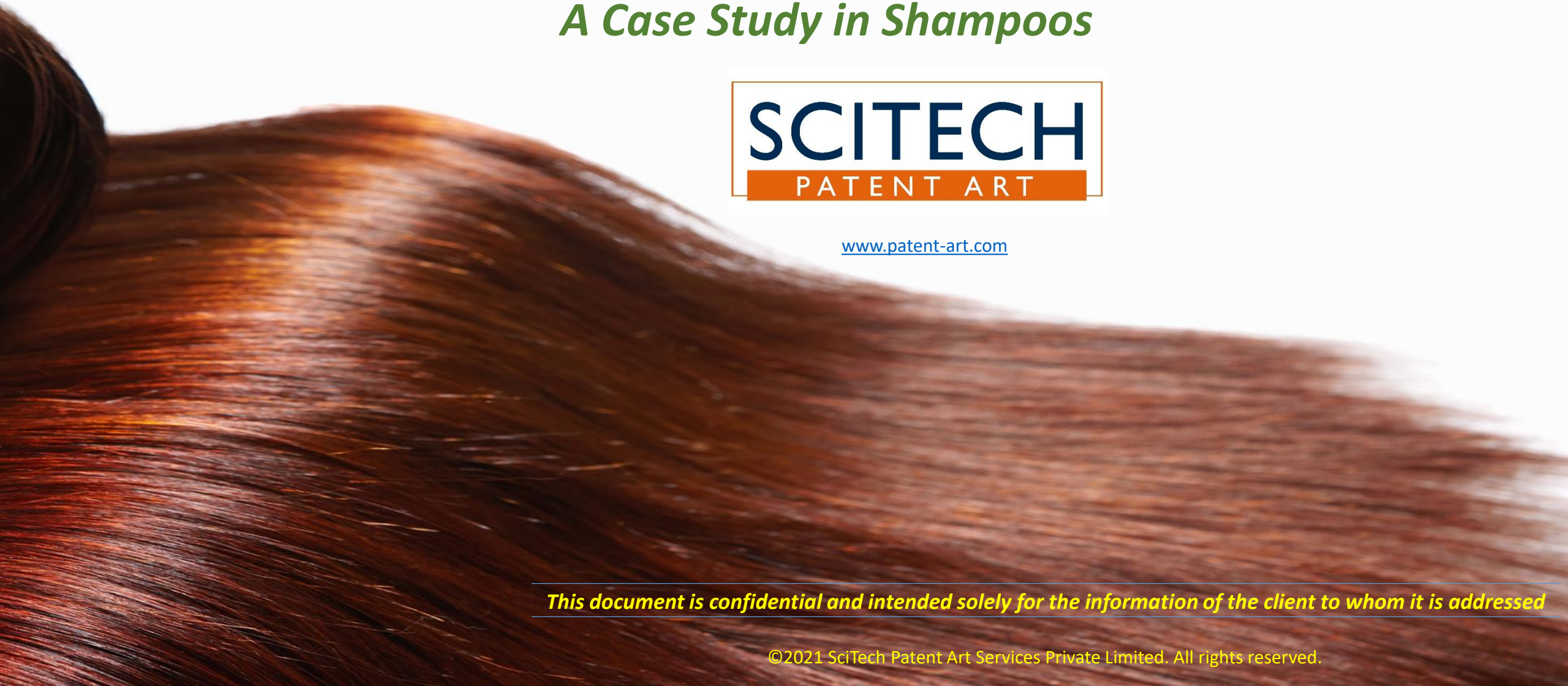
Assessing Commercial Effectiveness of Patents

