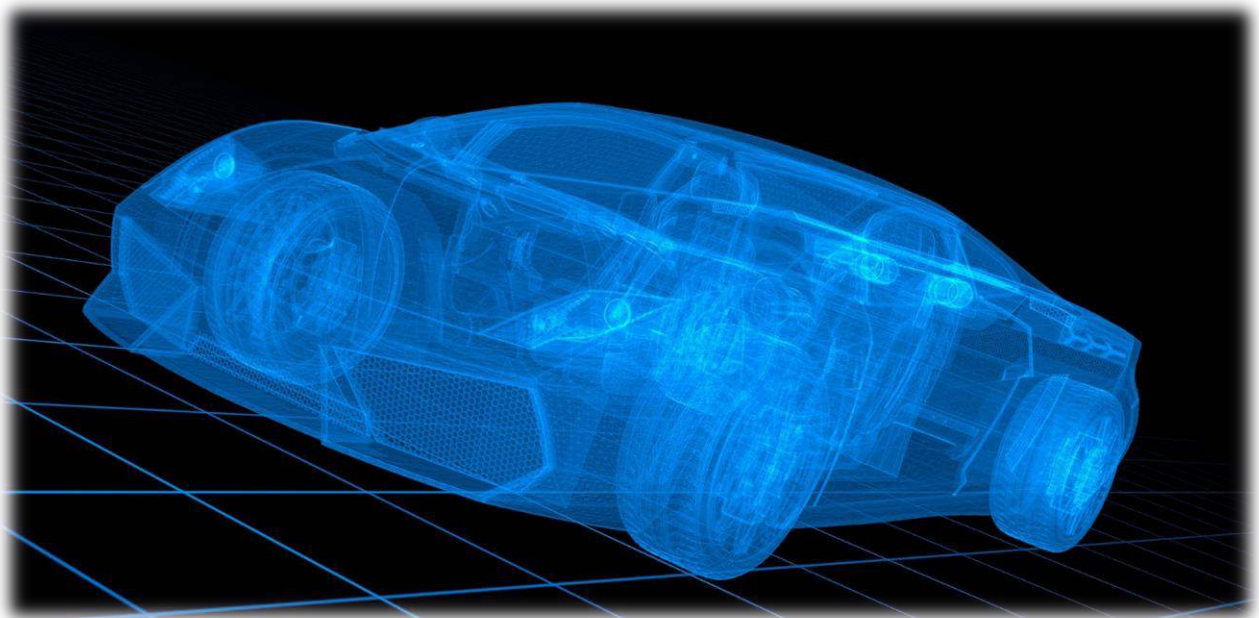


Patent and Industrial Design Statistics in the Automotive Industry in Vietnam

By Thomas J. Treutler, Thang Duc Nguyen, Son Cao Pham, and Van Vu Le

When Vietnam began to open its market in the late 1980s, there were few cars on its roads. Over time, as the country's economy entered a period of rapid growth, the number of cars grew accordingly. While that number has steadily risen, car ownership in Vietnam is still low by world standards, with only about 23 cars per 1,000 people. However, that rate is only expected to increase in the coming years as per capita income continues to rise.

The developing economy has also created opportunities for domestic auto manufacturers such as VinFast, a potentially strong company that has plans to roll out its own domestically produced cars by late 2019. The company is owned by Vietnam's largest conglomerate, VinGroup, and aims to be the biggest automotive manufacturer in Southeast Asia.

