

PHARMACEUTICAL SECTOR



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1. Disclaimer

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2. Introduction to SMEDA

Small and Medium Enterprises Development Authority (SMEDA) is an apex SME development agency working under the Ministry of Industries and Production (MoI&P), Government of Pakistan. In pursuit of its mission, SMEDA has adopted an integrated strategy that comprises SME sectors & clusters development, Business Development Services (BDS), and Policy advocacy to protect and promote SME interests.

SMEDA offers a broad spectrum of business development services to SMEs which include prefeasibility studies, identification of experts and consultants, delivery of need-based capacity building programs in addition to business guidance through help desk services.

3. Introduction to Pakistan’s Pharmaceutical Sector

3.1 Sector’s Overview

The pharmaceutical sector is an important SME sector of Pakistan and is contributing towards the economy of Pakistan in multiple ways by providing employment opportunities, generating national income, increasing foreign exchange and contributing to national trade. The development of the healthcare system in every country is very important with respect to the general socio-economic development of the nation. Pharmaceutical sector is the core component of healthcare systems worldwide, thus, weaknesses in the pharmaceutical sector negatively impact health outcomes, especially in developing countries. “In 2020, the value of the pharmaceutical sector of Pakistan was estimated to be around USD 3.2 billion, doubling from USD 1.64 billion in 2011¹. Including institutional sales, industry posits that this sector easily becomes a retail market worth USD 4 billion.”¹.

The pharmaceutical industry is mainly located in Punjab, where a major part of the industry is geographically clustered and accounts for nearly 52% of the industry’s total production. There are 620 registered companies in the sector, dominated by top local and Multinational Companies (MNCs). Out of 620 companies, 27 are classified as MNCs. Top 100 companies of the sector account for approximately 97% of the total market share whereas, remaining more than 500 companies hold only 3% market share. Further, top 50 companies hold approximately 80% of market share, indicating that a major proportion of the sector is dominated and controlled by them. Pharmaceutical companies are geographically spread all over Pakistan. Pharmaceutical units in provinces tend to concentrate in major cities like Karachi, Rawalpindi, Lahore and Peshawar. Although numbers reflect that more than 50% of firms are in the province of Punjab, mainly clustered around Rawalpindi/Islamabad but in terms of production, capacity utilization, volume and size of business, Karachi leads the way.

3.2 Contribution of Pharmaceutical Sector to the Economy of Pakistan

Some major indicators of Pharmaceutical sector in Pakistan’s Economy are summarized below:

Particulars	Indicators
Direct Employment Skilled	10,000 – 11,000
Employment Unskilled	3,000 – 4,000
Estimated Total Revenue	< PKR 453 billion
Contribution to Export (2021)	1% (approx.)
YoY Growth in Exports	28.51% (approx.)
Production Quantity Export (2021)	25,008 MT
Total Production Value Export (2021)	> USD 269 million
Estimated No. of SMEs	432 (approx.)
Capacity Utilization	70% to 90%

Table 1: Economic Indicators of Pharmaceutical Sector

¹ A Health Check for a Better Future: Unleashing the Potential of Pharmaceutical in Pakistan by PBC and CDPR (2021)

Source: Pakistan Bureau of Statistics and Trade Maps

3.3 HS Codes Listing for Pharamceutical Sector

The Harmonized System (HS) is an international nomenclature for the classification of products published by the World Customs Organization (www.wcoomd.org). It allows countries to classify traded goods on a common basis for customs purposes.

The Harmonized Commodity Description and Coding System (HS Codes) designated for trade of Pharmaceutical products is **HS 30**. The brief description of sub-categories falling in this product category are described below in Table 2.