A Case Study in Shampoos



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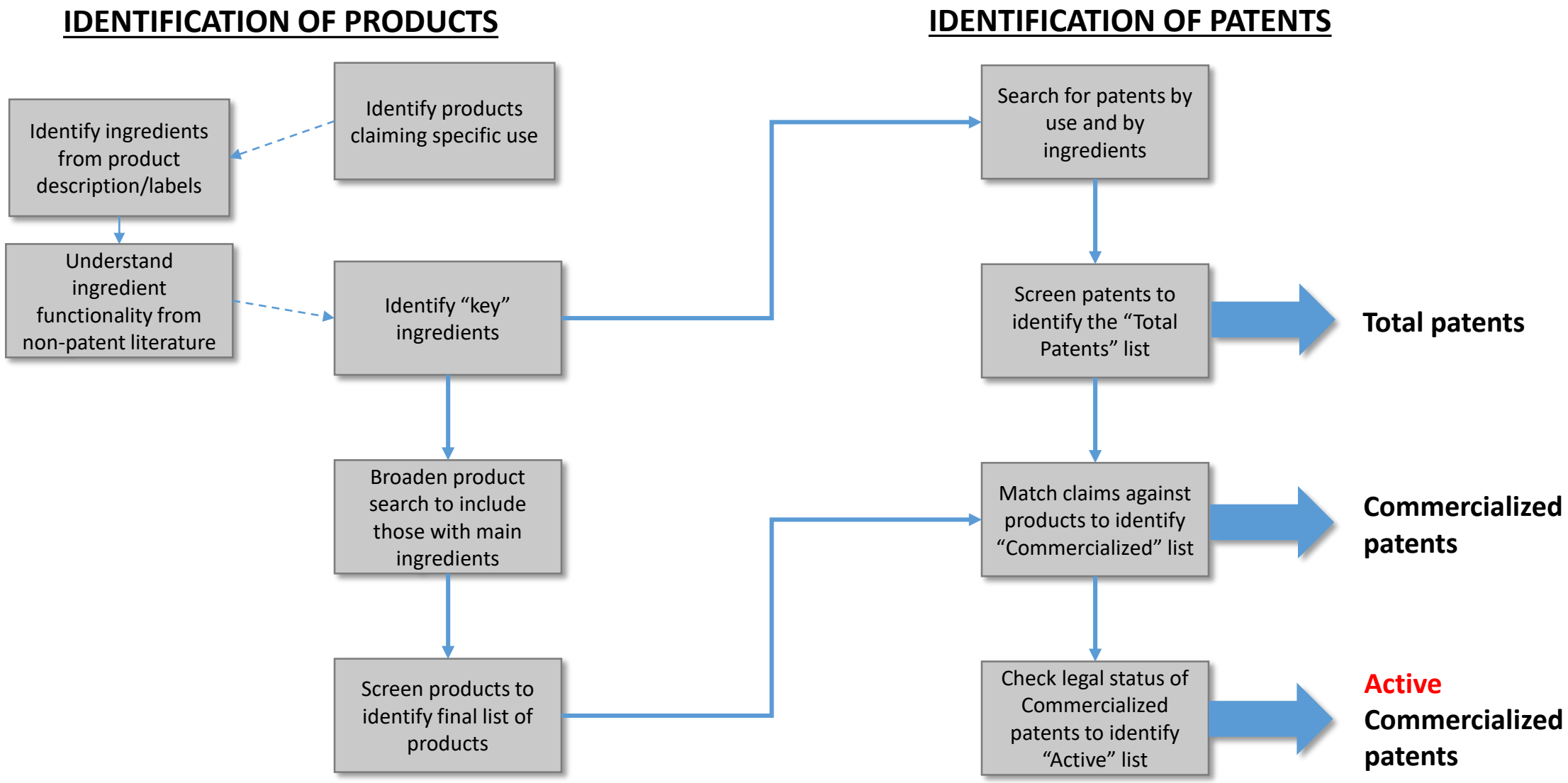
Business Case

- Companies are constantly looking for ways to optimize their spending on IP activities, i.e., get the best business results at optimal cost
- To do so, establishing meaningful ways to analyze the effectiveness of a patent portfolio in achieving key business objectives is important
- Effectiveness of a patent/patent portfolio can be assessed in many ways depending on whether a patent/patent portfolio is serving an offensive or a defensive business objective
- From a defensive perspective, effectiveness can be evaluated from two angles – from a product angle where degree of product protection is the focus (or) from a patent angle where the degree of patent commercialization is the focus
- SciTech Patent Art has developed a robust methodology for patent-product matching. This methodology offers a new way to evaluate effectiveness from both the above angles
- In this report, to demonstrate the effectiveness of this methodology, we conduct this analysis across competitors in the same business segment
- A systematic study such as this by any company can have significant implications on the IP processes / systems adopted within the company. Example business decisions that could be driven by such a study include:
  - Strengthening product protection by revitalizing IP programs in core areas of business interest
  - Identifying IP to acquire to strengthen a weak patent portfolio
  - Reduction of maintenance costs by discarding/out-licensing patents of no commercial interest
  - Recognition and retention of core inventors driving commercialized inventions
  - …and many more