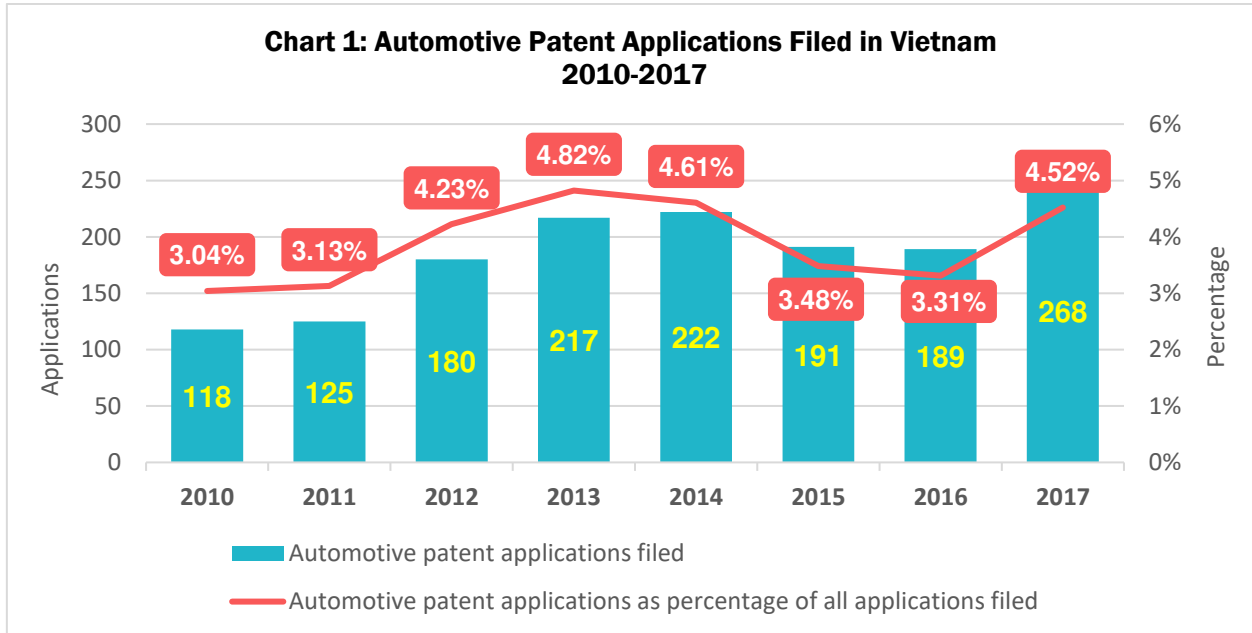


In this report, we have compiled statistics for both patent and industrial design in the automotive sector in Vietnam over the 2010 to 2017 period. The resulting "patent map" — a high-level visualization of patents applied for and granted in the sector — can be used to identify patterns, trends, and opportunities in the market.

I. Automotive Patents (for Inventions and Utility Solutions)

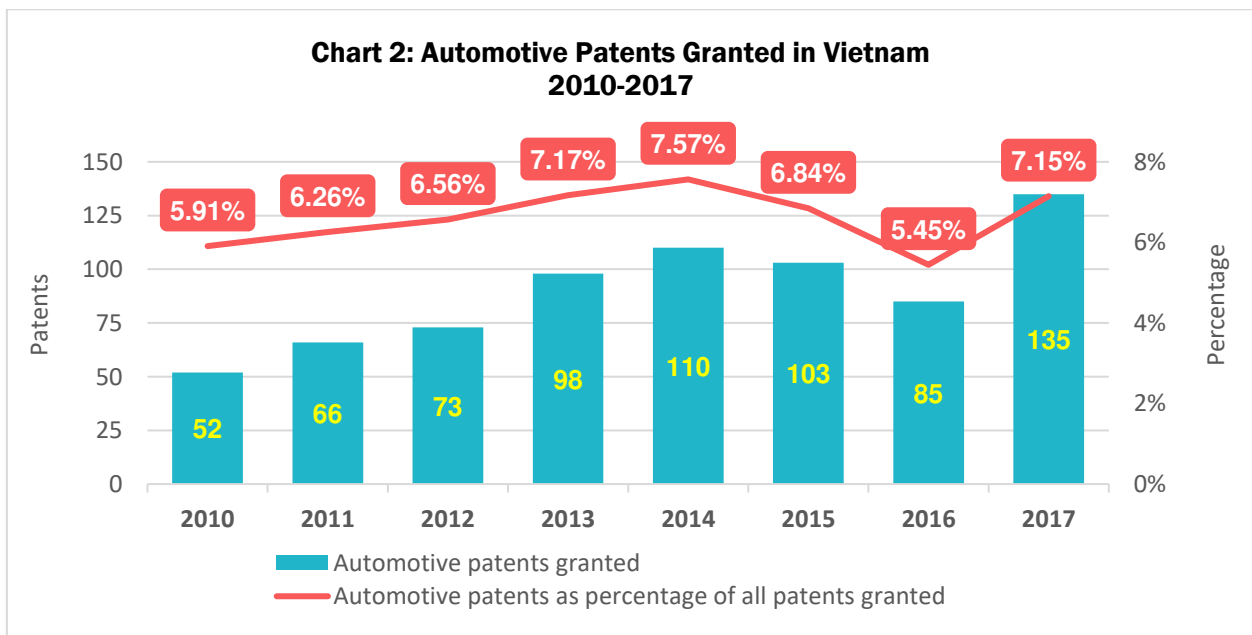
We first look at patents for inventions and utility solutions — a reasonable measuring stick for the degree of technological development in the country, and, in the case of the automotive industry, the level of manufacturing capabilities.

