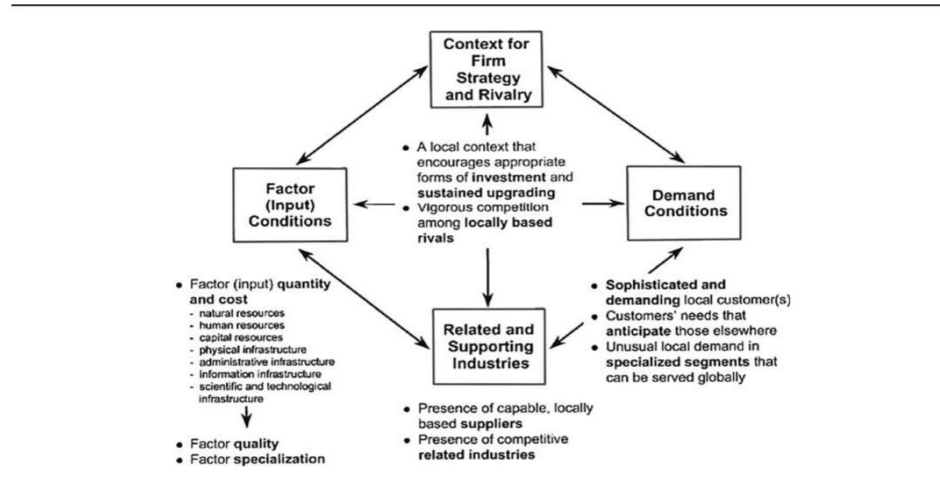
<sup>27</sup> Nation, T., *Govt Asked to Resolve Issues of Furniture Industry*, Retrieved from The Nation: <https://nation.com.pk/20-Mar-2020/govt-asked-to-resolve-issues-of-furniture-industry>

<sup>28</sup> Iqbal, K. *Furniture Industry in Pakistan and its Export Status*. (Lahore: 2016)

<sup>28</sup> SMEDA. *Cluster Profile: Wooden furniture Cluster Gujrat*. (Lahore: Small & Medium Enterprise Development Authority)

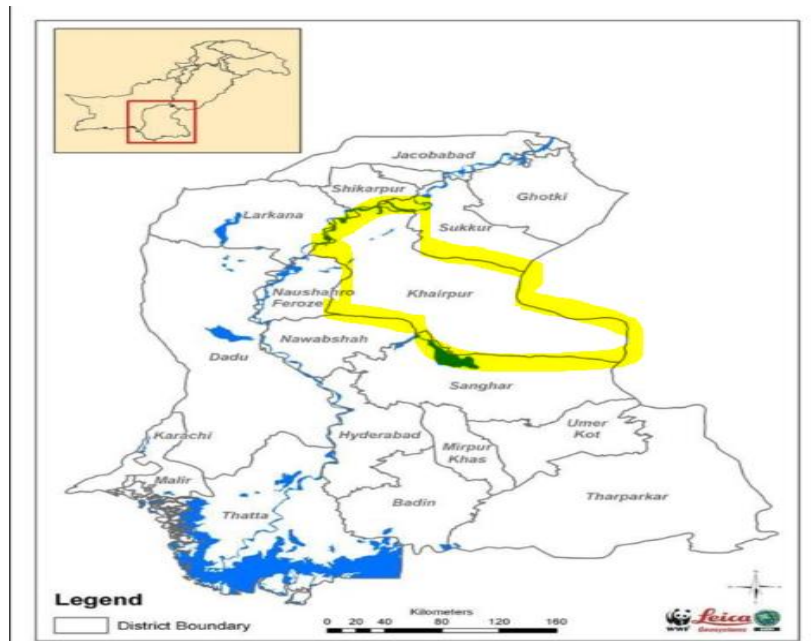
<sup>30</sup> *Furniture Pakistan*, (Lahore: PIDC, Ministry of Industries and Production)





Source: Locational Competitive Advantage Based on Diamond Framework by Michael Porter

If all these conditions are met for the wooden manufacturing firms of Khairpur, then we can proceed to conducting their SWOT Analysis to ascertain the causes of under-development of wooden furniture cluster in Khairpur.



