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TRENDS AND OPPORTUNITIES IN THAILAND'S EMERGING AUTOMOTIVE AFTERMARKET

March 2016

- The number of out-of-warranty passenger vehicles in Thailand is expected to exceed 14 million units by 2020, with more than five million units between the age of three and eight years.
- The number of used car sales is expected to grow with a CAGR of 5.5% during 2015-2020, due to an expected decrease in used car prices and an increasingly affluent middle class population.
- Bangkok will remain the key driver of the independent aftermarket, while the North and the Northeast will also be key markets contributing to aftermarket growth in the coming five years. The growth in passenger vehicle ownership, specifically in the Northeast, is expected to be driven by growing cross-border trade between Thailand and Lao PDR.
- The uncertified independent workshop is still the channel with the most outlets, however branded service providers and certified independent workshops are well positioned to benefit from the development of increased demand from out-of-warranty car owners.
- While consumers still have a clear preference for OEM branded parts, over 50% of consumers are willing to use non-OEM parts if the OEM parts are perceived as too expensive.

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Implications for Capturing Thailand's Aftermarket Opportunity

1 Parts Branding

64% of surveyed customers are comfortable with using non-OEM parts, due to:

- Lower product price
- Perceived equivalent quality with OEM parts

while brand awareness is closely linked to quality perception.

Develop a targeted and relevant value proposition to ensure brand awareness in the emerging independent aftermarket

2 Channel Development

Workshop equipment suppliers will benefit from branded service providers and independent workshop equipment upgrade demand, while independent aftermarket parts and accessories brands will need to closely follow the development of this channel to benefit from its development.

Track the development of the channel and identify and develop partnerships with relevant distributors

3 Geographical Landscape

With large populations, low average household income, low overall vehicle ownership rates and high second hand car transactions, the North and Northeast will be the key regions outside of Bangkok driving demand for independent aftermarket services.

Prioritize the development of distribution coverage in regions where demand growth is expected to be highest

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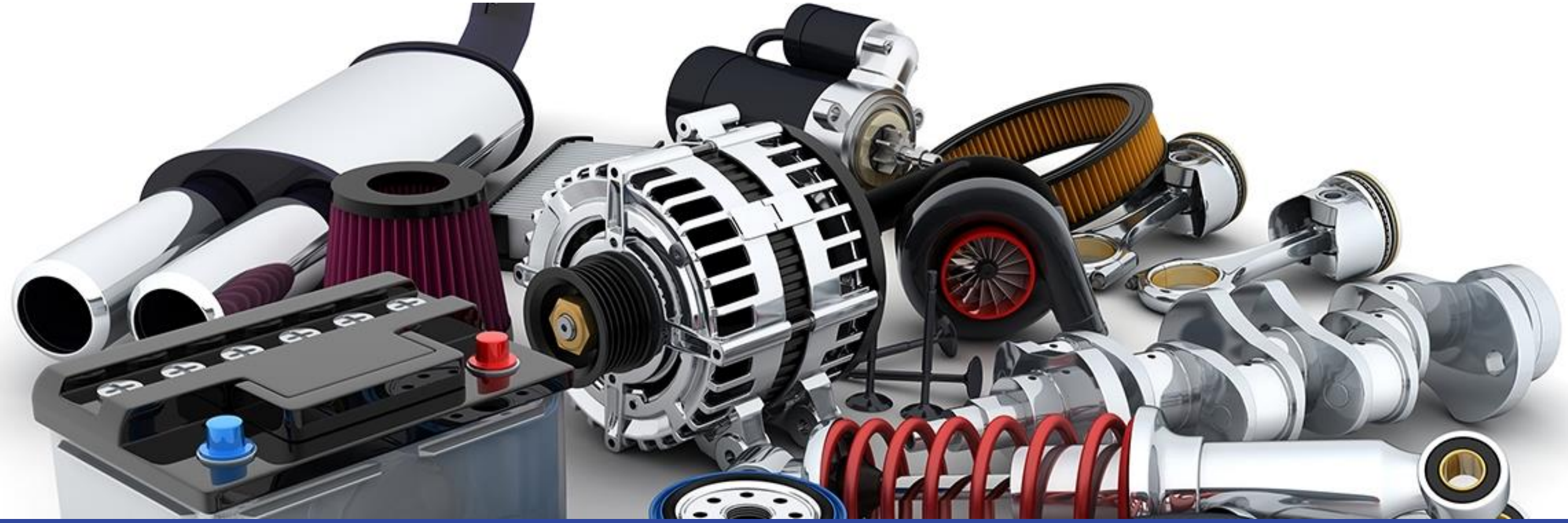