Methodology



Case Study: Hair Care

- Personal care or toiletries refers to the industry that manufactures consumer products used for personal hygiene and aesthetics

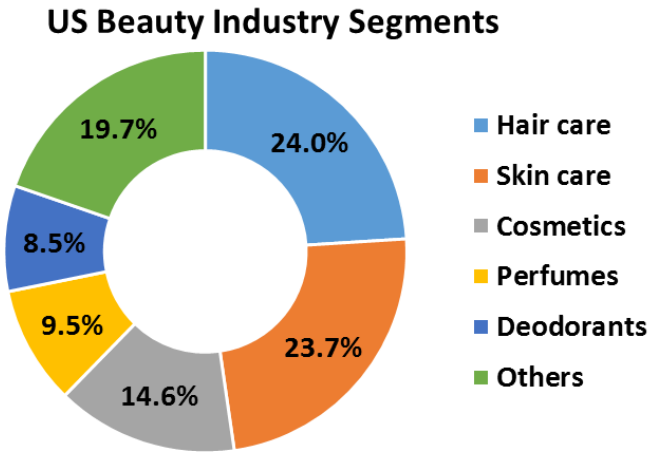
- The personal care sector is divided into the following subsectors:
    1. Personal hygiene: Examples include skin care products, oral care products, etc
    2. Cosmetics/beauty: Examples include hair coloring products, make-up, lip stick, etc.

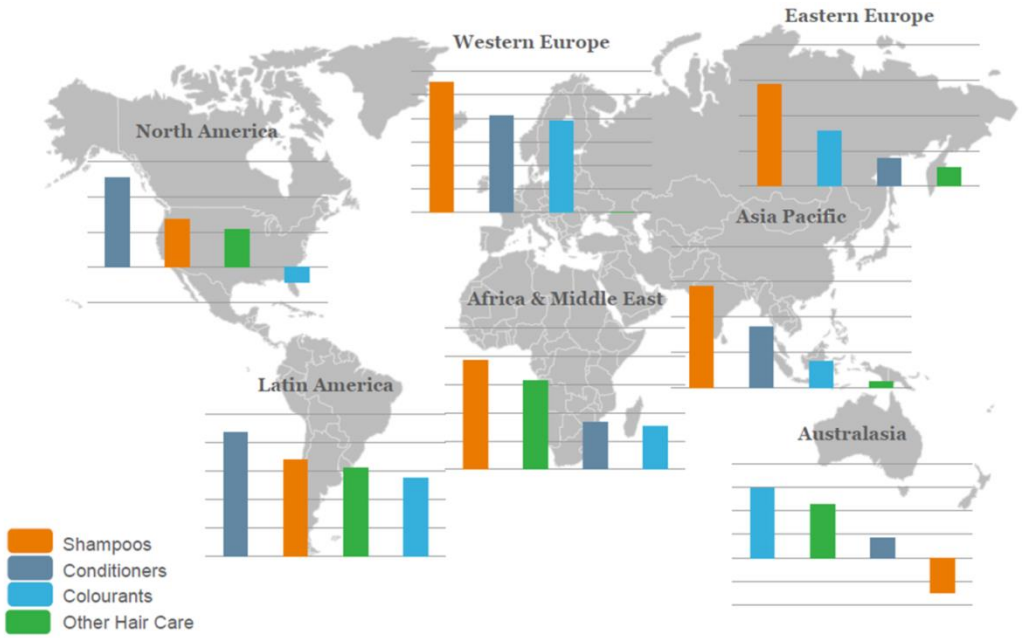
- The major product categories within the cosmetics/beauty subsector are:
    1. Skin & sun care products
    2. Hair care products
    3. Makeup & color cosmetics
    4. Deodorants
    5. Fragrances, perfumes and colognes

- In this report, we focus on
    - ‘Hair care products’ (#2 above) since that subsector is rapidly growing and has also had a significant number of new product launches in the recent past
    - Specifically, in ‘Hair Care’, to demonstrate the methodology, we picked specific product category – products focused on **Hair Loss / Hair Fall Control** – to conduct this analysis

Background: Cosmetics/Beauty care

- In 2015, the cosmetics/beauty industry generated $56.2 billion in the United States
- Among the product categories in cosmetics/beauty care area, hair and skin care constitute nearly 50% of the market share by revenue