1. By number of applications



Over the 2010-2017 period, automotive patent applications made up 3.89% of all applications filed in Vietnam, a healthy percentage indicating the importance of the automotive sector in the country. While the numbers have fluctuated, the percentage has stayed relatively consistent — around 4% — showing that the automotive patent field in Vietnam is quite stable, unlike some other sectors that have grown or dropped sharply over time.

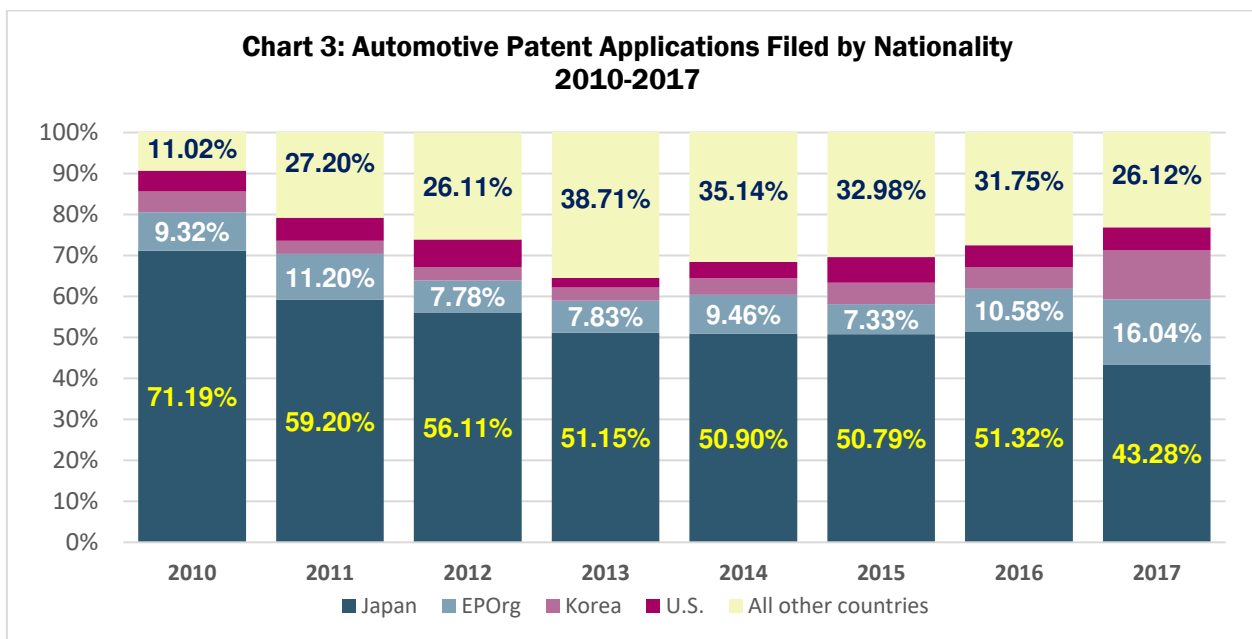
2. By number of granted patents



Over the 2010-2017 period, automotive patents made up an average of 6.61% of all patents granted, despite being only 3.89% of all patent applications filed — in other words, automotive patents are granted at a higher rate than average. A number of factors may contribute to this. For example, automotive patent applications are typically handled by Patent Division No. 1 of Vietnam’s National Office of Intellectual Property, which seems to work faster than the other divisions, and fewer applications in the automotive field are abandoned than in other fields.