1. **AUTOMOTIVE AFTERMARKET TRENDS AND OPPORTUNITIES**
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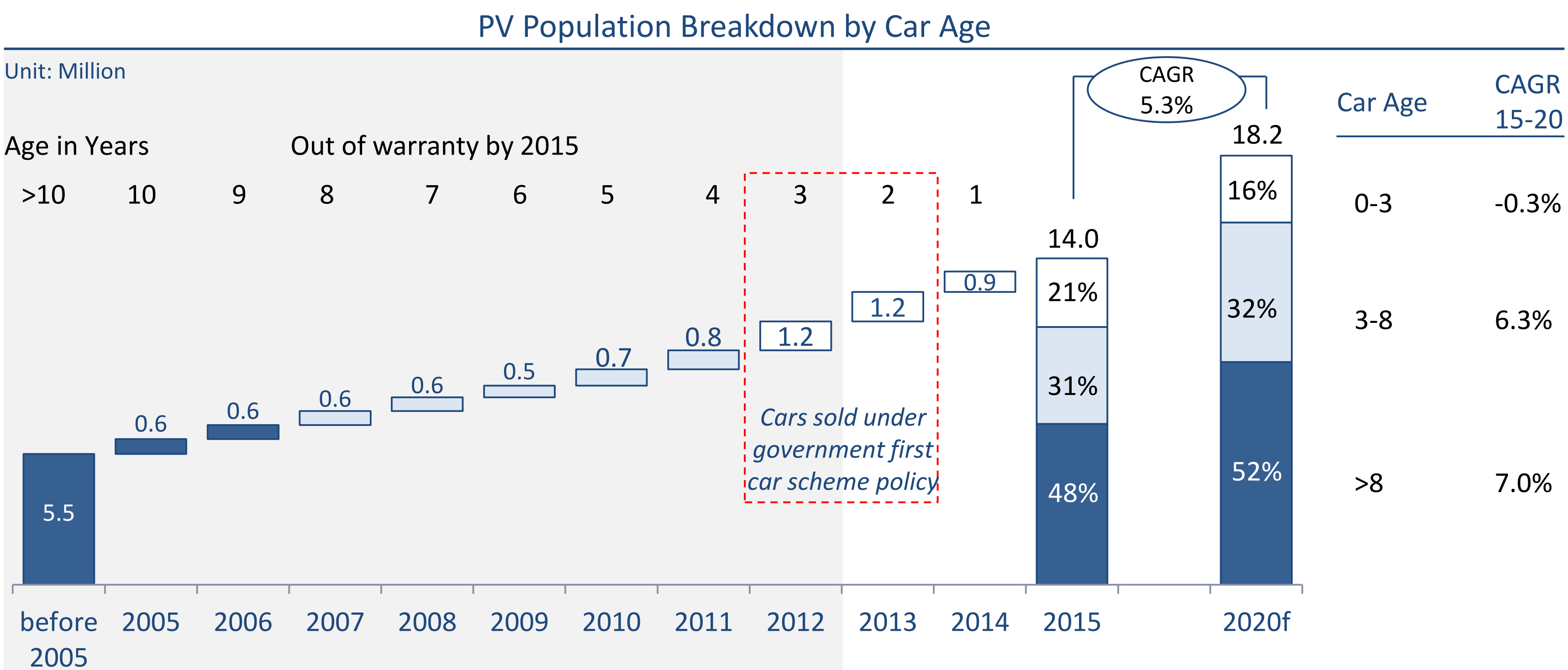
By 2020 the out-of-warranty passenger vehicle population will exceed 14 million units with more than five million units between the age of three and eight years



- The government's first car scheme policy 2012-2013 granted first time car purchasers a tax refund up to 100,000 baht (USD3,250*). The scheme covered three segments: small sedan, eco-car with engine lower than 1,500cc, and pick-up car with the price less than 1,000,000 baht.

Source: Department of Land and Transport; BMI; TAI; Ipsos Business Consulting Analysis

**Note: Based on average exchange rate in 2013 of 30.7 bath/USD)*

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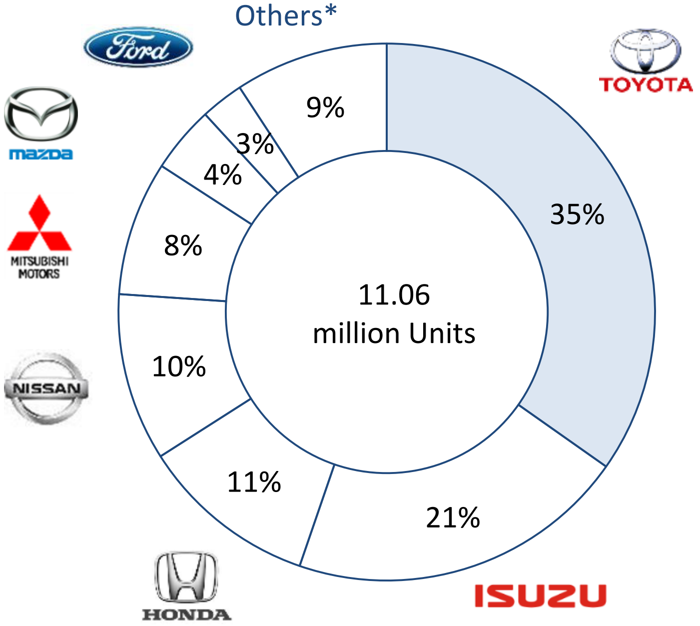
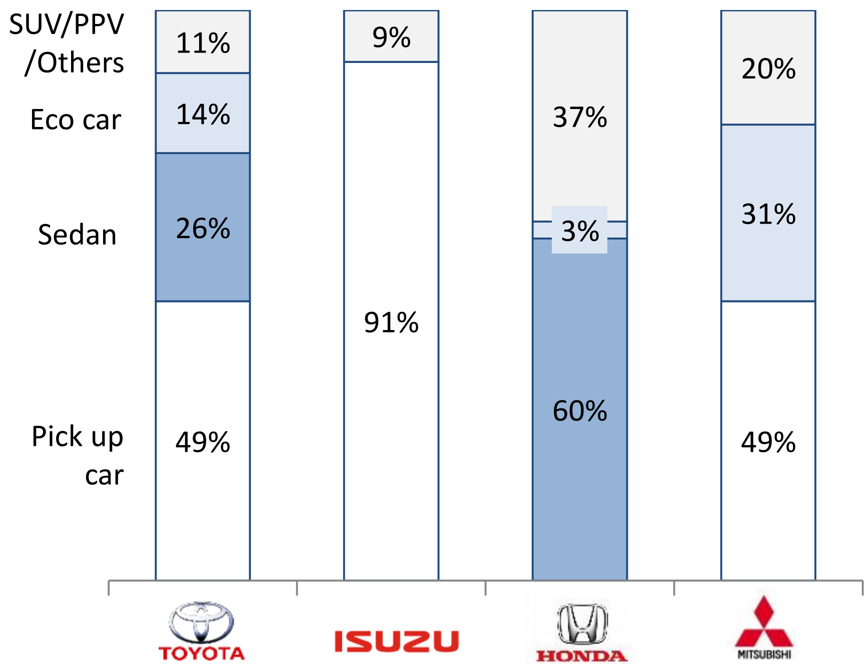
As of 2015 the pick up car segment is estimated to have accounted for just under 50% of all out-of-warranty vehicles

