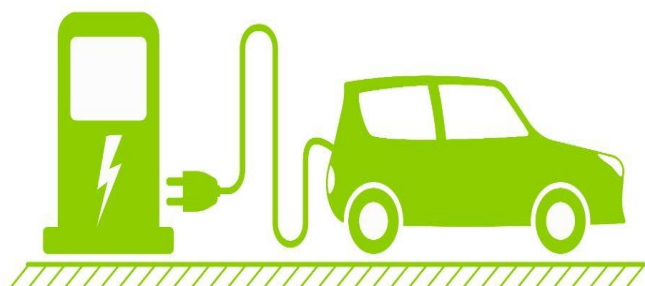


A Study on Trade of Electric Vehicle in India



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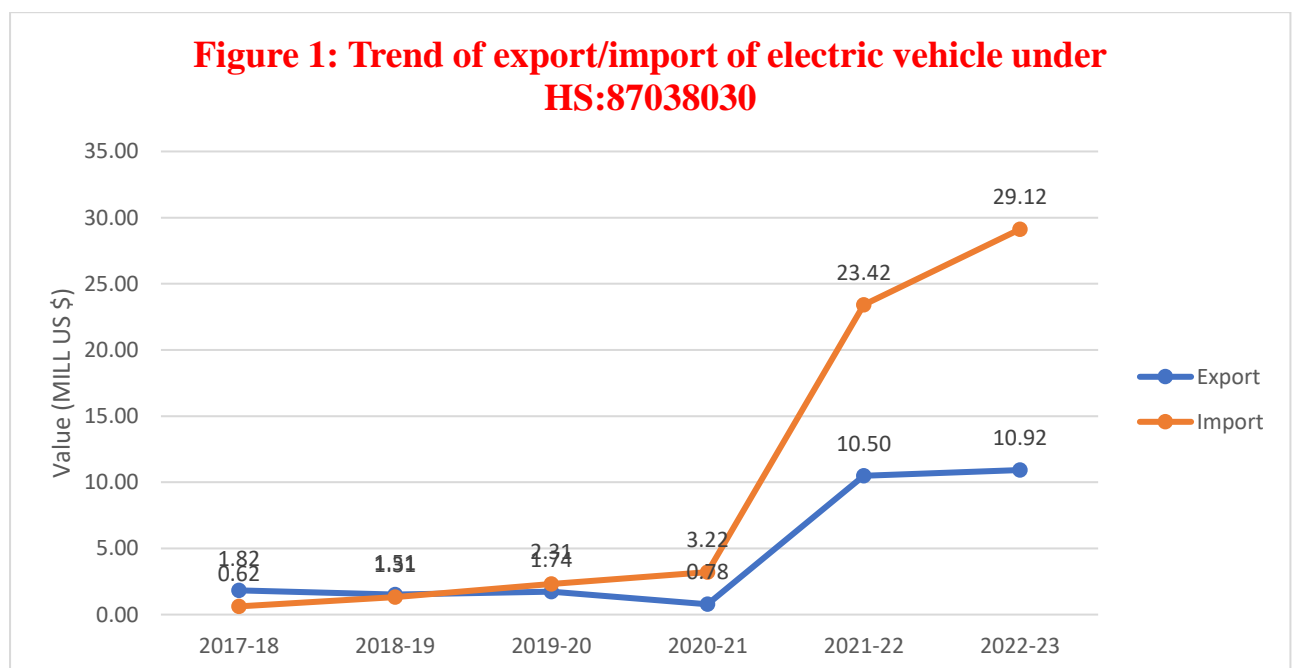