Interestingly, though it takes a patent application several years to be granted, the percentage of patent applications filed in Chart 1 closely tracks the percentage of patents granted in Chart 2, without any noticeable lag. Both graphs peak in 2013-2014 and then, following a slight decline, rise again in 2017.

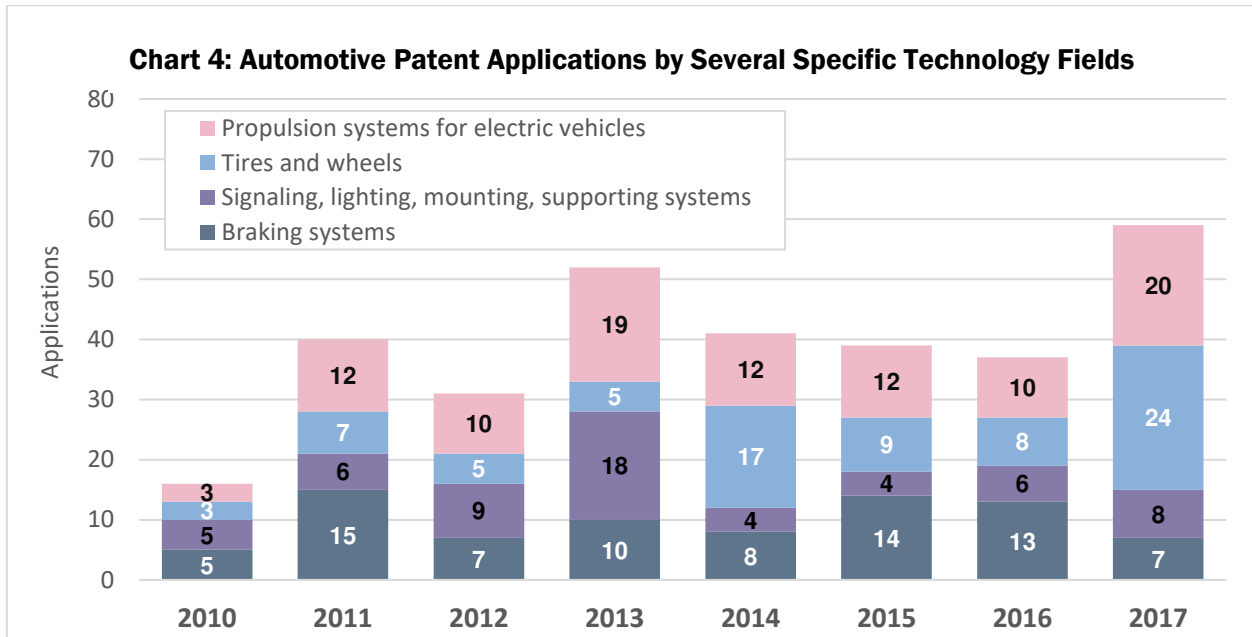
3. By country of origin of applicants



Over the period of this study, about 75% of all auto patent applications filed in Vietnam were filed by applicants from Japan, the United States, South Korea, and the EPOrg (i.e., all member states of the European Patent Organisation, led by Germany and Sweden). Japan — home of Honda, Toyota, and Nissan, among others — has been the most dominant country by far, accounting for more than half of all automotive patents filed. However, Japan’s share has been slowly declining, while EPOrg and Korean applications are recently on the rise