2015 Out-of-Warranty PV Population by Brand



*Others includes Chevrolet, Mercedes, BMW, etc.

Out-of-Warranty PV Population by Segment and Brand**



- Approximately 44% of the PV population are manual transmission vehicles.
- Toyota is the market leader for new PV sales in each segment, while Isuzu primarily focuses on the pick-up and PPV segments, and Honda focuses on the sedan, eco-car, and SUV segments.

Source: Department of Land and Transport; Ipsos Business Consulting Analysis

***Note: Estimation based on 2010-2015 new PV sales data*

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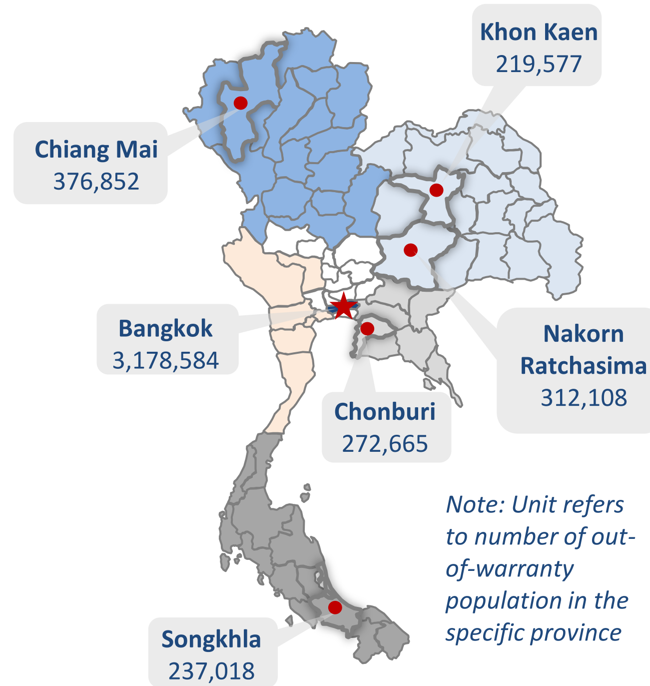
Increasing economic development in the Northern regions is expected to drive second hand car ownership, in turn driving demand for independent aftermarket services

2015 Thailand Out-of-Warranty PV Population by Region* and Key Provinces

	Bangkok	Northeast	North	South	East	West	Central
11.06 million units	32%	19%	17%	12%	8%	6%	6%
PV ownership ratio (per 1000)	587	107	171	163	238	234	180
AVG monthly household income (USD)*	1,405	548	550	786	742	644	712
Percentage of total population	23.2%	27.9%	17.1%	13.6%	8.3%	5.3%	4.6%

**Regions are classified according to the definition by the department of land and transport*



Note: Unit refers to number of out-of-warranty population in the specific province

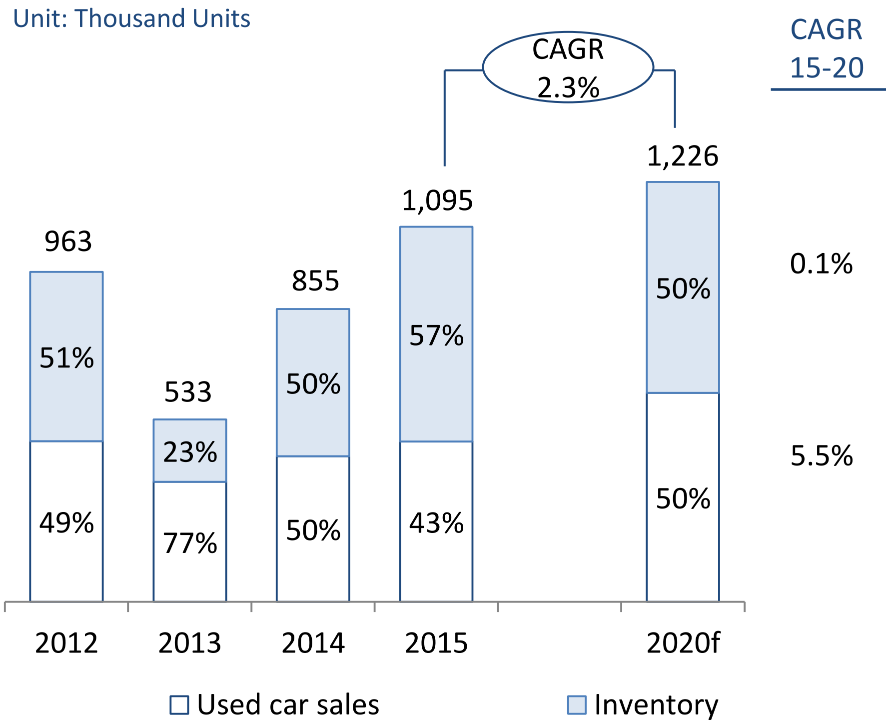
- The out-of-warranty PV population is unevenly distributed, with only Bangkok having more than 1 million registered units.
- The Northeastern region has the highest PV population growth at CAGR of 9% from 2010-2015 due to strong economic growth from increasing cross-border trade supported by the presence of special economic zones.