3.4 Products Description

In general, the pharmaceutical industry develops, produces, and markets drugs or pharmaceuticals licensed for use as medications. Pharmaceutical companies are allowed to deal in generic and/or branded medication and medical devices. The word pharmaceutical comes from the Greek word Pharmakeia. Pharmaceutical products consist of various natural/chemical ingredients combined with additional materials (excipients) selected to control dosage delivery, enhance performance and facilitate manufacture of healthcare products. Under the **HS Code 30**, pharmaceutical sector contains number of products; however, a brief description of subcategories falling under Pharmaceutical products includes the following:

Sr. No.	HS Codes	Product Description
1	3001	Human and animal substances such as dried glands or organs and their extracts for therapeutic or prophylactic uses
2	3002	Human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; antisera and other blood fractions and immunological products
3	3003	Medicaments consisting of two or more constituents mixed together for therapeutic or prophylactic uses
4	3004	Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses
5	3005	Wadding, gauze, bandages, dressings etc. impregnated or covered with pharmaceutical substances for medical, surgical, dental or veterinary purposes
6	3006	Pharmaceutical preparations and products of subheadings 3001 - 3005

Table 2: List of Pharmaceutical Products HS Codes

3.5 Product Classifications

The main pharmaceutical goods produced can be divided into five main categories that include liquid dosage forms, solid dosage forms, semi-solid dosage forms, special dosage forms and other pharmaceutical products.

Sr. No.	Product Types	Product Description
1	Liquid Dosage Forms	Liquid dosage forms solutions contain drugs in dissolved form. Solvents are water, alcohol, a mixture of alcohol and water or oil. Pharmaceutical product groups are: Syringes, sprays, vials, cartridges, bottles, ampoules, auto injectors and eye drop systems.
2	Solid Dosage Forms	Solid Dosage Forms are preparations consisting of solid, loose dry and more or less fine particles. Often, powder is the intermediate in the manufacture of other dosage forms such as: Granules, tablets or capsules. Pharmaceutical product groups are capsules, coated tablets, fine-grained powders, granules, tablets, pellets and expedites.
3	Semi-Solid Dosage Forms	Semi-solid preparations for cutaneous use are intended for local or transdermal drug release. They can have a softening or protective effect on the skin. The preparations have a homogeneous appearance. Pharmaceutical product groups are: ointments, pastes, creams, gels and suppository.
4	Special Dosage Forms	Special dosage forms are aerosols (inhalator), transdermal systems (patch), implants and sustained released systems (tablet, capsules). Pharmaceutical product groups are: Inhalators, transdermal systems, implants and sustained release systems.
5	Other pharmaceutical products	Any other products from 'pharmaceutical' not falling in the above categories but are classified under HS 30.

Table 3: Pharmaceutical Products Specification

4. Pakistan's Trade in Pharmaceutical Products Sector

Pakistan exports pharmaceutical products in all sub-categories of HS 30. For the purpose of this document, analysis is based upon trade figures of the subject HS code, inclusive of all sub-categories as listed in the section below.

4.1 Pakistan's Exports

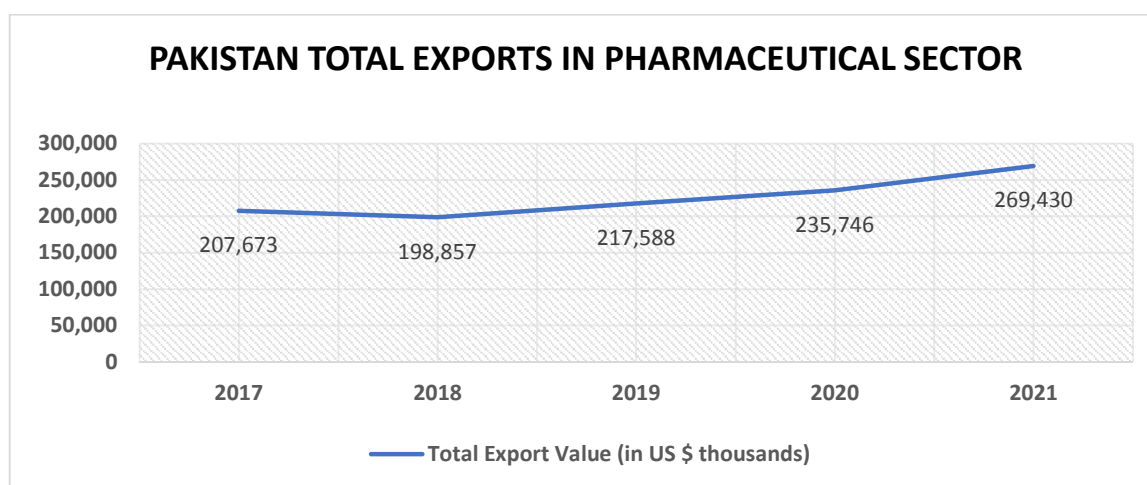
The total US dollar value of Pakistan's exports in HS Code 30 pharmaceutical products sector; sub categories from 2017 to 2021, is shown in the table below:

Pakistan Exports in Pharmaceutical Products Sector HS – 30					
HS - 30 Sub - Category	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021
	Amount US \$ Thousands				
3001	0	64	123	0	0
3002	69	50	38	1815	178
3003	58,773	32,732	24,130	23,979	25,040
3004	144,328	162,327	188,609	206,283	235,869
3005	4462	3681	4585	3348	3305
3006	41	3	103	321	5010
Total	207,673	198,858	217,587	235,837	269,430
% Growth	0%	-4%	9%	8%	14%

Table 4: Pakistan Exports in Pharmaceutical Sector

Source: Trade Map [www.trademap.org]

Pakistan's major exports of Pharmaceutical Products were in the category of HS 3004 and HS 3003. Over the last years, export figures have shown mixed growth, with a slightly negative growth trend from 2017 – 2018 and then showed positive trend from 2018 – 2021. This is mostly attributed to increased demand of medicine and drugs during the COVID pandemic. During the year 2021, the exports value of Pharmaceutical Products was USD 269 million out of which USD 235 million (approx.) was the export of HS 3004 i.e. Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses.

**Figure 1:** Pakistan Exports in Pharmaceutical Sector

4.2 Pakistan's Exports Product Mix for Pharmaceutical Sector

The following chart indicates Pakistan's export product mix for pharmaceutical sector, based on total value of products exported in the year 2021. It can be seen that the major value

contributor in Pakistan's pharmaceutical sector exports (88%) is product category HS: 3004 which represents Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses commonly known as retail and OTC medicines such as penicillin, streptomycin, amoxicillin, antibiotics, steroids, vitamins and sedatives etc. The following pie chart reflecting the portions of the mix includes HS-3003, HS-3004, HS-3006 while others includes HS-3001, HS-3002 and HS-3005.



Figure 2: Pharmaceutical Exports Product Mix

4.3 Pakistan's Imports

The total US dollar value of Pakistan's imports in the HS Code 30 pharmaceutical sector from 2017 to 2021 is shown in the table below:

Pakistan Imports in Pharmaceutical Sector HS - 30					
HS - 30 Sub - Category	Imported value in 2017	Imported value in 2018	Imported value in 2019	Imported value in 2020	Imported value in 2021
	Amount US \$ Thousands				
3001	3	87	5	95	1,882
3002	275,008	311,294	303,803	267,660	3,260,479
3003	13,768	11,789	16,829	17,998	21,442
3004	474,194	531,186	454,729	474,019	478,010
3005	6,950	8,874	7,323	6,241	6,665
3006	18,158	18,390	15,476	15,471	23,944
Total	788,081	881,620	798,165	781,484	3,792,422

Table 5: Pakistan Imports in Pharmaceutical Sector

Source: Trade Map [www.trademap.org]

Pakistan imports in the FY 2021 increased by 385% from USD 781.4 million to USD 3792.4 million. The main reason of this huge increase was due to the import of COVID 19 (coronavirus) vaccines and other pharmaceutical products required during the pandemic.

5. Pharmaceutical Sector Global Perspective

In this section we will be looking at global trade of the Pharmaceutical sector, and Pakistan's share in it. The HS product category HS-30 covers trade in "Pharmaceutical Products" with six diverse categories of these products.