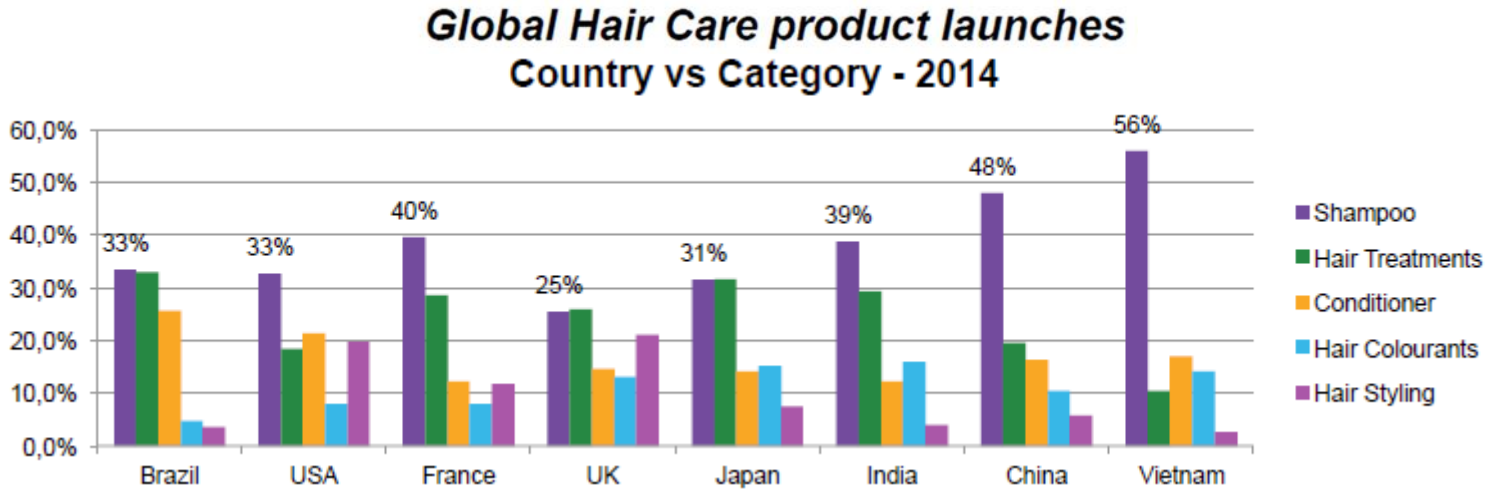


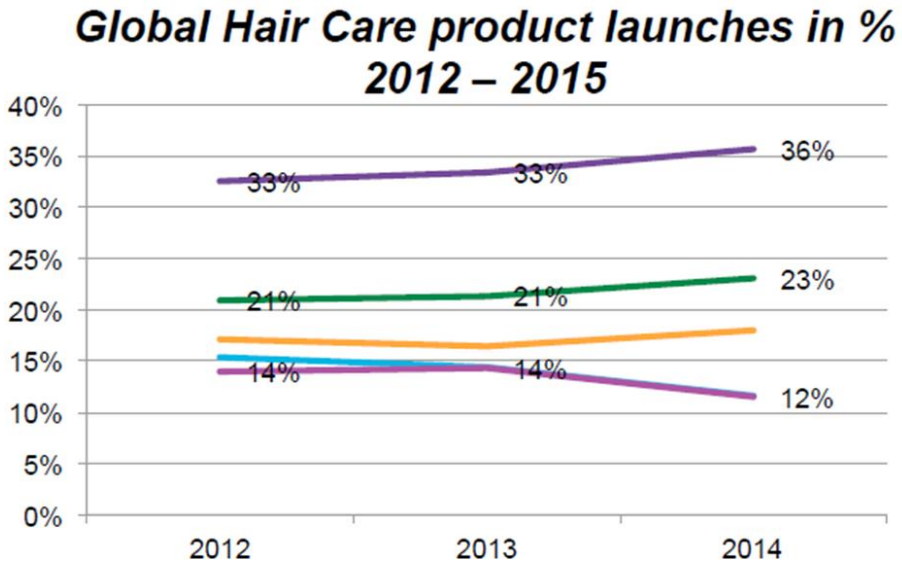


- In the recent past, hair care segment has surpassed the skin care segment in many countries, including the US
- Within the hair care segment, shampoos constitute about 30% of the total market across the globe, followed by colorants and conditioners

Source(s): Euromonitor International: Hair Care: Exploring trends and future prospects (2015) and other web sources