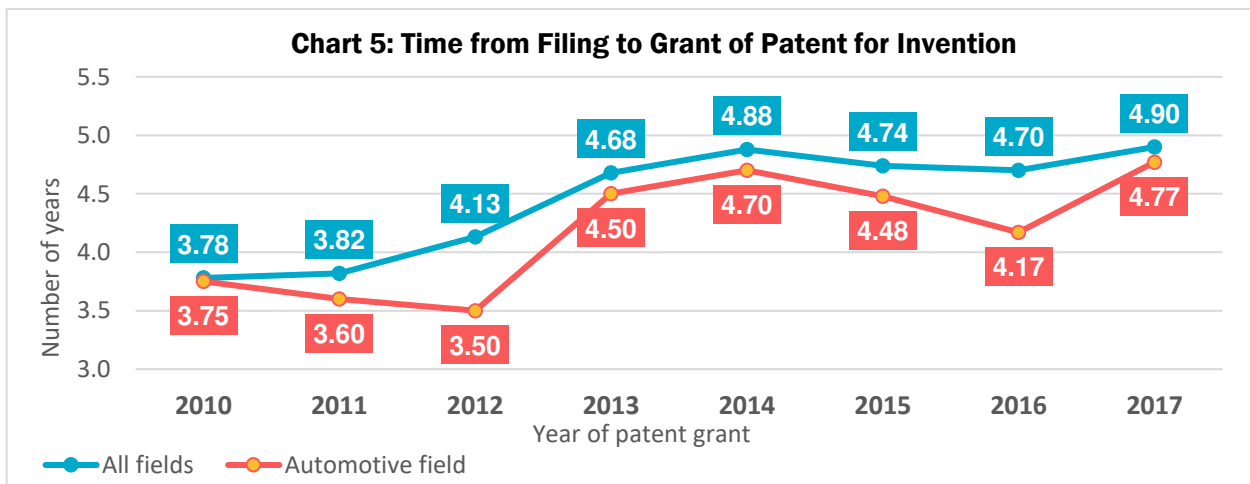
The number of applications filed by domestic Vietnamese applicants has thus far made up only a negligible portion of the total.

4. By specific field of automotive application



Looking at the technical fields covered by automotive patent applications in Vietnam (based on WIPO IPC fields), the most commonly occurring are (i) propulsion systems for electric vehicles, (ii) tires and wheels, (iii) signaling, lighting, mounting, and supporting systems, and (iv) braking systems. These four technologies account for about 25% of all automotive patent applications filed in Vietnam. Patent applications for electric vehicles increased significantly in 2017. This trend is likely to continue, with the growing tendency in Vietnam, as in many countries, to move away from expensive, polluting fossil fuels.