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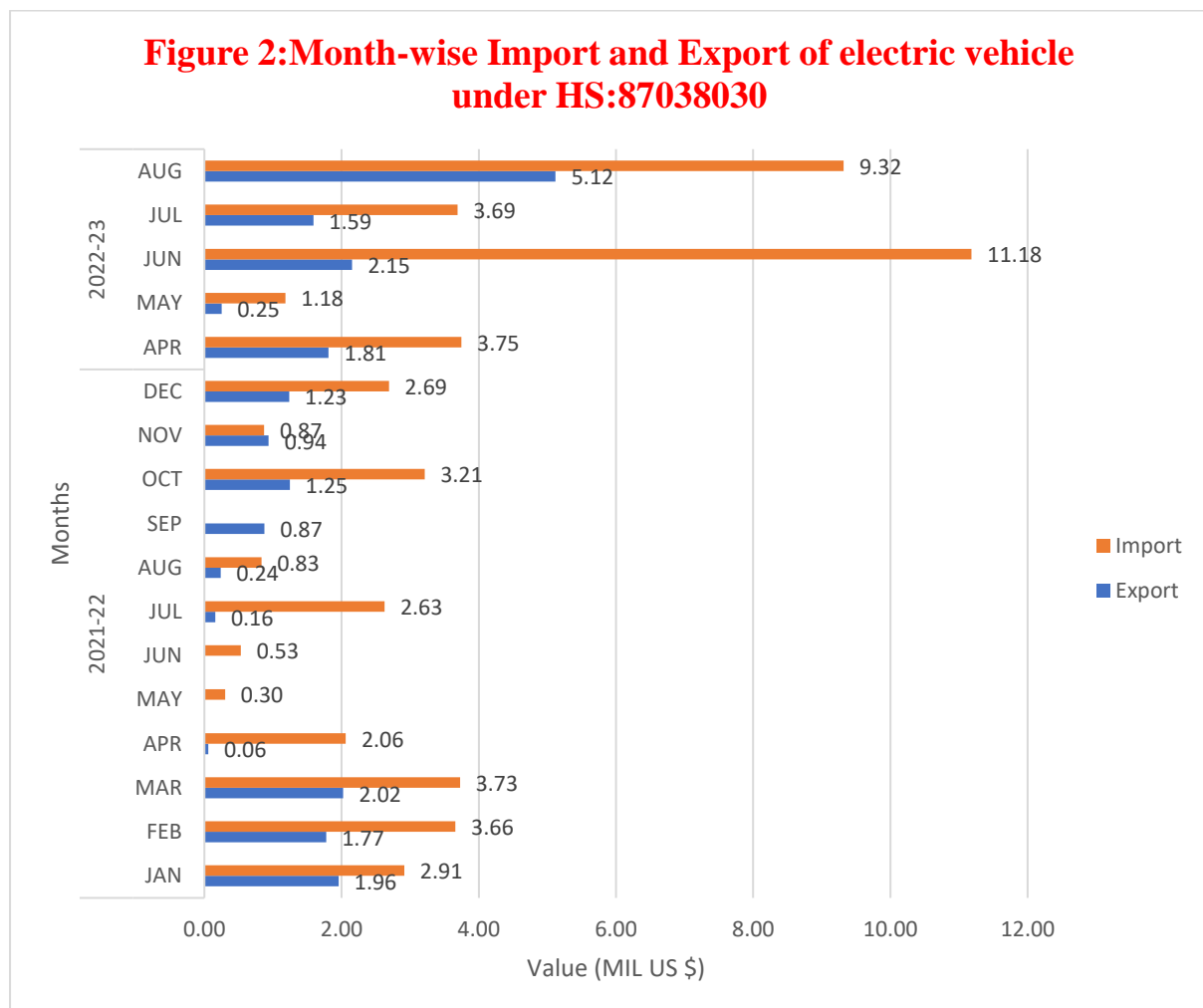
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In the context of recent surge in fuel charge and adaptation towards less polluted environment, future of mobility of a second largest populated country like India, is undoubtedly a topic of discussion. It has been 20 years since, and one would have expected electric vehicles to become a norm and a lifestyle in the country. The vision of the government of India is that by 2030 there will be only electric vehicles generating cost infrastructure, unsafe mileage, and generally high prices. In this scenario, trade of electric vehicle plays similar importance as like in manufacturing the same domestically. Sometimes, export may become an indicator of self sufficiency of any product. Here, in this article, trade of electric vehicle is studied with data available in DGCIS, Kolkata during last five financial year till August,2022.