Source: Map of study area © GIS lab, WWF-Pakistan (Khan, 2011)

## Research Methodology

### Khairpur, the selected Region and historical trends

The district of Khairpur is located in the upper region of the Sindh province and occupies a prominent place in the history of subcontinent. Dating back to 5000 BC, the ancient Kot Diji is one of the oldest civilizations known to man<sup>31</sup>. It has produced some of the finest crafts in Pakistan, a few of which are still produced today. In Sindh province, Khairpur district is 3<sup>rd</sup> and 5<sup>th</sup> largest in terms of area and population (2.4 million people as of 2017) respectively. Khairpur is known for its rich heritage which reflects itself in the physical infrastructure like monuments and buildings. In the initially years of the formation of Pakistan, it flourished industrially including textiles, leather and leather related goods, silk, cigarettes, match boxes, toiletries like soaps, footwear and carpet weaving. Also, it has been an exporter of date called Khaark. After death of Quaid e Azam, the state lost its independence and much of its glory<sup>32</sup>. Khairpur complies with the criteria for selecting the region because the local furniture sector has a long tradition but need to be revitalized and there is a market for the crafts that must be evaluated in terms of its operations. Since, Khairpur is also home for Pakistan's first industrial park, (Khairpur Special Economic Zone) with SEZ status under SEZ Act, 2012 which is yet to be materialized. An investigation in to the wooden furniture network of Khairpur is beneficial for the industry as it can also be included in SEZ setting based on its importance<sup>33</sup>. Furniture cluster in Khairpur is established at Station Road from Khaki Shah pull to Nimm More (approximately 1 km area) where around 150 to 200 furniture houses/ manufacturers are located. All kind of furniture is prepared on general as well as customized/made to order designs.

### Case study as a method and Methodology

In the last four decades, case study research has witnessed an ample development on methodological front. Such progress and development has resulted in a research approach which is flexible and capable of providing an in-depth knowledge of a wide array of issues across a broader set of disciplines. Such flexibility has emerged from historical evolution and the researcher's own reflexivity, theoretical lens, assumptions and his/her preferences to approach a case<sup>34</sup>.

This research takes the form of a case study since the researcher is exploring the dynamics of wooden furniture industry as an Industrial cluster in the Khairpur city. Therefore, the context is Khairpur city, which is one of Taluqas of Khairpur district. The Taluqas include Khairpur, Nara, Kot Diji, Sobho Dero, Mirwah, Kingri, Faiz Ganj and Gumbat and they fall under Sukkur division<sup>35</sup>.

<sup>31</sup> Khan, W. *Distribution and status of Hog Deer (Axis porcinus) in Indus Eco Region, Pakistan*, (Pakistan Wildlife Foundation, 2011)

<sup>32</sup> Agha, A., History of Khairpur and the Royal Talpurs of Sindh. *Daily Times*, (2018, April 22)

<sup>33</sup> Razi, S., No Progress So Far on Khairpur Special Economic Zone. *Daily Times*, (2017, June 21)

<sup>34</sup> Harrison, H., Birks, M., Franklin, R., & Mills, J., Case Study Research: Foundations and Methodological Orientations. *Forum: Qualitative Social Research*, (2017)

<sup>35</sup> *District Government Khairpur Profile*. (2008), Retrieved November 07, 2018, from District Government Khairpur: <http://www.khairpur.gos.pk/history.asp>

This study calls for considering case study as a methodology as well as method. Methods are the techniques used in the research whereas these techniques are informed through the lens of methodology which includes the theoretical perspective<sup>36</sup>.

Furthermore, the case study experts advocate that an over arching methodology forms a case study design which warrants for the use of both qualitative as well as quantitative methods in their research design<sup>37,38,39</sup>.