5. By prosecution time

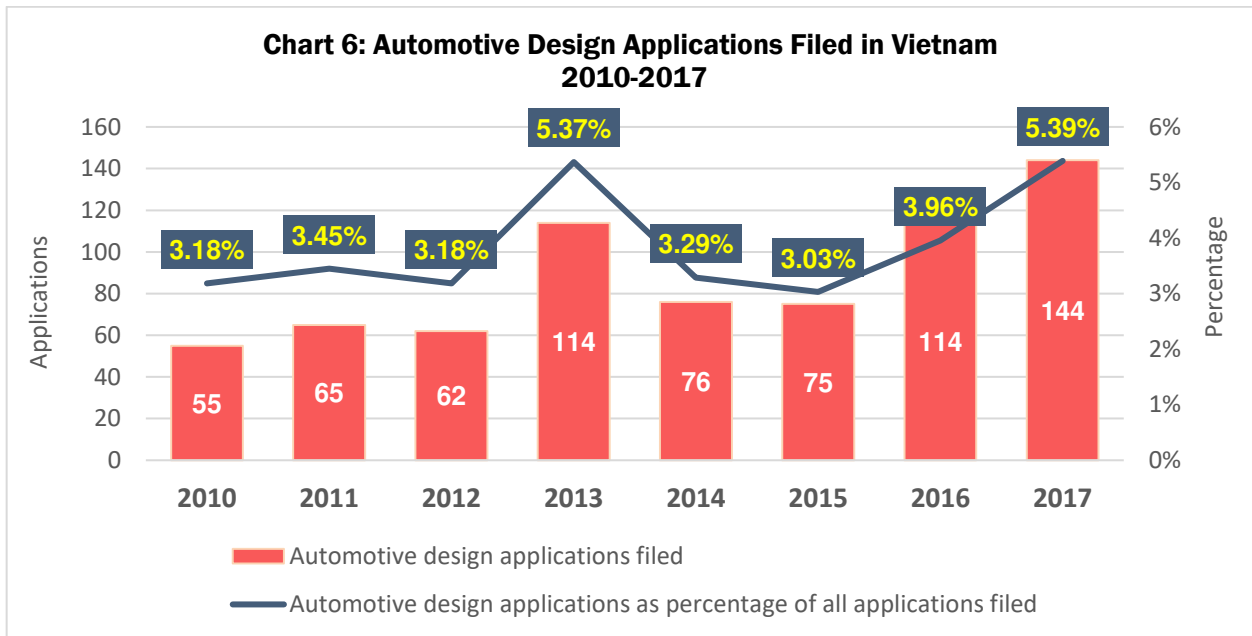


While automotive patents tend to be granted more quickly than the average patent, the difference is not great. The time of over four years from filing to grant is not especially slow, in comparison with the rest of the world, but it is worth noting that accelerated examination in Vietnam has thus far not been very effective. With extended and improved cooperation programs for examining patent applications, such as the recent pilot Patent Prosecution Highway (PPH) with Japan, Vietnam has an opportunity to speed up the examination process even more.

II. Automotive industrial design

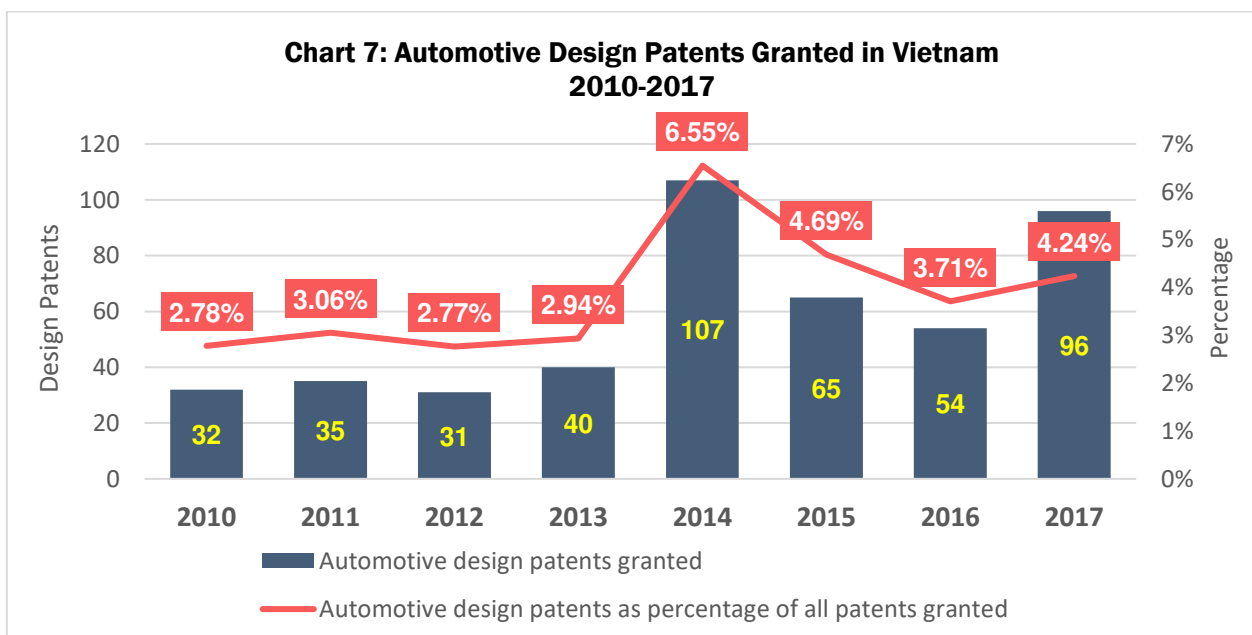
Unlike sectors such as pharmaceuticals and biotechnology, the automotive field is a tangible field. In addition to the “under-the-hood” inventions and processes that make cars run, the shapes and styles of automobiles can be a very important and distinctive intellectual property object. As a result, industrial design patents are critical in the automotive field, and merit a separate study.