5.1 World Exports in Pharmaceutical Sector

The total world exports in Pharmaceutical Products Sector stood at USD 681 billion in the year 2021. There has been an upward trend in world exports from year 2017 to 2021 and can be seen in the table below:

World Exports in Pharmaceutical Sector					
HS Code # 9506	2017	2018	2019	2020	2021
	Amount US \$ Million				
World Total	528,531	588,837	618,444	680,551	818,391
Growth %	5.7%	11.4%	5.0%	10.0%	20.2%

Table 6: World Exports in Pharmaceutical Sector

Source: Trade Map [www.trademap.org]

Based on the table above, the following illustration demonstrates the data on world exports:

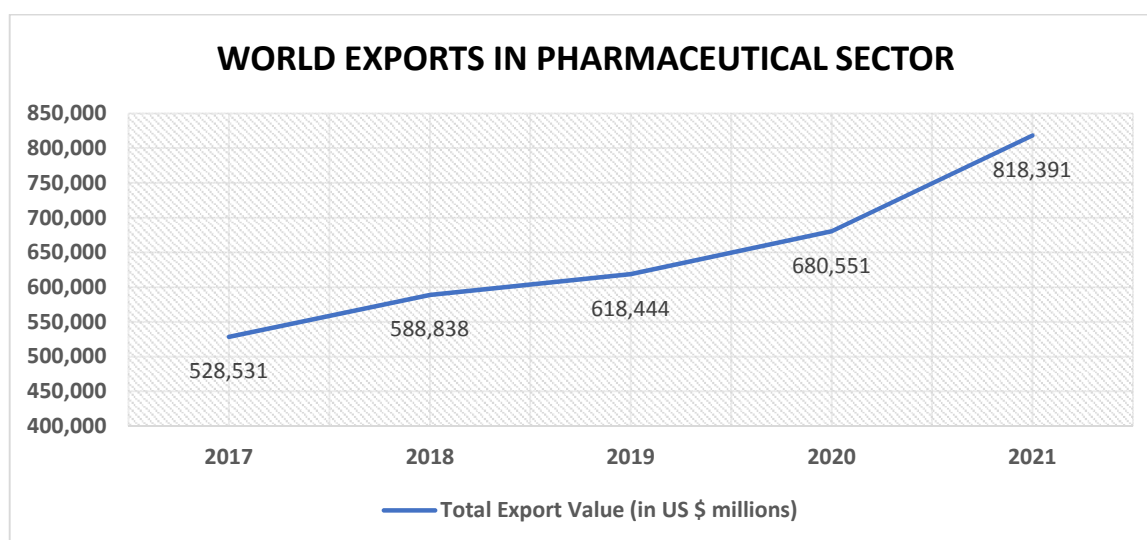


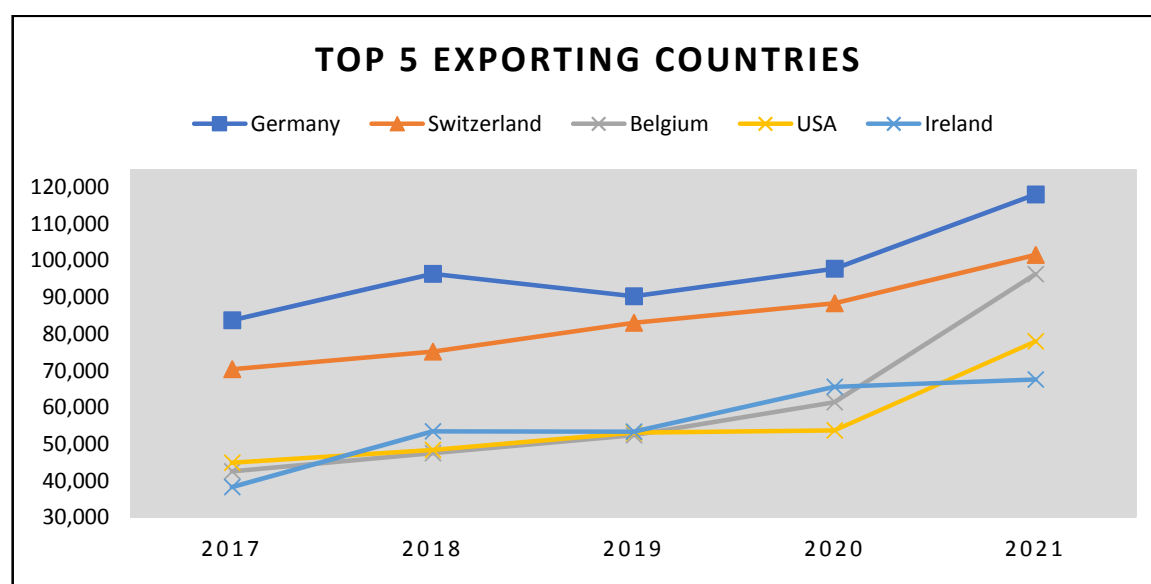
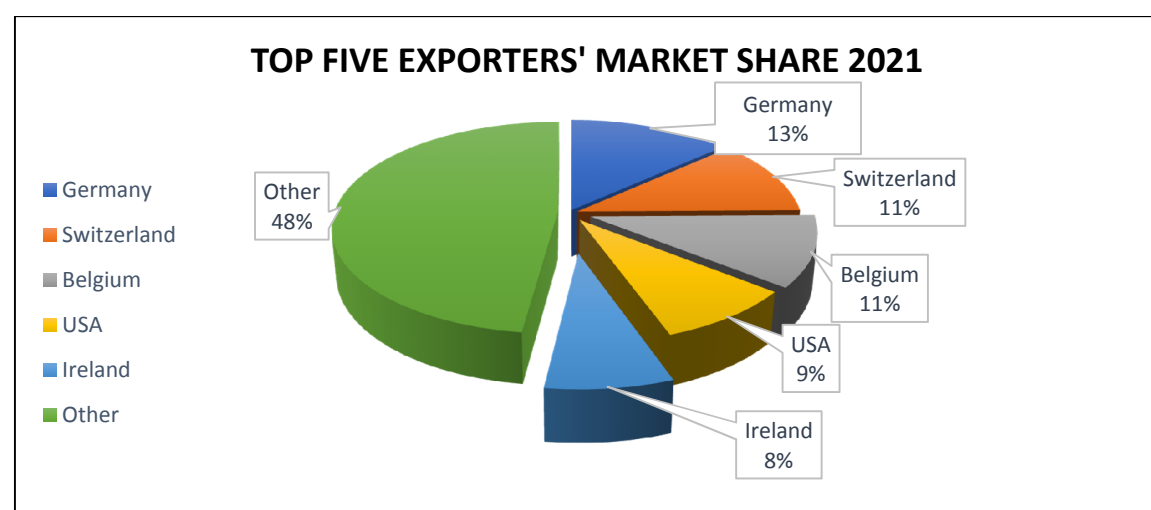
Figure 3: World Exports in Pharmaceutical Sector

5.2 Top 5 Exporting Countries and Pakistan in Pharmaceutical Sector

The data of world exports of pharmaceutical sector under the HS Code 30 is as follows:

HS CODE # 30: Pharmaceutical Products					
Exporting Countries	2017	2018	2019	2020	2021
	Amounts US \$ Million				
Germany	83,769.5	96,420.3	90,294.7	97,779.2	118,072.4
Switzerland	70,374.8	75,208.5	83,047.9	88,356.8	101,533.9
Belgium	42,548.3	47,520.8	52,463.1	61,448.0	96,344.3
USA	44,936.4	48,422.5	53,154.6	53,749.6	77,962.1
Ireland	38,322.2	53,490.5	53,409.0	65,605.4	67,574.2
Pakistan	207.7	198.8	217.6	235.7	269.4

World Total	528,531.0	588,837.5	618,444.2	680,551.1	818,391.3
Growth %	5.7%	11.4%	5.0%	10.0%	20.2%

Table 7: Top Five Exporting Countries and Pakistan*Source: Trade Map [www.trademap.org]***Figure 4: Top Five Exporting Countries 2021****Figure 5: Top Five Exporter's Market Share 2021**

According to the above trade statistics of Pharmaceutical Sector, Germany is found to be the top exporter of Pharmaceutical Products in the world. Germany's exports for the year 2021 were USD 118,072.4 million whereas Pakistan's exports for the same period were amount to only USD 269.4 million.