In India, Trade data is captured and analysed following Harmonized System (HS) of 8-digit commodity classification. So far, more than 11000 HS commodity codes are assigned to different commodities for its unique identification and there is no dedicated HS code to identify 'electric vehicle' as such. However, a major trade activity of electric vehicle has happened over the years under HS: 87038030 (*Other vehicles, with only electric motor for propulsion: Motor cars*). In this line, all analysis is performed considering HS: 87038030. To start with, a trend of trade of electric vehicle under HS: 87038030 is presented below by Figure 1 from FY:2017-18 to FY:2022-23 (Till August,22).



It can be seen from Figure 1 that, there is a sudden increase in import of electric vehicle under HS: 87038030 in FY: 2021-22 and same increasing trend prevails during FY:2022-23 (Till Aug,22). However, the export of electric vehicle is much less as compared to import of the same. During FY:2019-20 to FY:2020-21, a slight decrease in export of electric vehicle is observed and thereafter, similar to the import, a sudden increase in export of electric vehicle from FY:2021-22 is observed but the degree of increase is much less as compared to the import. Since the trade both in export and import have increased significantly during FY:2021-22 and 2022-23 (Till Aug,22), a month-wise analysis is conducted and presented by Figure 2.



It can be seen from above Figure that, the import of electric vehicle was maximum in June,2022 which is about 11.18 US MILL \$ during FY:2021-22 and FY:2022-23. However, maximum export of electric vehicle is observed in August,2022 which is about 5.12 US MILL \$. One can infer from above Figure that, trade of electric vehicle both in export and import have increased in recent months. To identify the contribution of countries in this surge, country-wise analysis was performed and given below by Table 1 and 2 for import and export respectively.

Table 1: Country-wise Import of electric vehicle during FY:2021-22 and 2022-23 (Till Aug,22)

FY	Month	Country	Import (VAL US MILL \$)	
2021-22	APR	SLOVENIA	1.21	
		GERMANY	0.83	
		CHINA P RP	0.02	
	MAY	SLOVENIA	0.24	
		FRANCE	0.06	
		JUN	CHINA P RP	0.30
	KOREA RP		0.08	
	U K		0.07	
	SLOVENIA		0.05	
	JAPAN		0.03	
	JUL		GERMANY	1.32
		SLOVENIA	0.81	
		SINGAPORE	0.25	
		GREECE	0.24	
		CHINA P RP	0.01	
		AUG	GERMANY	0.34
	CHINA P RP		0.28	
	SWEDEN		0.11	
	SLOVENIA		0.09	
	OCT		GERMANY	2.12
			SLOVENIA	0.57
		CHINA P RP	0.52	
	NOV	GERMANY	0.63	
		CHINA P RP	0.24	
		DEC	CHINA P RP	1.23
	GERMANY		1.07	
	SLOVENIA		0.37	
	VIETNAM SOC REP		0.02	
	JAN		CHINA P RP	2.13
			U K	0.48
		SLOVENIA	0.19	
		GERMANY	0.10	
		VIETNAM SOC REP	0.02	
		FEB	GERMANY	1.76
	CHINA P RP		1.46	
	KOREA RP		0.29	
	SLOVENIA		0.14	
	VIETNAM SOC REP		0.01	
	MAR		GERMANY	2.97
		U K	0.75	
		CHINA P RP	0.01	