1. By number of applications



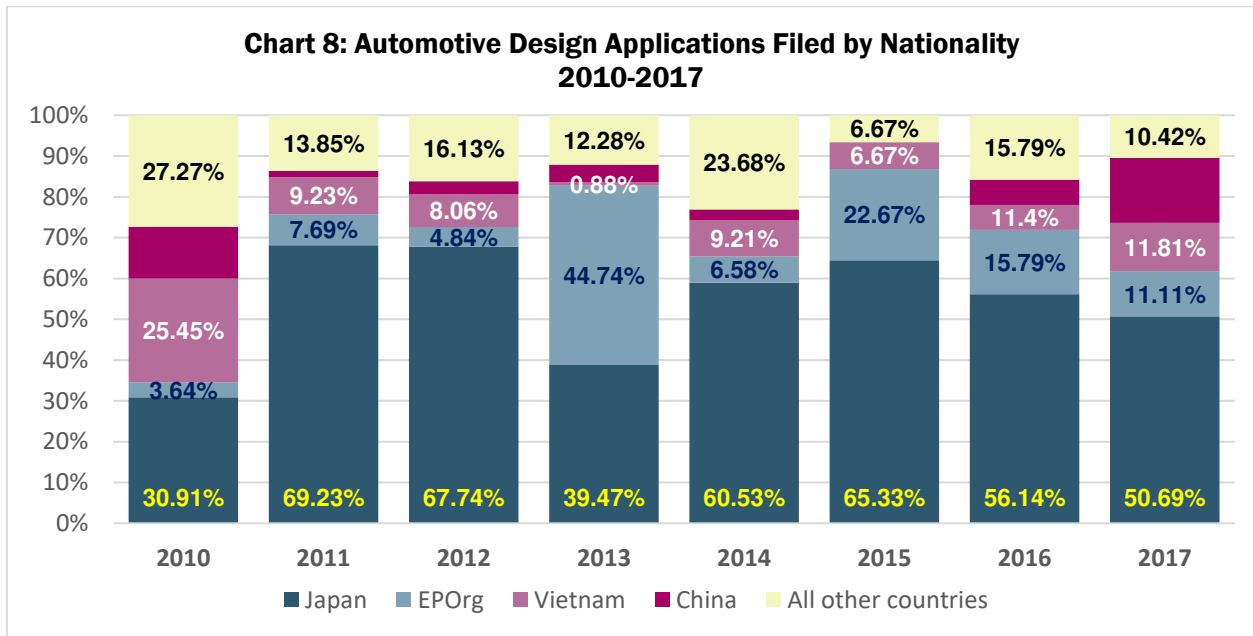
In the automotive field, the number of design applications filed annually is approximately half the number of patent applications (invention/utility solution), but represents a slightly higher percentage of all applications filed in the area. There has been a strong upward trend since 2015.

2. By number of granted patents



Over the 2010 to 2017 period, automotive design patents granted represented 3.84% of all design patents granted — nearly identical to the percentage of automotive design applications out of all design applications filed, which is 3.85%. Unlike invention/utility solution patents, design patents in the automotive field do not appear to have any advantages over other fields. The spike in applications filed in 2013 appears to be echoed by a spike in patents granted in 2014. This is natural, given the typical time to grant of slightly over a year for design patents (see item 4 below).