Background: Hair Care



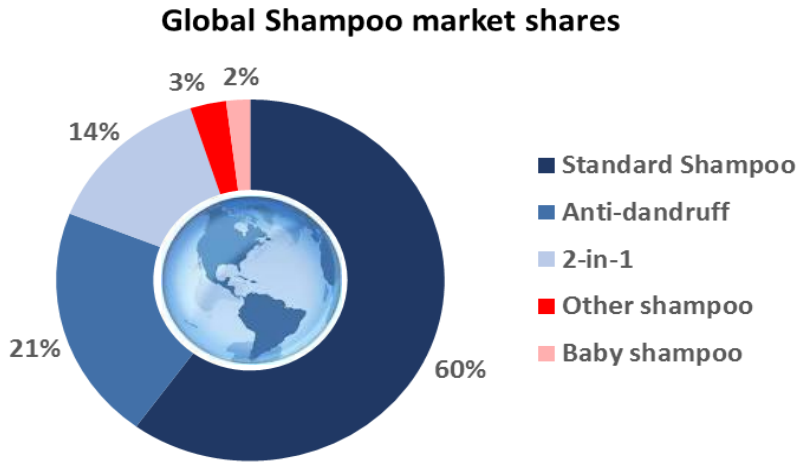


- Within the Hair Care segment, the shampoo segment has had the maximum number of product launches in many parts of the world in 2014
- 34% of the total products launched globally are in the shampoo segment
- Between 2012 and 2014, the rate of product launches in the shampoo segment trended upward, with an improvement of 300 basis points from 2013 to 2014
- In contrast, during the same period, the hair styling segment saw a dip of 200 basis points

Sources(s): Global Haircare Trends: Understanding your consumers (2015), Mintel

Types of Shampoo – A Primer

- The global shampoo market is $12bn in size in 2012-13 and expected to reach an estimated value of $25.73 billion by 2019
- There are many types of shampoo available in the market today. One way to understand the market is to segment by consumer benefit
- Broadly, 'standard' shampoos, i.e, those that cleanse hair without providing any other medical benefit, account for 60% of the global shampoo market followed by anti-dandruff shampoos ($4.3bn) and two-in-one formulas ($2.9bn)
- Anti-dandruff shampoos carry the second largest share at 21%, which has been attributed to Asian consumers being very concerned with scalp care
- For this study, we have picked the benefit category of Hair Fall Control since the data-set is small and our primary objective is to illustrate the methodology



Shampoo Benefits
Cleansing / Clarifying
Volumizing
Anti-dandruff
Hair Fall Control / Loss
Damaged Hair
Colored Hair
Etc

REPORT FOCUS

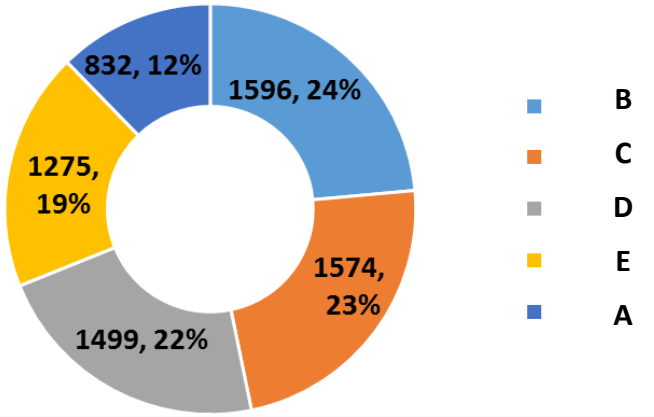
Source(s):

1. Consumer Insight Consumer and Innovation Trends in Haircare (2014), Datamonitor
2. Consumer Market Data Analytics (2013), Datamonitor
3. The Global Shampoo Market 2014-2019 Trends, Forecast, and Opportunity Analysis, Lucintel