FY	Month	Country	Import (VAL US MILL \$)
2021-22 Total			23.42
2022-23	APR	GERMANY	3.14
		CHINA P RP	0.35
		KOREA RP	0.16
		CZECH REPUBLIC	0.08
		VIETNAM SOC REP	0.02
	MAY	KOREA RP	0.69
		GERMANY	0.25
		VIETNAM SOC REP	0.15
		SWEDEN	0.09
	JUN	GERMANY	10.11
		CHINA P RP	0.59
		U K	0.27
		VIETNAM SOC REP	0.17
		BELGIUM	0.05
	JUL	GERMANY	3.63
		CHINA P RP	0.06
	AUG	GERMANY	8.45
		U K	0.43
		KOREA RP	0.23
		SWEDEN	0.22
2022-23 Total			29.12

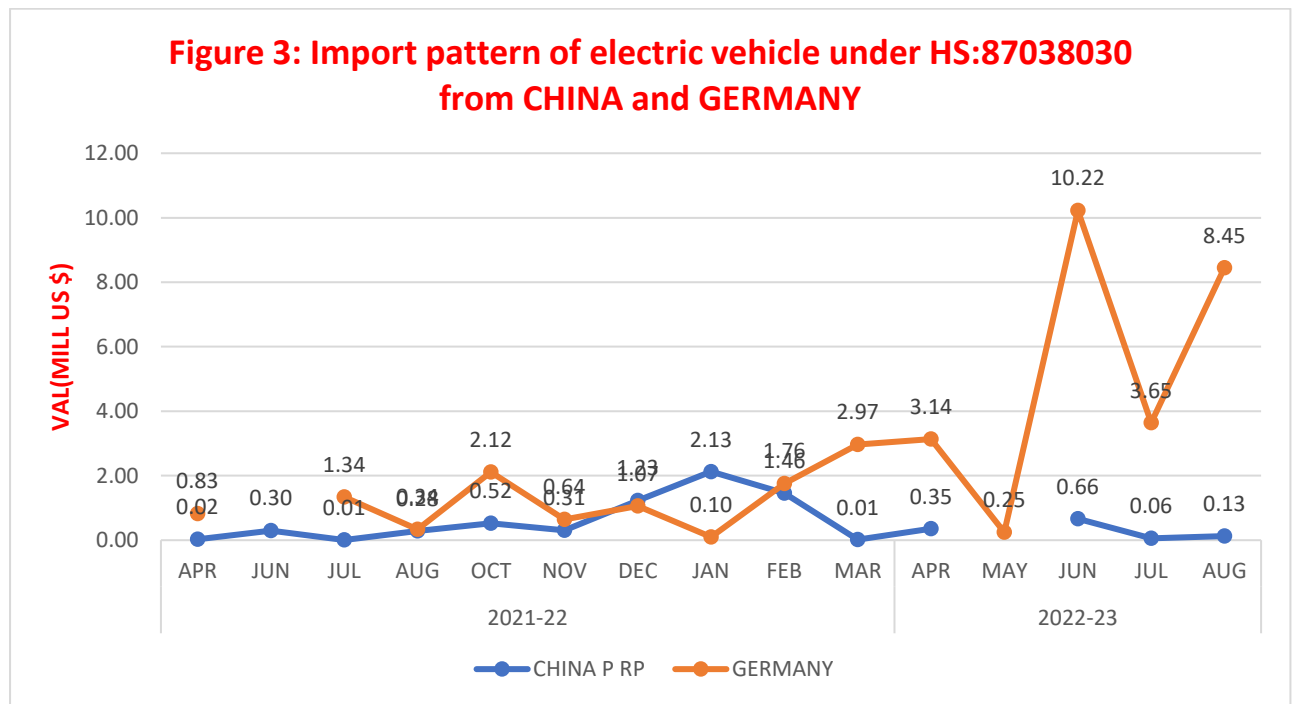
Table 2: Country-wise Export of electric vehicle during FY:2021-22 and 2022-23 (Till Aug,22)