After the coronavirus brought a halt to economic activities across the globe, Germany's export growth jumped to the highest in over two decades on during the year 2021. Germany has 13% of the market share of Pharmaceutical Products in the world. It has been observed that Germany's export increased in 2021 while the other players in the market also followed an increasing trend.

5.3 World Imports in Pharmaceutical Sector

The total world imports in Pharmaceutical Products sector stood at USD 840,835 million in the year 2021. There has been an upward trend in world value of imports from the year 2019 to 2021. The imports increased during the period as shown in the table below:

World Imports in Pharmaceutical Sector					
HS Code # 30	2017	2018	2019	2020	2021
	Amount US \$ Million				
World Imports	564,685	623,745	656,734	714,239	840,835
Growth %	6.4%	10.5%	5.3%	8.8%	17.7%

Table 8: World Imports in Pharmaceutical Sector

Source: Trade Map [www.trademap.org]

5.4 Top 5 Importing Countries and Pakistan in Pharmaceutical Sector

The data of world imports of Pharmaceutical Products under the HS Code 30 is represented as follows:

HS CODE # 30: Pharmaceutical Products					
Importing Countries	2017	2018	2019	2020	2021
	Amounts US \$ Million				
USA	96,879	115,525	128,135	139,431	149,499
Germany	53,380	57,241	58,585	65,607	79,263
Belgium	35,027	40,729	45,302	51,457	62,382
Switzerland	28,722	29,994	31,562	38,935	42,213
China	25,251	27,900	33,614	34,919	38,159
Pakistan	788.1	881.6	798.2	781.5	3,792
World Total	565,499	624,557	657,610	715,416	840,835
Growth %	6.4%	10.4%	5.3%	8.8%	17.5%

Table 9: Top Five Importing Countries and Pakistan

Source: Trade Map [www.trademap.org]

The above Table no. 9 shows data of world imports of Pharmaceutical Products Sector of last five years. It shows that USA is the top importer of Pharmaceutical Products and its imports for the year 2021 were amount to USD 149,499.5 million. Pakistan's imports for the year 2021 were amount to USD 3,792 million.