Source: Department of Land and Transport; Ipsos Business Consulting Analysis

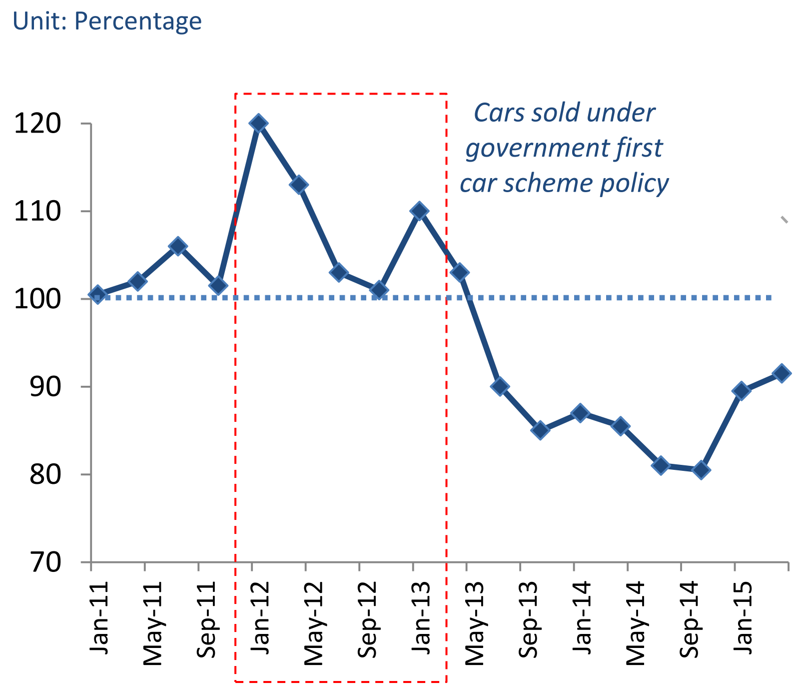
***Note: Based on average exchange rate in 2015 of 36.02 bath/USD)*

Used car demand is expected to increase due to the impact of the new automotive tax policy, which will increase the cost of all new cars except for eco-cars by 5% to 10%

Transfer of Used PV Ownership 2012-2020



Used Car Price Index



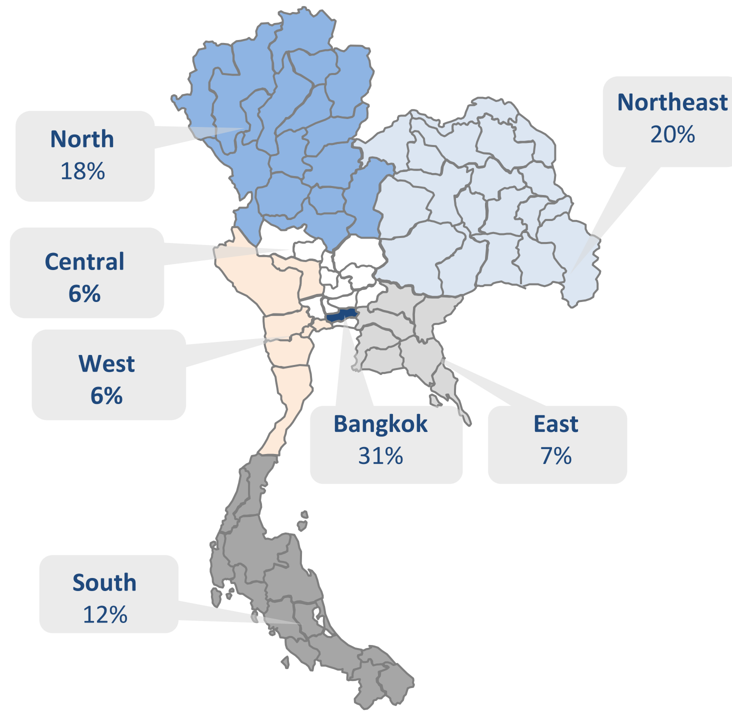
- The used car price dropped significantly in 2013 due to the impact of the government's first car scheme policy.
- Inventory greatly increased in 2015 due to the large number of cars that were purchased in 2012.