FY	Month	COUNTRY	Export (VAL MILL US \$)
2021-22	APR	KOREA RP	0.06
	JUL	NEPAL	0.14
		GERMANY	0.01
	AUG	KOREA RP	0.14
		NEPAL	0.10
	SEP	NEPAL	0.83
		SEYCHELLES	0.03
		KOREA RP	0.01
	OCT	NEPAL	0.99
		U K	0.15
		KOREA RP	0.08
		BHUTAN	0.02
	NOV	NEPAL	0.64
		BHUTAN	0.14
		SWEDEN	0.08
		CHINA P RP	0.07

FY	Month	COUNTRY	Export (VAL MILL US \$)
		GERMANY	0.01
	DEC	NEPAL	1.00
		BHUTAN	0.21
		MALDIVES	0.02
		HUNGARY	0.00
	JAN	NEPAL	1.87
		BHUTAN	0.09
	FEB	NEPAL	1.77
	MAR	NEPAL	2.02
2021-22 Total			10.50
2022-23	APR	NEPAL	1.63
		BHUTAN	0.11
		KOREA RP	0.04
		SEYCHELLES	0.02
		SPAIN	0.01
	MAY	NEPAL	0.20
		MALDIVES	0.02
		SEYCHELLES	0.02
	JUN	NEPAL	1.74
		GERMANY	0.11
		BHUTAN	0.11
		CHINA P RP	0.07
		FRANCE	0.05
		NEW ZEALAND	0.04
		SEYCHELLES	0.02
		KOREA RP	0.01
	JUL	NEPAL	1.10
		BHUTAN	0.17
		FRANCE	0.15
		KOREA RP	0.10
		MALDIVES	0.04