### Research Questions

The research questions and their proposed analytical techniques are as following:

**Question 1:** What is the location of the wooden furniture cluster of Khairpur city?

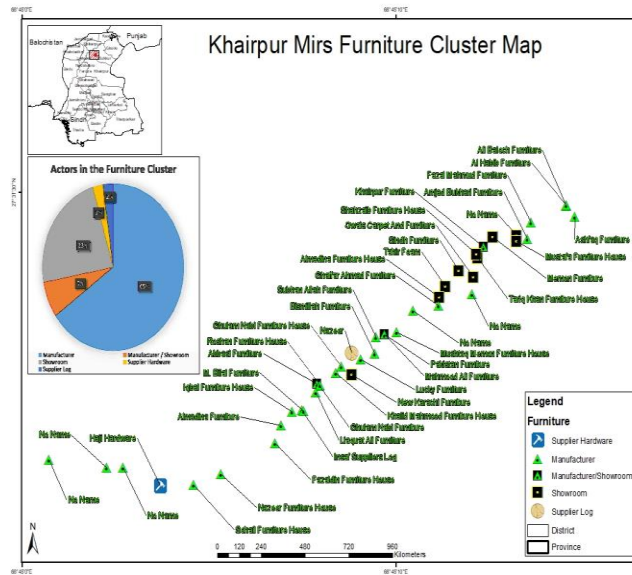
**Question 2:** What is the production and value chain process of the Khairpur furniture industry?

**Question 3:** What the causes of under-development of wooden furniture cluster in Khairpur are as ascertained through strength-weakness-opportunity-threat matrix?

Sampling for data analysis is non-probability and the techniques applied in drawing the sample would be purposive and snow-balling.

### Analysis

RQ1: What is the location of Furniture cluster in Khairpur Mirs?



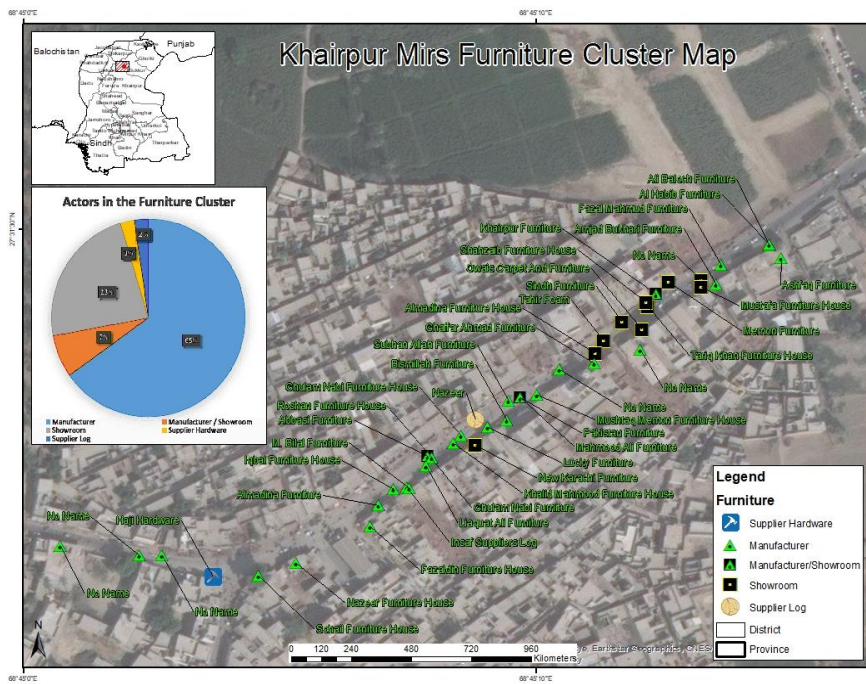
Source: Map 1 generated from GIS tool on the basis of primary data

<sup>36</sup> Mills, J., & Birks, M., *Qualitative Methodology: A Practical Guide*. (Sage, 2014)

<sup>37</sup> Merriam, Sharan B., *Qualitative research: A Guide to Design and Implementation* (2nd ed.). (San Francisco, CA: Jossey-Bass, 2009)

<sup>38</sup> Stake, Robert E., *The Art of Case Study Research*, Thousand Oaks, (CA: Sage, 1995)

<sup>39</sup> Yin, R. K. *Case Study Research: Design and Methods*. (Beverly Hills, California: Sage Publications, 2014).