3. By country of origin of applicants

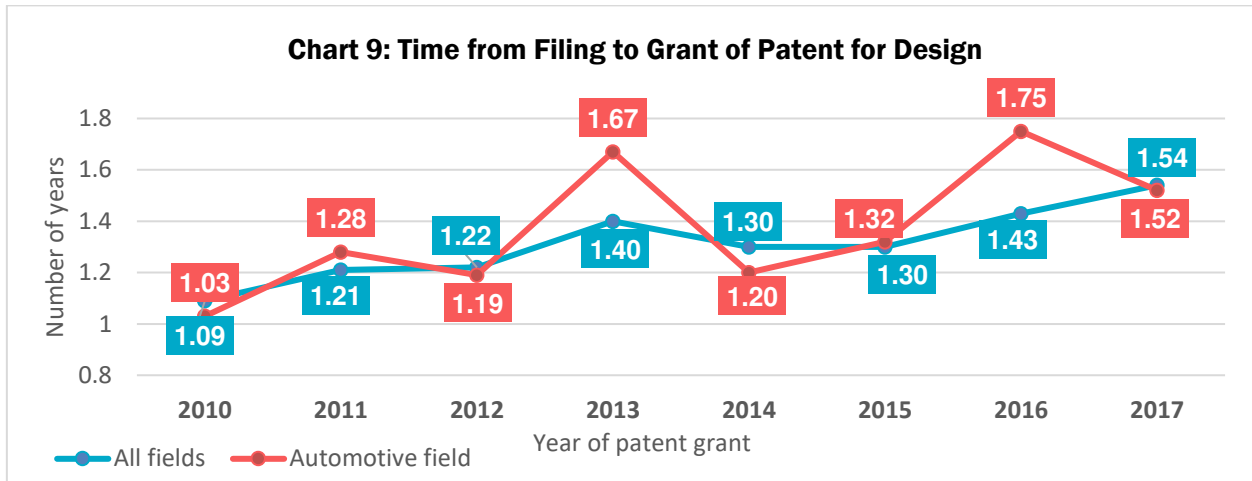


As with invention/utility solution applications, Japan is the dominant country for automotive design applications, typically representing more than half of all applications filed. China also filed a considerably high number of design applications in 2017.

Given the limited scope of the domestic auto industry, it may come as a surprise to see Vietnam ranked third, behind only Japan and China, in percentage of design applications filed in 2017. However, it is worth noting that domestic applications for industrial design typically make up a much higher percentage of total applications than they do for invention/utility solution. For example, in 2016, Vietnamese applicants submitted only 10.7% of all invention/utility solution applications filed (in all fields), but 64% of all design applications filed. From that perspective, domestic applicants' 11.4% share in the automotive sector can be viewed as another indication that the domestic automotive industry is still developing.

An interesting take-away is that, in invention/utility solution but especially in design, the large automakers from countries other than Japan—e.g., Korea, Germany, and the U.S.—have filed very few applications. This shows that there is still a huge potential for those countries to file applications in Vietnam.

4. By prosecution time



Over the period of this study, the average time from filing a design application to grant in the automotive field (16.5 months) is similar to the time for all fields (15.5 months). In our experience, accelerated examination of design applications has been rather effective. However, the number of examiners has not kept pace with the growth in applications, leading to a backlog of pending applications and an overall increase in the length of prosecution time.

III. Conclusion

Historically, intellectual property awareness in Vietnam, and among Vietnamese companies, has not been high. The manufacturing industry has always been primarily focused on production, with innovation — and the need for IP protection — taking a secondary position.

With the rapid growth of Vietnam’s economy over the past two decades, and the continued development of the IP law framework, Vietnamese companies are now paying more attention to protecting their inventions and designs. As companies like VinFast spur the growth of the domestic auto industry, the number of patent and design applications is expected to rise. Foreign automakers would be well advised to establish their IP rights in Vietnam as much and as soon as possible.

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