		GERMANY	0.02
		U K	0.01
	AUG	NEPAL	4.74
		BHUTAN	0.13
		CHINA P RP	0.13
		U K	0.09
		SEYCHELLES	0.02
2022-23 Total			10.92

It can be seen from Table 1 that; Germany plays a vital role in India's electric vehicle import. It is already been discussed that huge increase in import of electric vehicle is observed in

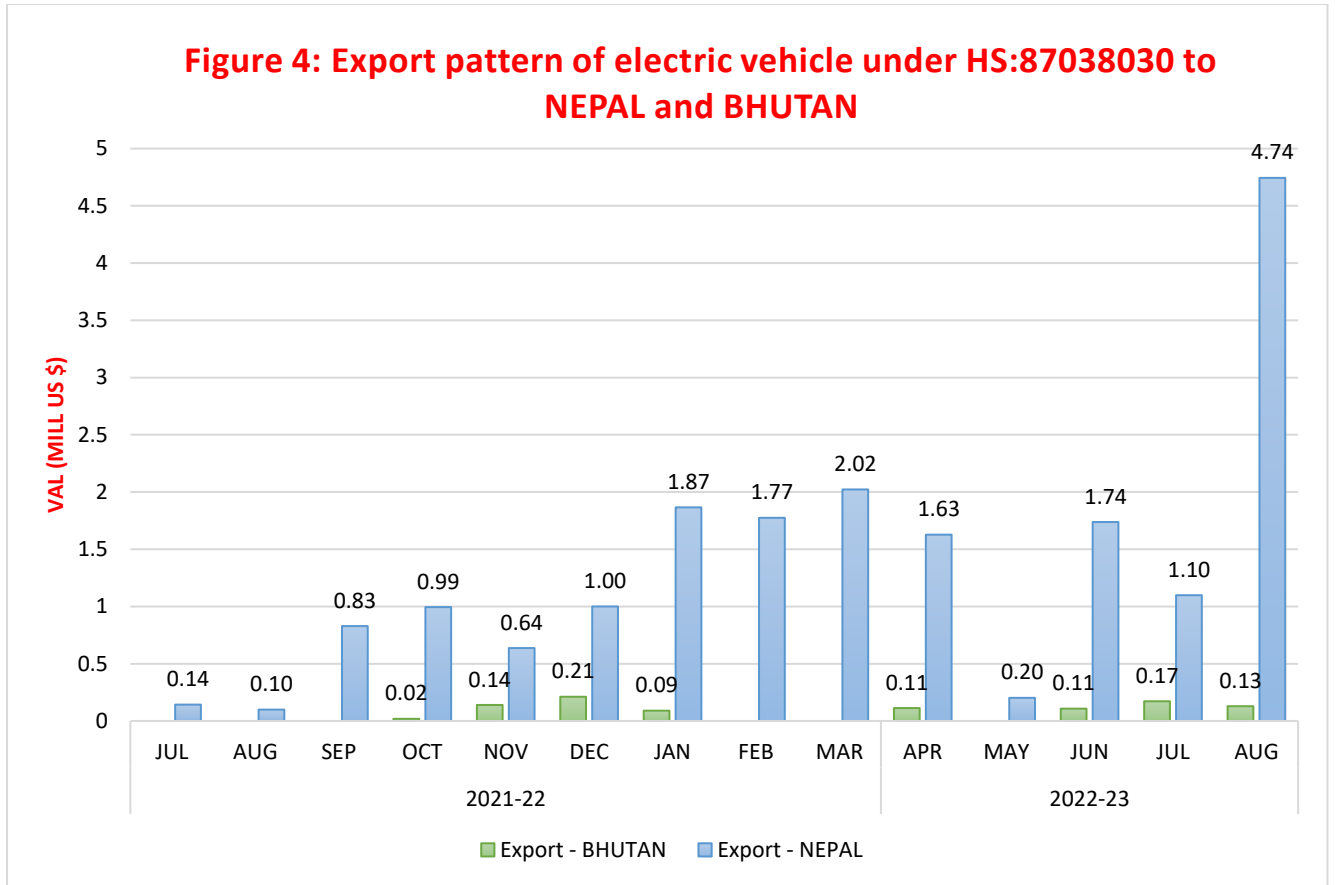
FY:2022-23 in months June, 2022 and August, 2022. Two countries Germany and China contributed most in total import of electric vehicle during FY:2021-22 and 2022-23 (Till Aug,22). In few months viz., June, 2021, December 2021 and January, 2022 maximum import of electric vehicle was conducted from China and thereafter contribution in Import were mostly from Germany and which substituted China. An import pattern of these two countries is given below by Figure 3.