Patent Deep Dive: Shampoos

FOCUS: HAIR LOSS / HAIR FALL CONTROL SHAMPOOS

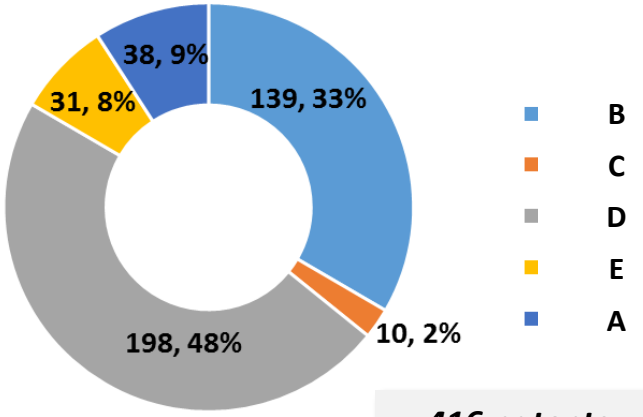
Patent filings on Shampoos



~4, 700 patents

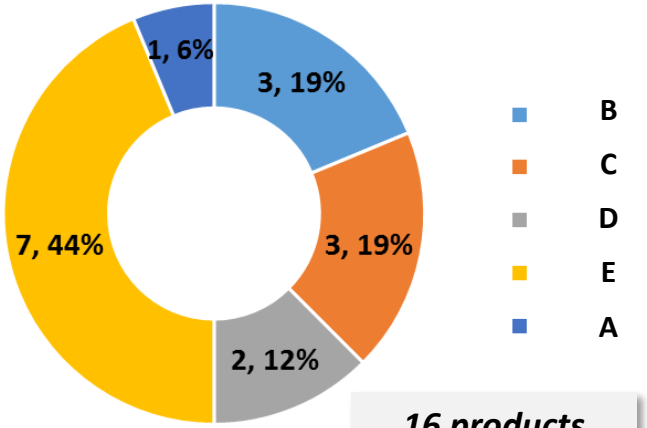
- Among the top hair care companies, A, B, C, D and E were considered for this study.
- There are about 4,700 patent filings in shampoos for these assignees.
- All the assignees, excluding **A**, have similar numbers of patents in shampoos.

Patents on Hair Fall Control



416 patents

Products mentioning Hair Fall Control



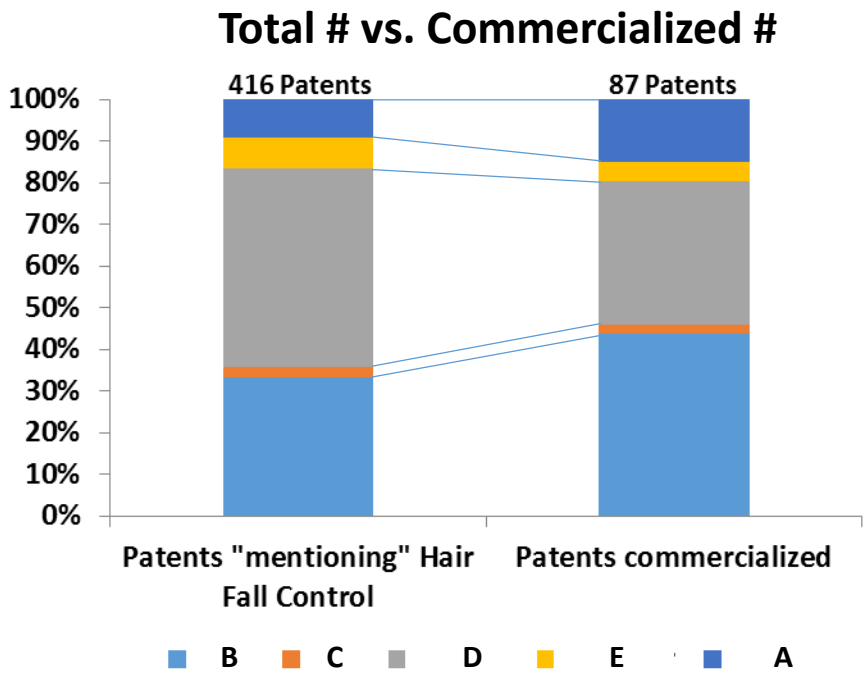
16 products

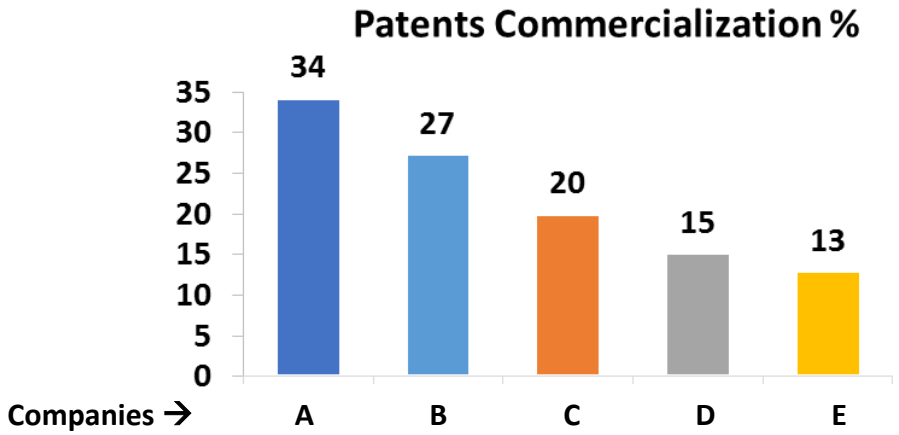
- Out of ~4,700 patents, 416 patents (9%) either mention hair fall control benefits or contain the core ingredients related to that benefit.