Source: Kasikorn Research Center; Department of Land and Transport; Thai Association of Used Car; Bank of Thailand; Ipsos Business Consulting Analysis

At present, Bangkok is central to the development of the independent aftermarket, while demand in the Northern regions is expected to grow over the coming years

Typical independent used car dealership
Bang Khae district, suburb of Greater Bangkok (GBKK)

2015 Transfer of Used PV Ownership by Region

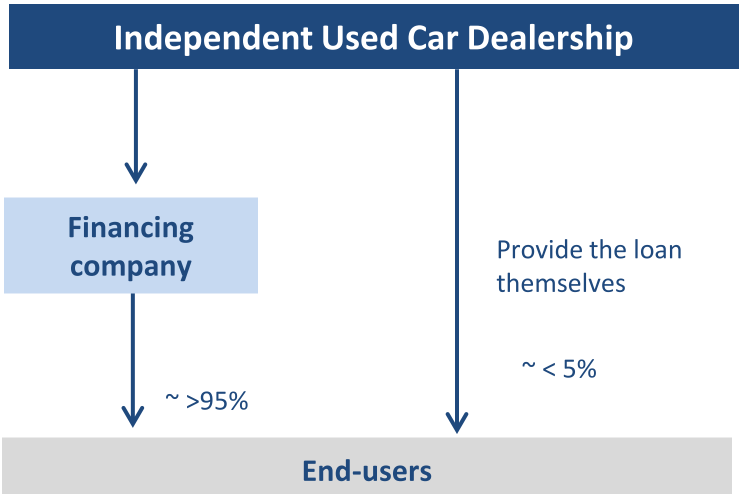


- The main channel for purchasing used cars is through an independent used car dealership. In 2014, it was estimated that there were more than 4,000 independent outlets nationwide. Authorized used car dealers from OEM brands are still limited.
- It is uncommon for independent used car dealerships to provide vehicle repair services.

Source: Kasikorn Research Center; Department of Land and Transport; Ipsos Business Consulting Analysis

With one year warranties on used cars becoming increasingly common, certified workshops will benefit from increased demand for repair and maintenance services

Used Car Financing Practice



- It is common for independent used car dealerships to partner with a finance company to grant loans.
- Finance companies will usually provide a free one year warranty.
- Some dealerships also grant loans, however usually on less attractive terms and only to customers that do not receive financing approval from a loan financing company.

Overview of Used Car Financing Companies

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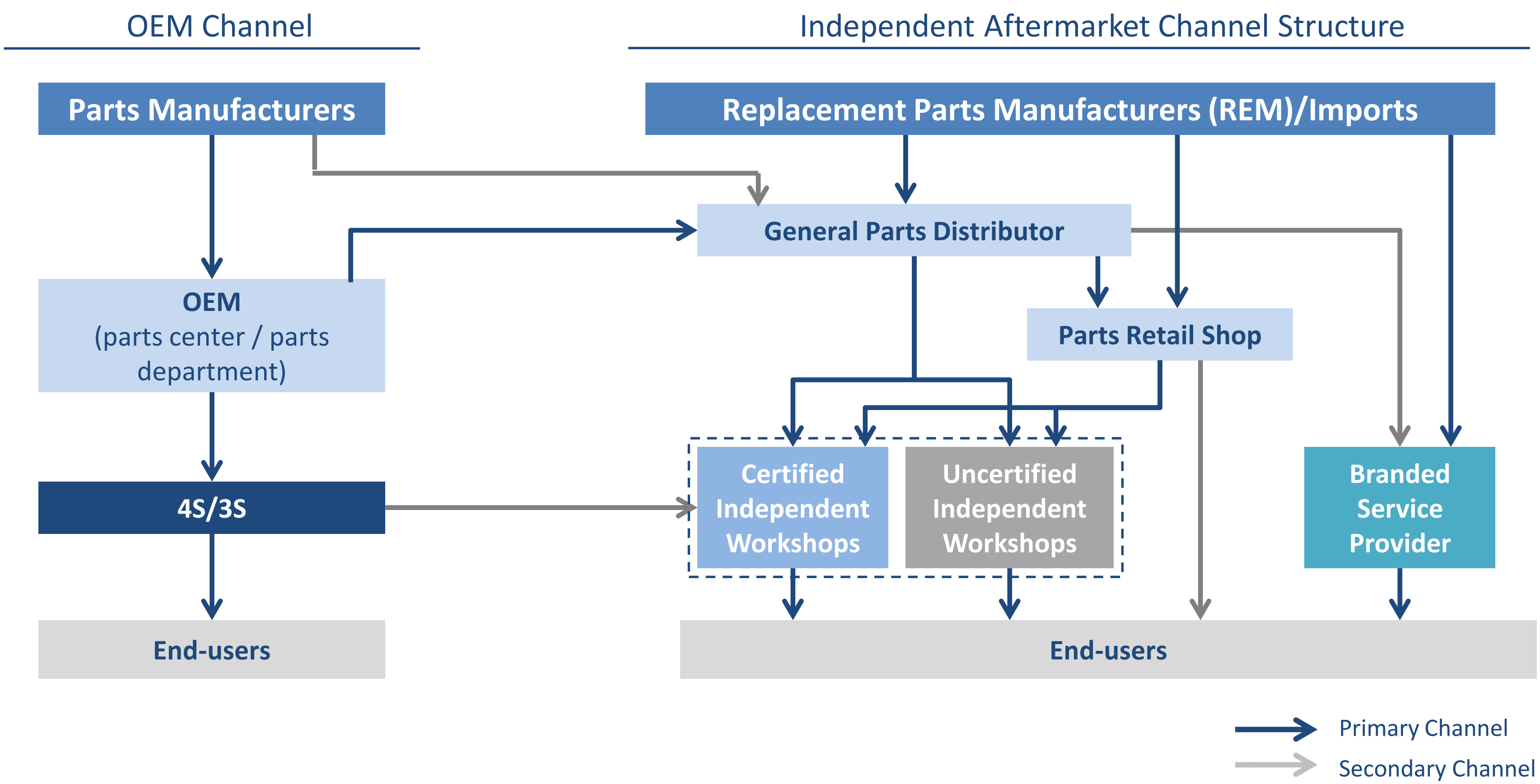
- Common contractual terms:
  - ✓ Loan value up to 80% of the used car price
  - ✓ Up to six years payment period
  - ✓ Guarantor is not required
  - ✓ Fast approval in less than one day
  - ✓ Flat interest rate of 4% to 8% depending on age of used car
  - ✓ Offer one year car warranty that covers the electric system, brake system, suspension system, fuel system, and labor cost, however does not cover consumable parts
  - ✓ Emergency assistance for any engine problems