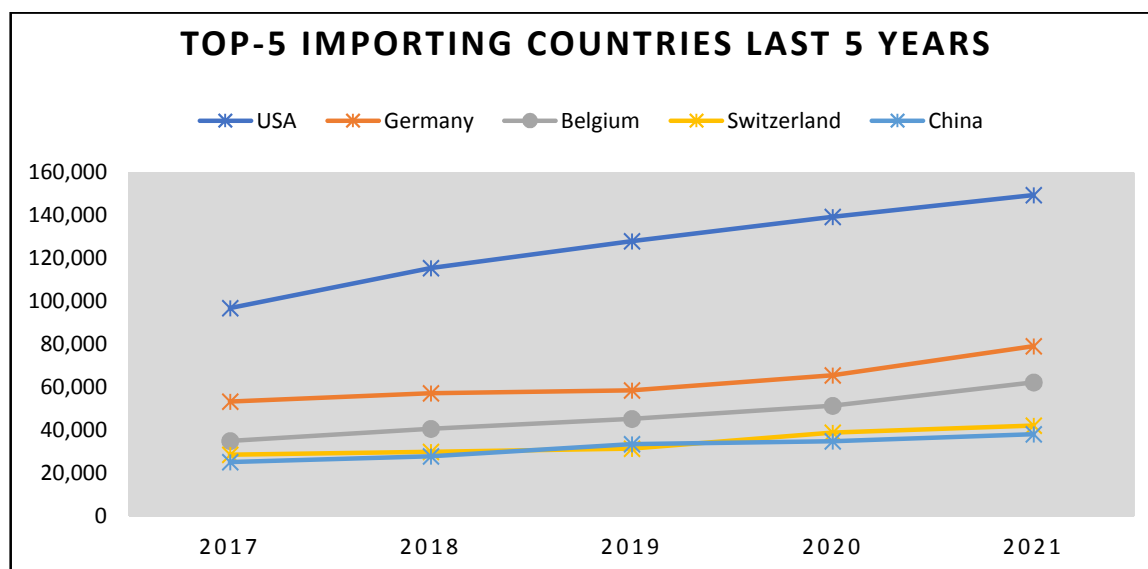


Figure 6: Top Five Importing Countries

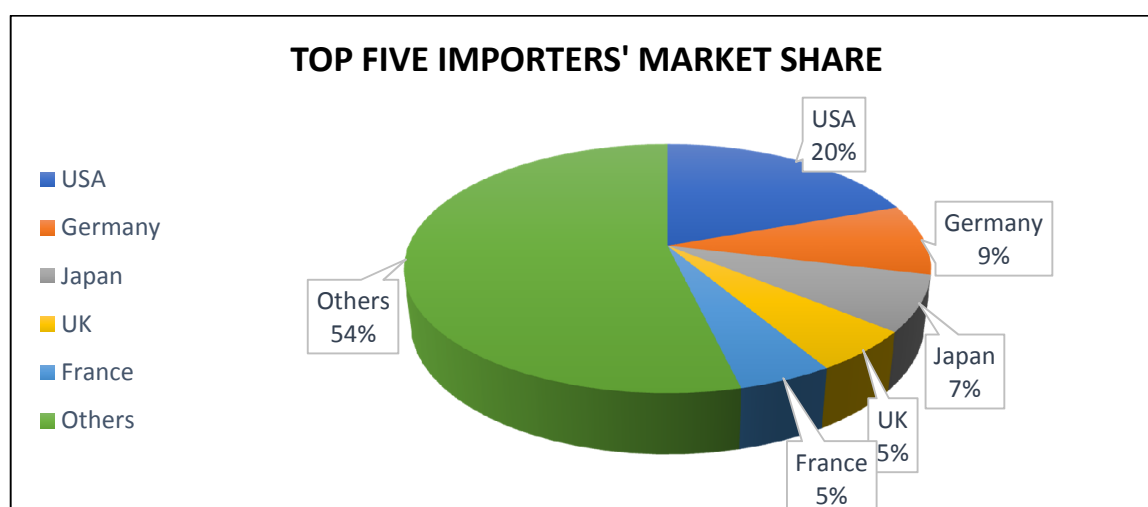


Figure 7: Top Five Importer's Market Share

5.5 Pakistan Share in World Exports

The Table no. 10 below is showing Pakistan's export data for the year 2020 and its share in world exports of Pharmaceutical Products sector.

HS Codes	Pakistan Exports 2021	World Exports 2021	Pakistan's Share in World Exports
	Amounts US \$ Million		%age
3001	0	5852.6	0.00%
3002	0.178	353,270.4	0.00%
3003	25	9,005	0.28%
3004	235.8	417,757	0.06%
3005	3.3	9,128	0.04%
3006	5	1,7951.7	0.02%
Total	269.4	818,391	0.03%

Table 10: Pakistan's Share in World Exports of Pharmaceutical

Source: Trade Map [www.trademap.org]

Data sources indicate, Pakistan's total export of pharmaceutical products in 2021 were USD 269.4 million. A majority of Pakistan's exports are concentrated in the HS 3004 with exports of USD 235.8 million. Exports of pharmaceutical products have shown an increase since 2017 from USD 207 million to the current amount of USD 269.4 million. The incline was the result mainly due to the effect of COVID-19 and its post effect. Pakistan exports are mainly to underdeveloped countries such as Afghanistan, Sri Lanka, Philippines, Myanmar and Cambodia. Along with their internal social and economic stability issues, these countries were severely affected by the COVID and are still phasing the recovery. Owing to the facts, health care provision and insurance mechanisms and emergency response to the pandemic expand imports to fulfil demand for pharmaceutical.