Source: Map 2 generated from GIS tool on the basis of primary data

**Q2: What is the production and value chain process of the Khairpur furniture industry?**

Wood for the logs from the forest or from government → Lumber Traders → Raw material for the furniture (logs) → Furniture maker/manufacturer → Planks are made from the log → Drying of the flat timber (planks) → Middle man / Showroom owner → Specifications, carvings are designed → Joining / Assembling of the parts → Machining/Finishing/polishing → Selling to consumer.

**Q3: Causes of Underdevelopment on the basis of themes Analysis of furniture cluster:**

There were 06 interviews that were conducted from the manufactures with or without showrooms, and middle men/ dealers with showroom. The decision regarding how many interviews to be conducted from each category was guided by Creswell (2008) who suggested for interviews between 5 and 25 and Yin (1994) who gave the minimum number to be 6 and also suggested to go for point of saturation, an idea endorsed by Yin, as well as Glaser and Strauss (1967).

On account of above transcription following themes have emerged:

### **1. Survivalist Cluster:**

Khairpur Wooden furniture cluster matches the profile of a survivalist cluster which is working like Marshall's agglomerated districts instead of Porter's dynamic diamond shaped cluster with strong linkages among firms and their supporting institutions. No efforts are made for their development by the firms themselves or the government and policy making institutions. They exist merely because of an unsustainable endowment like availability of natural resources or skill base. In this case firms are in furniture business because the owners only have artisanship or carpentry skill as it is passed on from their fathers or grandfathers to them. Education level is primary for the poor manufacturers with a shop (and not a proper showroom). With little investment, education and alternative skills, they don't have prospects either to switch to different business or improve their current business. Generally speaking this weak cluster is functioning without much effort by the stakeholders. Moreover, the demand is seasonal in most cases and it is usually active in winter seasons (on account of eids, weddings and for some businesses even Rabi ul Awwal has demand).

### **2. Perceptual Variations based on Business identities.**

Manufacturers with a sweatshop with low investment, 2 or 3 workers and approximately Rs. 25000 to 30,000 earning consider their businesses to be part of dying cluster. The multiple field surveys also point to this fact that around 60% of units fall in this category. Middle men with multiple shops in the furniture market have positive experience and better opinion of the business, that it helps them to sustain if not grow in profits and financial stability. They buy items in bulk form big cities of Sindh, add value and then sell in the local market and there demand is more as compared to the aforementioned entities. Then come the established business men who get orders in bulk especially who have diversified in to school/office clientele. Their experience is best among the three categories. The source their material, hardware and semi finished items from not only Sindh but also other parts of the country especially Punjab. So they have better linkages in terms of material and knowledge.

### **3. Dearth of Vocational training and support institutions.**

No wood banks so lack of steady supply of raw material (logs) to manufacturers specially those who make from the scratch and their entire production process and value chain is local (within Khairpur).

Wood banks are pantries; they are the programs and storages for the sustainable provision of wood for their business. Also, there are no functional technical training institutes at Khairpur. The institutions like IBA and SZABIST offer various diploma courses excluding vocational or carpentry courses or diploma. No seasoning factories are there so wood/logs have to be sun dried. This process is time consuming and if logs are not properly dried, the quality of furniture is affected.