With their established networks, general parts distributors are important partners for companies looking to distribute products into the independent aftermarket



- Most retail shops only use online channels to promote their outlet, while online sales are estimated to account for less than 5% of their total sales.

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There are an estimated 60 authorized parts distributors active in the market, while the number of general distributors and parts retail shops is expected to be much higher

Key Stakeholders	Description	Examples
General Parts Distributor	• There are two types of general parts distributors: 1. Authorized parts distributors for OEMs. There are approximately 60 authorized distributors in the market. They carry parts of specific OEM brands. 2. General distributors which carry several brands of OEM and REM parts. They generally focus on specific product lines, for example body work, car accessories, auto seats. • In addition, most general parts distributors cooperate with car insurance companies to distribute products to the certified independent workshops.	TSV auto@one VIVAT TRADING PHL autoparts RUX ALAI YONT AUTO PARTS **S.C.L. Motor Part Co., Ltd**
Parts Retail Shops	• Parts retail shops are located nationwide. They mostly receive products from general parts distributors. It is estimated there are around 500-600 parts retail shops in Greater Bangkok. • Parts retail shops usually carry various types of parts and consumable products such as lubricant and car batteries. • Their primary focus is low price and product availability, particularly in Greater Bangkok where there is an intense competition due to a high number of shops.	See photo below

Parts retail shops in Bang Plat district, suburb of Greater Bangkok (GBKK)

Branded service providers and certified independent workshops will be the benefactors of the growing demand for independent aftermarket services

	4S/3S	Branded Service Provider	Certified Independent Workshop	Uncertified Independent Workshop
Description	• Major channel for new car sales • Primary repair and maintenance channel for cars under warranty	• Standardized repair shops • Primarily affiliates of tire manufacturing companies	• Two major types of certified independent workshops: 1. Car polishing workshops 2. Body work workshops	• Generally have limited service offerings compared to other channels
Number of outlets	• 2,000 outlets nationwide	• More than 500 outlets mainly in key urban areas	• 800-1,000 outlets nationwide	• ~10,000 outlets in both urban and rural areas
Key service offerings	• Car check up • Heavy and small parts repair* • Car polishing	• Car check up • Mostly focus on changing consumable parts such as tires and lubricant	• Car check up • Heavy and small parts repair • Car polishing	• Car check up • Small parts repair • Some can perform heavy repair
Strengths and weaknesses	• Highest repair capability • Highest price compared to other channels	• Standardized services with various promotions • Convenient due to short waiting times • High price and low coverage	• Second highest repair capability after 4S/3S • More reliable than uncertified independent workshops • Low coverage	• Highest coverage • Lowest price • Least reliable channel due to unstandardized service and parts offering
Future trend	→	↗	↗	↘