  81% of the patents in hair fall control area belong to **D** and **B**, indicating their IP interest in this segment.
- There are 16 products that were identified across the 5 assignees in this segment.
- Interestingly, though **E** has a relatively minor presence in patents (8% of total), it appears to have the largest product portfolio in this segment.

Source(s): SciTech Patent Art analysis

Evaluation from a Patent Angle: Commercialization Efficiency



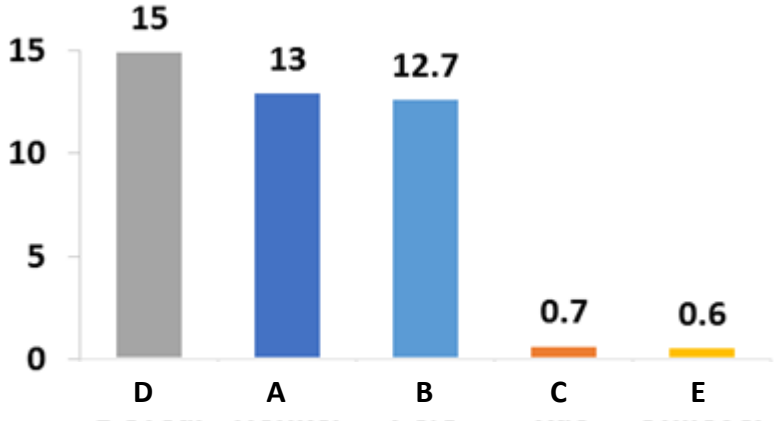


Source(s): SciTech Patent Art analysis

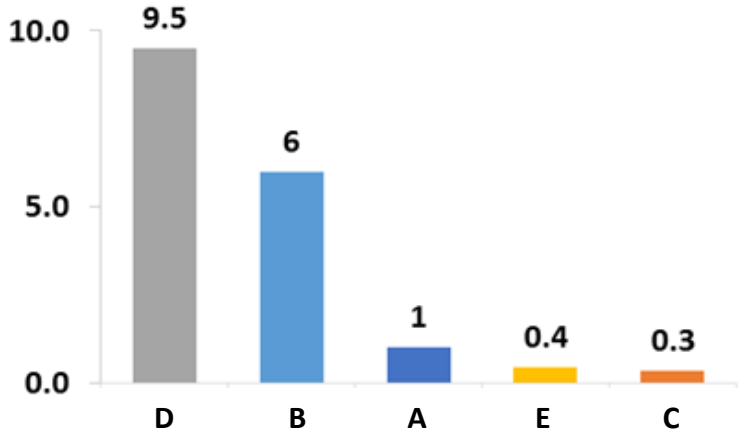
- In the five companies studied, **A** and **B** have the highest "efficiency", i.e., proportion of their hair fall control patents commercialized
- **A** stands at the top with 34% of their hair fall control patents commercialized
- **D** and **E**, on the other hand, appear to have the least efficiency, with <15% of their Hair Fall control patents commercialized. This efficiency is <50% of their largest competitors
- Across all players, improving this efficiency may bring significant opportunities in saving maintenance costs, and focusing on spending on strengthening the portfolio