#### 4. Thriving through External Linkages

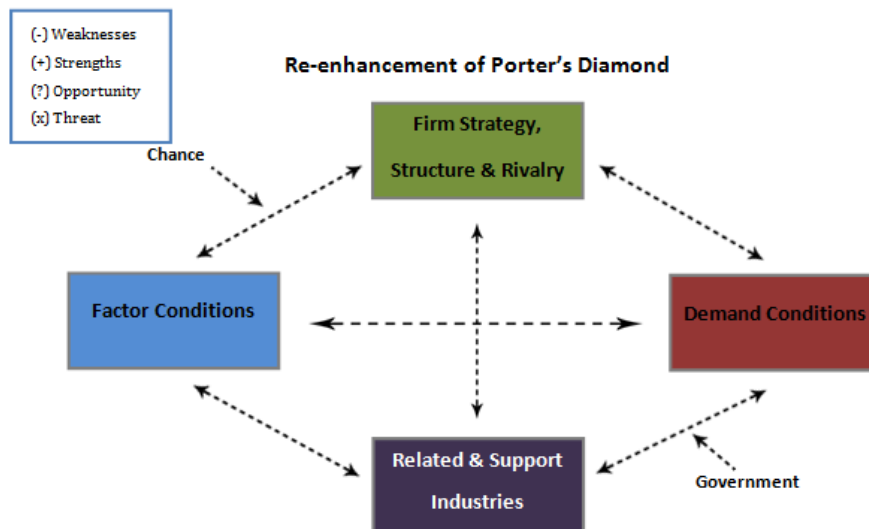
Those firms which source their materials from Sindh and Punjab, tend to have comparatively profitable business. They have more awareness regarding recent trend in the furniture (in-flow of knowledge), smooth production and value addition process because they have alternative supply sources. So linkages within and outside the cluster helps in the sustaining, even thriving of clusters, as depicted by sources of locational advantage theory and optimization of value chain.

#### 5. Government Apathy

Government is totally oblivious of the local industrial clusters and there are no policies at the regional or national level that can help the weak or poor clusters. Here, the problem lies with the lack of investment for many furniture units and government has not helped in the promotion of the businesses through provision of customized lending programs like in the case of Chinot. Cluster friendly policies do not make part of the industrial policies of the country that is why they are being neglected. Even the representative institutions like Chamber of Commerce and Industries do not reach out to them for the resolution of their problems or at least forward their concerns (like load shedding, inflation, lack of investment, protection to local industry) to the provincial governments.

The weaknesses and threats inform as to why the survivalist cluster is struggling and also they are more in quantity and magnitude as compared to the strengths. These depictions are the result of interview findings:

#### Application of Porter's Diamond on the furniture market through SWOT Analysis:



Source: Authors' application of Porter's diamond on furniture cluster

(-) Weaknesses (+) Strengths (?) Opportunity (x) Threat
<b>Firm Strategy, Structure &amp; Rivalry</b>
<ul style="list-style-type: none"> <li>• (-) Lack of any clear direction or strategy</li> <li>• (?) Structure is flat, organic</li> <li>• (-) Weak &amp; non-productive competition</li> <li>• (-) Dearth of Investment &amp; Innovation</li> <li>• (-) No joint action/collaboration</li> </ul>
<b>Demand Conditions</b>
<ul style="list-style-type: none"> <li>• (-) Low demand due to less purchasing power of middle class &amp; more options for elite (big cities or Chinese import)</li> <li>• (x) Imports from China</li> <li>• (-) No furniture expore from Khair Regions knock</li> <li>• (-) Non-adaptability &amp; upgration of local firms</li> <li>• (?) Strong demand of furniture world-wide</li> <li>• (x) Introdction of New type of furniture (easy to assemble and down, different economical materials)</li> <li>• (-) Copied design</li> <li>• (-) Supply &gt; Demand</li> </ul>
<b>Related &amp; Support Industries</b>
<ul style="list-style-type: none"> <li>• (+) Ample hardware supplies (4)</li> <li>• (-) Hoarding &amp; overpricing by suppliers &amp; timer merchants</li> <li>• (-) No R&amp;D facilities</li> <li>• (-) Apathy by local chamber of commerce &amp; Industry</li> <li>• (-) Weak support system                             <ul style="list-style-type: none"> <li>• No training institutes</li> <li>• No marketing facility</li> <li>• In case of poor manufacturers, the ambience of shops not good &amp; no facility of warehousing</li> <li>• No customized lending program for furtinutre business</li> </ul> </li> </ul>
<b>Factor Conditions</b>
<ul style="list-style-type: none"> <li>• (-) The location is old, congested &amp; unappealing</li> <li>• (-) Business sustainability issue</li> <li>• (-) Physical endowments like RM and capital is weak</li> <li>• (-) Human Resource   skilled labor is abundant but demand is weak</li> <li>• (-) Over saturated market</li> <li>• (-) Cluster based on heritage &amp; family business market</li> </ul>
<b>Government</b>
<ul style="list-style-type: none"> <li>• (-) Not creating Demand (indirectly)</li> <li>• (-) Not creating support industries like R&amp;D, seasoning factory marketing &amp; distribution channels</li> </ul>
<b>Chance</b>
<ul style="list-style-type: none"> <li>• (-) China's entry into the local market was unpredictable</li> <li>• (-) High cost of doing because of economic policies of new government due to which inflation has increased</li> </ul>