*Note: Heavy repair refers to body works and suspension system repairs

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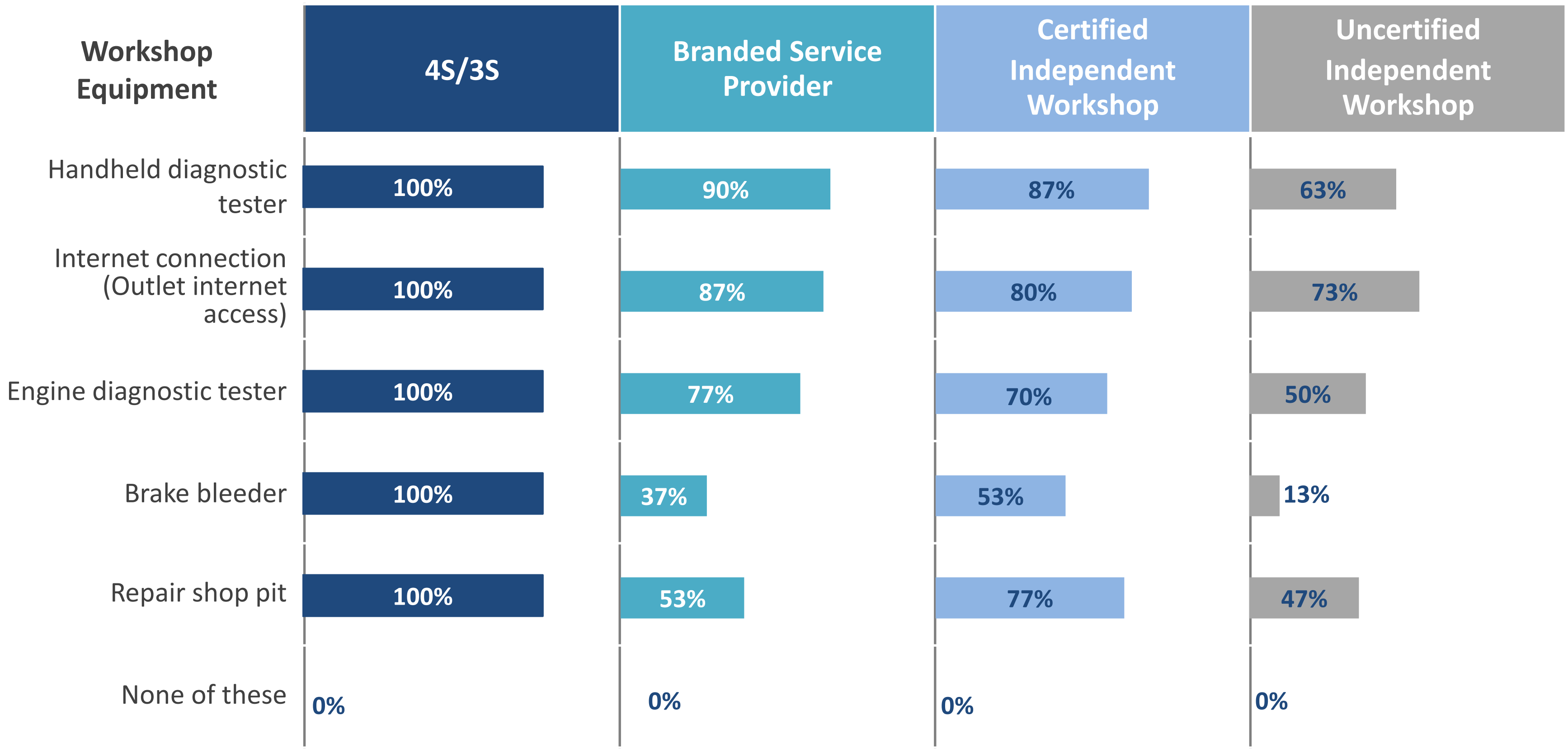
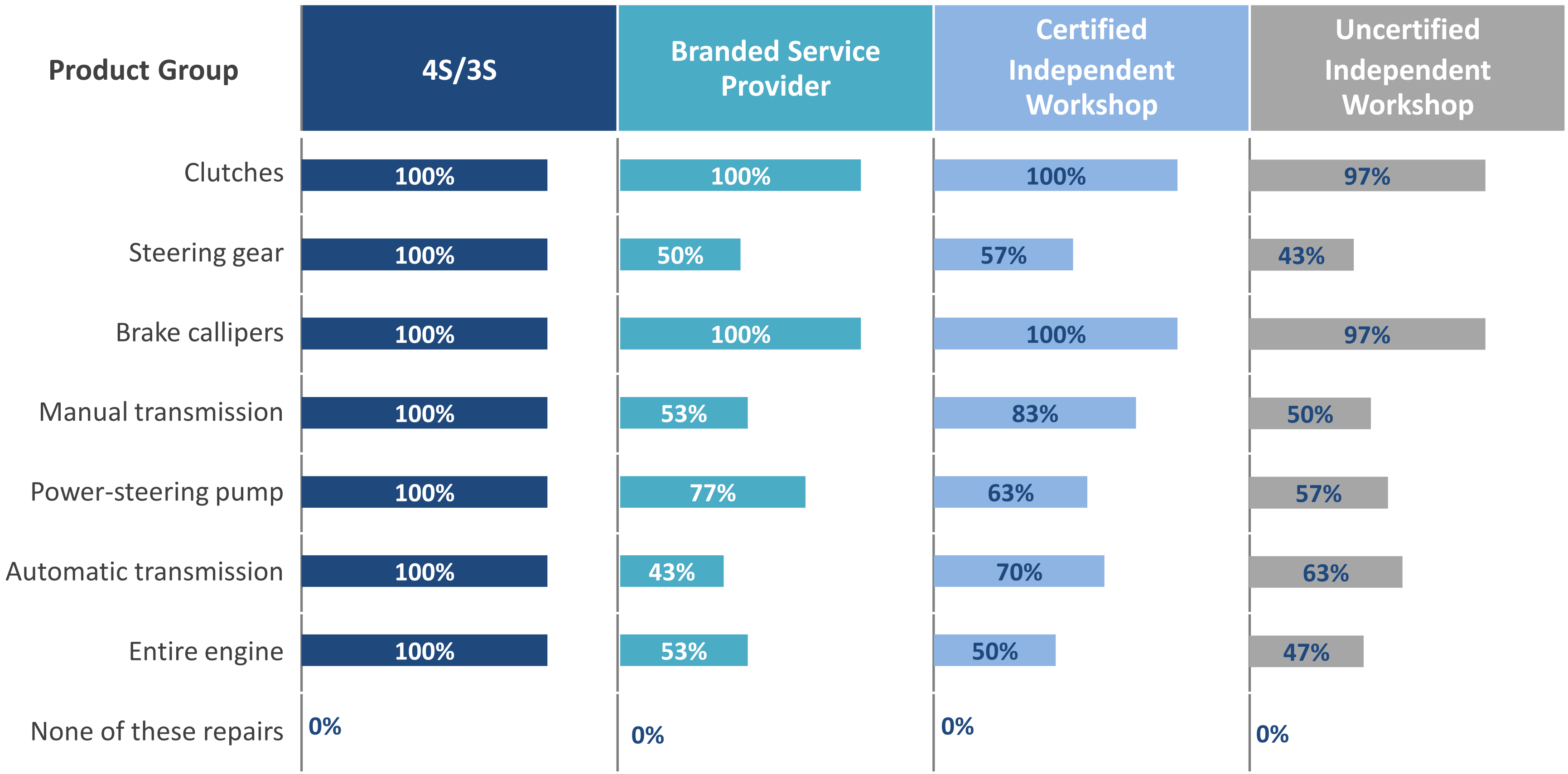
Increased aftermarket demand will also provide opportunities to workshop equipment suppliers as branded service providers and independent workshops upgrade