Evaluation From A Product Angle: Protection Strength

Total # of patents per product



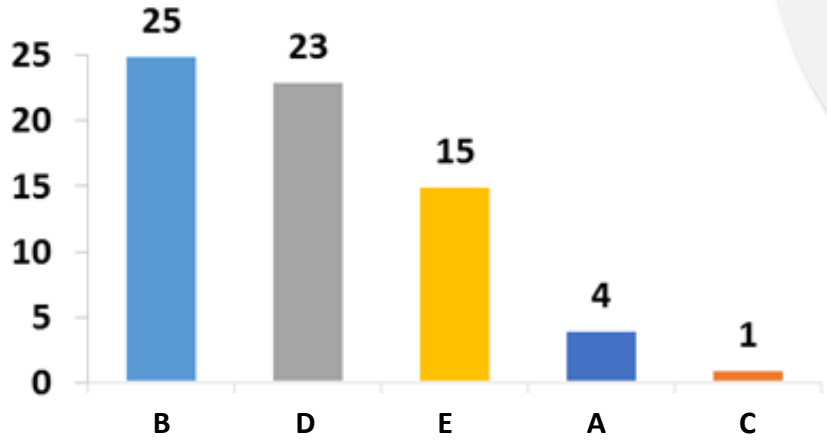
Active # of patents per product



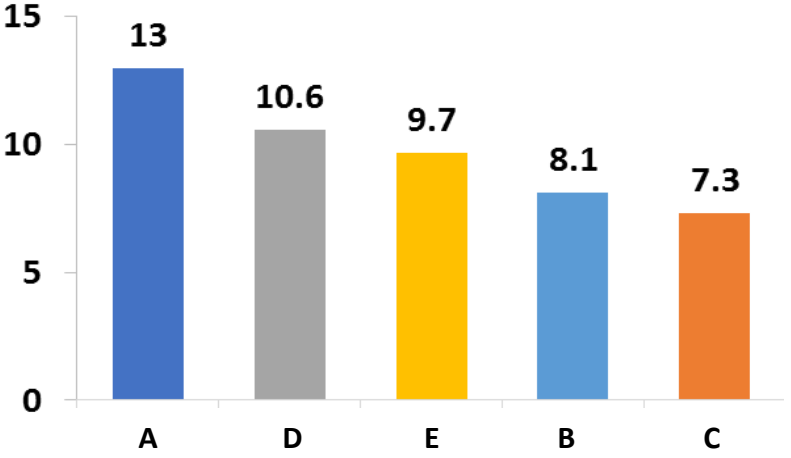
Key Observations

- **D** and **B** have the most active patent programs in Hair Fall Control segment
- **B**'s patent portfolio is relatively older
- **A**, **C** and **E** have the weakest portfolios despite having multiple products in the market today

Geographic Coverage (# of Countries)



Average Remaining Life (Years)



Source(s): SciTech Patent Art analysis

Impactful Inventors

- Here we bring a different perspective to inventor assessment. Impactful inventors are defined as those that have had their patents commercialized repeatedly. The top few in each company are listed below

Company	No. of inventors	Inventors with >1 patent	Impactful Inventors (No. of patents)
B	89	19	• Inventor xx (9) • Inventor yy (8)
C	1	1	• Inventor aa (2)
D	54	12	• Inventor bb (5) • Inventor cc (3) • Inventor dd (3) • Inventor ee (3)
E	6	3	• Inventor ff (3) • Inventor gg (3) • Inventor hh (3)
A	16	9	• Inventor ii (8) • Inventor jj (5)

Source(s): SciTech Patent Art analysis

Commercialized Technology

- By studying the commercialized patents, we can identify the key technology that each company commercialized. A preliminary list is below. Further analysis of the patents can reveal even deeper technical insights

Company	Commercialized Ingredient(s): Hair Fall/Loss Control Benefit
D	• Arginine
A	• Pisum sativium • Extract of Styphnolobium • Quercetin-containing extracts • Apricot kernel oil
C	• Royal jelly or its extract • Trans-3,4’-dimethyl-3-hydroxy flavanones
B	• Citronellol • Panthenol and derivatives
E	• Panax Ginseng extract

Source(s): SciTech Patent Art analysis

Conclusions & Next Steps

- Patent-product matching methodology can help understand the commercial effectiveness of a patent portfolio
- The average rate of commercialization of patents in the “hair fall control” shampoos segment is only ~20%...a potential opportunity to unlock value or rationalize the rest of the portfolio
- Some companies are more effective than others at managing their patent portfolios in this segment…however the best case is only 50% better than the average, implying that there is a significant head room for improvement
- Evaluation from a product angle, in addition, can potentially bring significant insights for technology development
- The current case study is a sample in one product area and that too, in one segment. Conducting a similar study in multiple businesses/segments can bring significant insights with overarching business implications
- Finally, such evaluations on a periodic basis can bring forward many interesting opportunities for technology-focused companies
- For more information on this report, please contact: info@patent-art.com