Source: Authors' analysis on the basis of primary data (interviews)

## Discussion

The analysis of the first objective (spatial mapping of the furniture market) shows that these furniture units have a) geographical agglomeration b) have a network of suppliers,

manufacturers, and customers. Therefore, the furniture industry of Khairpur Mirs is indeed an industrial cluster. Since Porter offers only qualitative account of the cluster, it was imperative that we check the linkages between different actors which make up the Porter's diamond in light of the structured interviews. The findings of these interviews highlighted the following points:

Firstly, the factors of production in the region are conducive in terms of abundance of labor (either skilled or readily trainable). However the quality and supply of the timber or logs have been deteriorated. The supply is often controlled by mafias who hoard the logs and raise price on their whims. So increasing cost of natural resources, poor infrastructure and lack of investment are the weaknesses of this cluster.

Then, the demand of the furniture has gone down because of slowing economy. Furniture have always been a seasonal commodity and is directly related to the consumer's purchasing power which have deteriorated in the past several years due to which the middle class only buys when starting a new family. On the other hand, on account of increasing exposure and awareness, affording consumers choose to shop from the major cities like in this case Hyderabad or Karachi because of the lack of trendy, innovative designs and styles which are pervasive in big cities. This is being taken by few middlemen as an opportunity. Although they cannot emulate the metropolitan city designs, they can buy the innovative and up to date pieces and sell them at profit. At the highest ladder are manufacturers that have external linkages, orders in bulk and unhindered supply but they are in minority (only two showrooms out of approximately 50 firms).

Moreover, there is a dearth of supporting industries in Khairpur like training institutes for the workers and research and Development Institutions to incorporate innovative and unconventional style Provision of electricity is also deficient. Government's role in the up lifting of this industry is also passive since there are no customized lending programs as well. However, related industries are present in the cluster like providers of paint, hardware and suppliers of logs so this is strength of this cluster.

Further, there is weak domestic competition and collaboration among the firms. Apart from cordial personal relationships, there is hardly any contest on improving the quality or decreasing the price since the firm owners are stuck with it. They can't sell their units and start another business anew because of lack of funds and being mostly a family profession, this is the only skill for which they have expertise. In terms of collaboration, till now they have no joint facilities like joint seasoning factories etc. Their suppliers and customers are the only commonality among them.

Sometimes there are chance conditions which are unforeseen for example the radical increase or decrease in cost of raw material because of change in the government policies for example the current devaluation of rupee was unpredicted by the industry. Then the fact that at least two middlemen from Khairpur are importing furniture from China and are working at different location was also not foreseen by the firms in the cluster and this have diverted the elite customer from the latter. Other such competitors outside the cluster can emerge which is a threat for them.



Additionally, the government is apathetic towards this failing industrial cluster and has not come up with any cluster friendly policy in the industrial policy of the country so there is negative domestic investment and export status of Khairpur furniture cluster is also non-existent which is a weakness for this industry.

However, there is an interesting finding in this industrial cluster. On account of thematic analysis of informal interviews, three profiles of the firms and the businessmen have emerged. At the top of well-performing hierarchy, there are few big manufacturers who are in control of their entire production process and value chain from the raw material to the upholstery and delivery of the order to the clients. Their clients are both home and school/office. They buy the logs in bulk from the Aari machine (supplier log) so they are given priority by the suppliers. They have better external linkages so more access to quality raw materials, supplementary material (hardware) and more innovative designs from Sindh as well as Punjab. They believe that their cluster has profitability potential. In the middle, are the middle men with showrooms who buy from big and established manufacturers from Sindh only (because of less resources than the manufacturers with external linkages). They add value in Khairpur and sell to local customers and believe that can sustain their families through their businesses if not prosper. In the lowest rung are the manufacturers with little investment to showcase their work, their entire production process is based locally and demand is scanty for them and they perceive the cluster to be dying and they form the majority of the cluster.