Pakistan Export Partners of Pharmaceutical Products HS 30						
Importing Countries	2017	2018	2019	2020	2021	Share
	Amounts US \$ Thousands					%age
Afghanistan	74,489	65,484	67,110	73,866	71,277	26.5%
Philippines	16,636	18,202	21,148	22,309	28,707	10.7%
Sri Lanka	25,318	20,256	21,767	21,223	27,563	10.2%
Myanmar	7,247	10,493	9,950	10,784	11,093	4.1%
Cambodia	5,921	8,366	10,207	9,835	10,409	3.9%
World Total	207,673	198,858	217,587	235,837	269,430	
Growth %		-4%	9%	8%	14%	

Table 11: Pakistan's Export Partners HS-30

Source: Trade Map [www.trademap.org]

Pakistan's major export partners in the category HS 30 are Afghanistan, accounting for 26.5%, Philippines 10.7%, Sri Lanka 10.2%, Myanmar 4.1% and Cambodia 3.9%. The largest exporter of HS 30 in the world is Germany with a 13% share of the world market and exports of USD 118,072.4 million. The second largest exporter is Switzerland with a share of 11% of the world market. Pakistan has a share of 0.03% only in world exports.

6. Way Forward

The Pakistan Pharmaceutical Industry today is in the front rank of Pakistan's science-based industries with wide ranging capabilities in the complex field of drug manufacturing and technology. It is growing very fast in terms of technology, quality and range of medicines manufactured. From simple headache pills to sophisticated antibiotics and complex cardiac compounds, almost every type of medicine is now manufactured in Pakistan. The organized sector of the pharmaceutical Industry has played a key role in promoting and sustaining development in this vital field.

Pharmaceutical sector in Pakistan is strictly regulated by the government through Drug Regulatory Authority of Pakistan (DRAP) for the registration of new medicine and new manufacturing unit. It also determines maximum retail price (MRP) of all medicines. Pakistan market is largely an out-of-pocket market (healthcare spending mainly coming from individual savings), however government provides free or low cost treatment at government hospitals and clinics.

During the Covid-19 pandemic, where exports of major exporting countries of pharmaceutical products have seen considerable increase, Pakistan exports have witnessed only a minor net impact against a 385% increase in imports for the year.

The pharmaceutical industry is a knowledge driven industry and is heavily dependent on Research and Development for new products and growth. However, basic research (discovering new molecules) is a time consuming and expensive process and is thus, dominated by large global multinationals, Pakistani companies have recently entered the area of R&D and initial results have been encouraging. Pharmaceutical is a continuous growth industry, immune to economic recession and commodity cycles. With rising population, new incidence and resurgence of certain diseases and new practices in healthcare, the industry continues to grow.

7. Annexures

7.1 Annexure 1: Pakistan's Top-10 Exporters of Pharmaceutical

Sr. #	Name of Companies	Listed
1	GlaxoSmithKline Pakistan Limited	Multinational
2	Getz Pharma (Private) Limited	National
3	Sami Pharmaceutical (Private) Limited	National
4	Abbott Laboratories Pakistan Limited	Multinational
5	Martin Dow Pharmaceuticals (Pakistan) Limited	National
6	The Searle Company Limited	National
7	Sanofi Aventis Pakistan Limited	Multinational
8	OBS Pakistan (Private) Limited	National
9	GSK Consumer Healthcare Pakistan Ltd	Multinational
10	Hilton Pharma (Private) Limited	National

Source: Pharmaceutical Industry Report by ICAP

7.2 Annexure 2: Authorities, Trade Bodies and Associations

Drug Regulatory Authority of Pakistan (DRAP), Ministry of National Health Services, Regulations & Coordination Address: Telecom Foundation Complex, Mauve Area, G-9/4, Islamabad, Pakistan Phone: (+92) 51 9107416 Toll Free: 0800-03727 Web: https://www.dra.gov.pk/	Small & Medium Enterprises Development Authority (SMEDA) Address: SBCC Building, Paris Road, Sialkot Tel: (+92) 52 4261 881 Web: www.smeda.org.pk Email: info@smeda.org.pk
Trade Development Authority of Pakistan (TDAP) Address: Paris Road, Sialkot Tel: (+92) 52 9250 081 Web: www.tdap.org.pk Email: tdap@tdap.gov.pk	Pakistan Pharmaceutical Manufacturer's Association (PPMA) Address: Islamabad, Pakistan Tel: +92 51 4435103 Email: info@ppma.org.pk Web: https://ppma.org.pk/

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6. Pharmaceutical Industry Report by ICAP
7. Pharmaceutical Sector Study by PACRA