It can be easily seen from above figure that, Germany substituted China in exporting electric vehicle to India in recent months and resulted in a huge surge of import of electric vehicle in India during June and August,2022. In June,2022, the import of electric vehicle from Germany was 10.22 US MILL \$ which is around 90% percent of total import of that month.

Similarly in export, maximum contribution in total export of electric vehicle during FY:2021-22 to 2022-23 (Till Aug,22) were from Nepal and Bhutan. An export pattern to these two countries is given below by Figure 4.

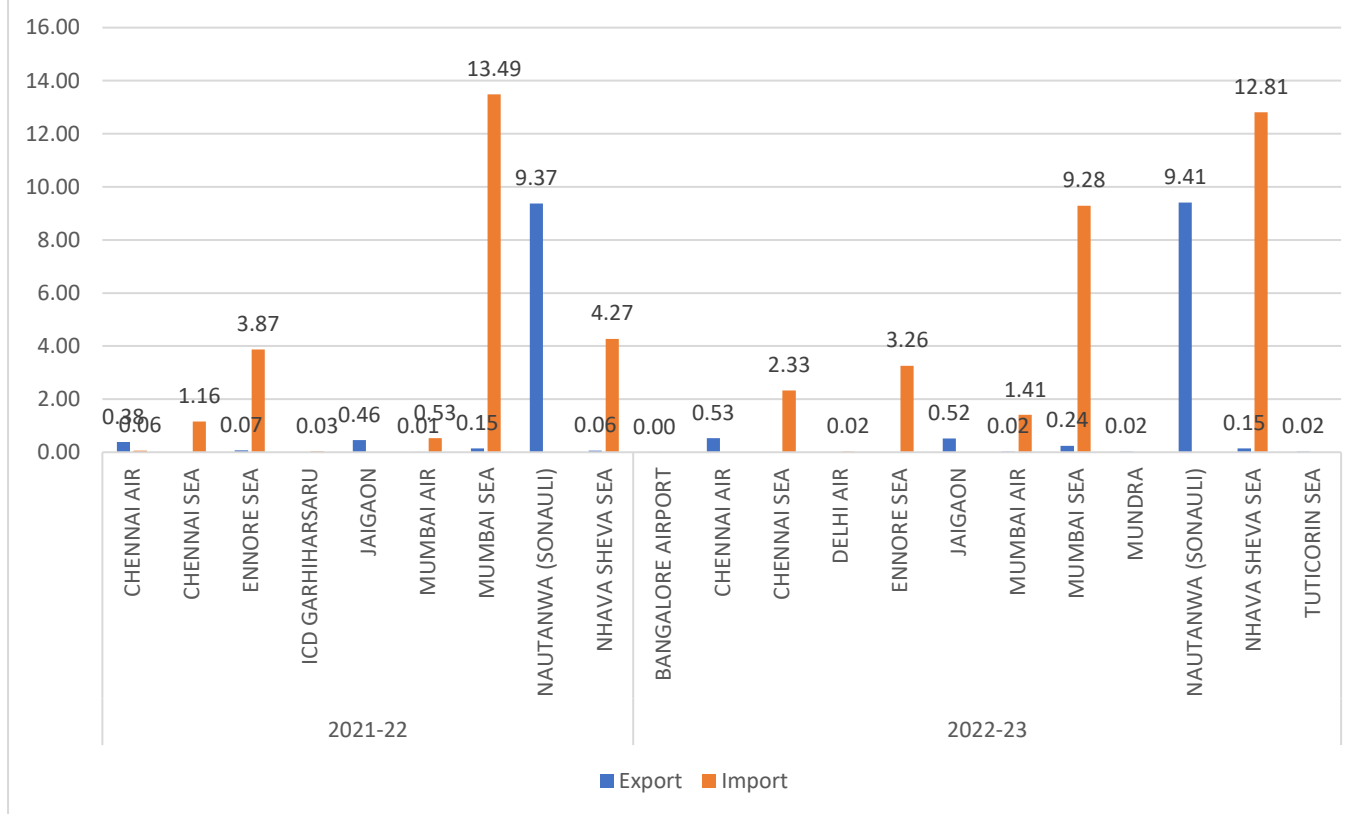
Figure 4: Export pattern of electric vehicle under HS:87038030 to NEPAL and BHUTAN



Contribution of Nepal to the export is much more than other countries and the export to this country is increased a lot in recent month i.e., August,2022 to 4.74 US MILL \$ from 0.14 US MILL \$ of July,2022.

Port-wise Import and Export of electric vehicle is also studied and it is observed that, more than 90% of total import of electric vehicle under HS: 87038030 was conducted via Mumbai Sea and Nava Sheva Sea whereas export of electric vehicle was happened through Nautanwa (Sonauli) which adjacent to India-Nepal Border. Detailed port-wise analysis is presented by Figure 5 as given below.

Figure 5: Port-wise Import and Export of electric vehicle under HS:87038030 during FY:2021-22 and 2022-23 (Till Aug,22)



It is already been observed that most of electric vehicle were imported from Germany during FY:2021-22 and 2022-23 (Till Aug,22). A country-of-origin and country-of-consignment wise analysis was also conducted for Germany and presented by Table 3.

Table 3: Country of Origin-wise Import of electric vehicle of Germany

Country	VAL (US MILL \$)	Share (%)
GERMANY	21.50	84.06
BELGIUM	3.49	13.65
HUNGARY	0.50	1.95
CZECH REPUBLIC	0.09	0.34

It is found that 84% of total imported electric vehicle from Germany, were of Germany origin. About 14% electric vehicle which were imported from Germany, were of Belgium originated. One may infer from above table that a significant portion of total import of electric vehicles were of Belgium originated and routed through Germany to India.