### **Conclusion:**

This research has identified Khairpur furniture cluster geographical location, its suppliers, manufacturers, and business owners on the Sindh's map which is referred to as spatial mapping. Further, the linkages among the elements of the Porter's diamond model have also been explored. The findings suggest that there are more weaknesses and threats as compared to strengths and opportunities faced by this cluster. Therefore, primarily, it is a weak cluster which is in the phase of decline due to lack of investment, diversification, lack of external linkages and government apathy. The majority of the businesses in this cluster can sustain themselves if they improve their production and value addition process. This will enable them to match the market demand of new and sophisticated designs and improved quality meanwhile keeping the costs in check. Since most of this improvement is capital and cost intensive, it might only be feasible if the government supports them through tax and utilities subsidies so that the cost of doing business is not prohibitively high for them. Conversely, if this weak cluster with feeble linkages is not supported by the government, then it will ultimately perish.

### **Recommendations**

Establishing industrial clusters and nurturing them is a tedious and complicated procedure and it requires in-depth deliberation, policy formulation and policy implementation at the grass root. Basically initiating industrial clusters involve careful analysis and huge financial, human and policy commitment. Therefore focusing and developing the existing clusters is a wise decision by developing countries which are already scarce on resources. It is time that all the stakeholders contribute towards positive cluster dynamism to revive majority of the firms from decline towards sustenance and profitability. Survivalist

clusters as mentioned by Schmitz and Nadvi (1999) need policy attention as they generate employment and support the local economy<sup>40</sup>. With reference to Khairpur Mirs furniture cluster there are following recommendations: for Firm and for Policy makers/Government:

Entrepreneurs/ Businessmen should start educating their children so that they do not feel stuck when demand dwindles, cost of doing their family business gets high and competition by those who have better education, exposure, contacts and investment gets fierce. In this way, they would have more options for sustenance instead of just sticking with their dying businesses.

Then, networking within and outside the cluster is important for better knowledge flow to bring innovation in styles, for good quality items and to ensure regular flow of supplies and raw material at low cost. When the local manufactures have multiple or single external supplier, hoarding and price inflation of material will not be an option for wood and hardware suppliers.

Moreover, within cluster (between firms) cooperation will result in a win-win situation for the industry. An example of cooperation would be sharing of resources. As highlighted through this study, there are very few profitable firms in this cluster. They can combine resources to create common wood bank and/or seasoning factory which will help the 80% of the poor manufacturers who are dwindling because of lack of investment mainly.

Finally, since the role of government and the associated institutions is negligible in this cluster, they need to do the needful by being active partners to this industry. Government can initiate lending programs for the local industry with easy repayment terms. Protectionism. Though is against the spirit of globalization and development, local regions of Sindh and Baluchistan are still struggling to survive so limiting competition through discouraging imports to these regions through higher tariff should be deliberate as an option. It should also facilitate the establishment of training institutions, Research and Development institution and make its operations smooth by making the local institutions like Pakistan Industrial Development Corporation, Khairpur Chamber of Commerce and Industries responsible for implementation at the grass root level.

#### ***Research Contributions and future directions:***

This study makes a valuable contribution in bringing this neglected yet lucrative industrial sector to the forefront. It acts as a starting point from where further studies for the development of the furniture cluster can be initiated. In the context of Pakistan, cluster profiling of Khairpur's wooden furniture and application of Porter's model will help the policy makers to decide whether resources and efforts should be made to devise efficient strategies for the development of the local furniture cluster and improve country's export status related to furniture in the foreseeable future.

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<sup>40</sup> Schmitz, H., and Nadvi, K., 'Clustering and Industrialization : Introduction', *World Development* 27: (1999), pp.1503-1514

Similar studies on other furniture clusters of Sindh like Karachi, Hyderabad and Mehrabpur, need to be conducted so that Sindh's province wooden furniture cluster can be mapped, and their issues could be highlighted and they could be possibly linked in common regional production network for the benefit of the local industry, economy and society.

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