- Question: Which of the following equipment do you have in your repair shop?
- Sample size: n=30 per segment, total sample n=120

Source: Ipsos Business Consulting Survey

Branded service providers and certified independent workshops both provide a wide range of services with flexibility to provide services to all PV brands

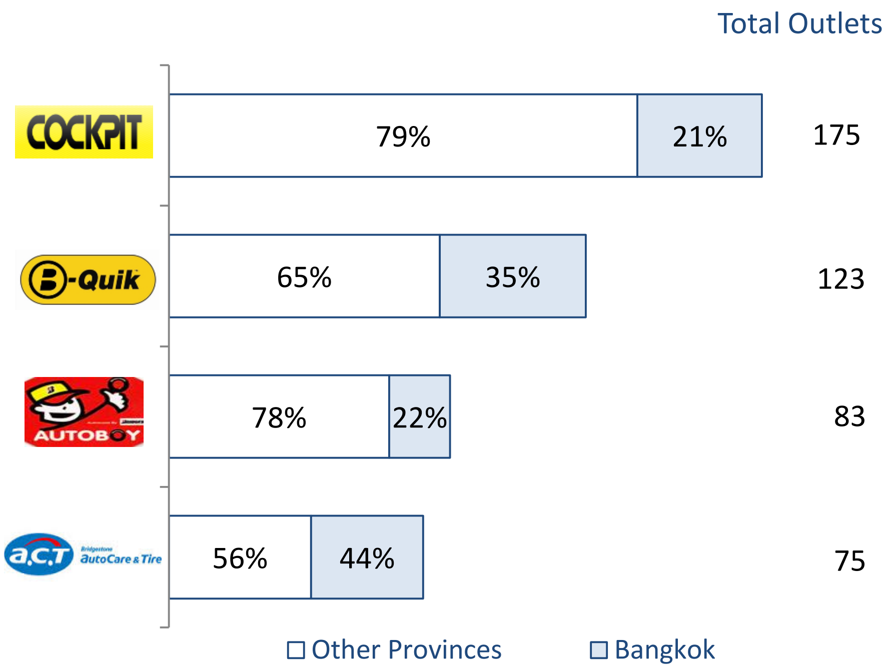


- Question: Which of the following replacement repairs are you able to offer in your repair shop?
- Sample size: n=30 per segment, total sample n=120

Source: Ipsos Business Consulting Survey

Branded service providers normally focus on tire replacement and other consumables, while some are adding car accessories to their portfolio as a point of differentiation

Major Branded Service Providers 2015



- The branded service provider segment experienced a revenue growth rate of 15-20% over the past three years (compared to industry passenger vehicle growth of 4.3%)

Branded Service Provider Service Overview

- Common services offered:
  - ✓ Auto repair including shock absorbers and suspension system
  - ✓ Engine oil and filter change
  - ✓ Electrical system repair including spark plugs, light bulbs, and fuses
  - ✓ Filling air into tires with nitrogen
  - ✓ Battery replacement
  - ✓ Brake change and maintenance
  - ✓ Stereo and other entertainment device installation
  - ✓ Car accessories installation
- Car accessories such as vehicle horns, light bulbs, bumpers, navigators, and entertainment devices are currently offered in a limited number of outlets in urban areas

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With a wide range of services offered, certified independent workshops will be an important channel for component manufacturers interested in entering the IAM

Certified independent workshop in Rama III road, central area of Bangkok

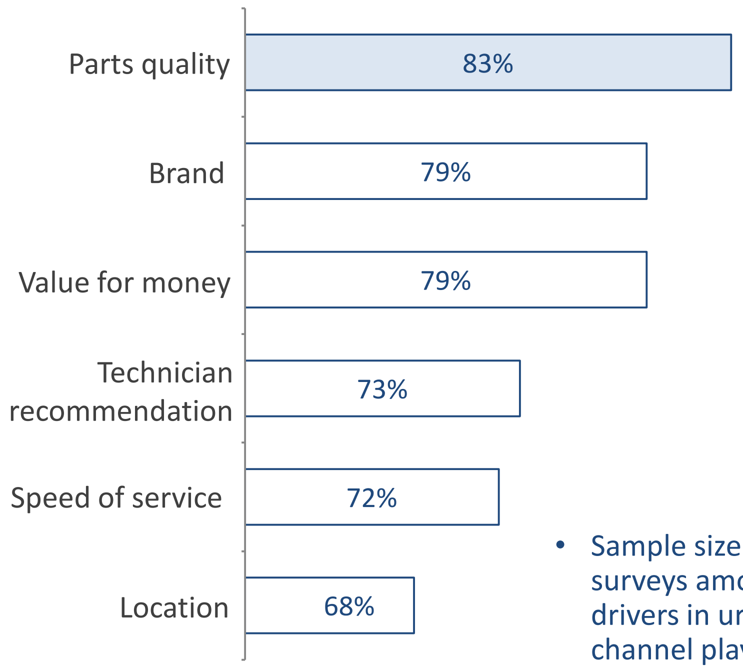
Certified independent workshop in Yannawa district, central area of Bangkok

Certified Independent Workshop Requirements

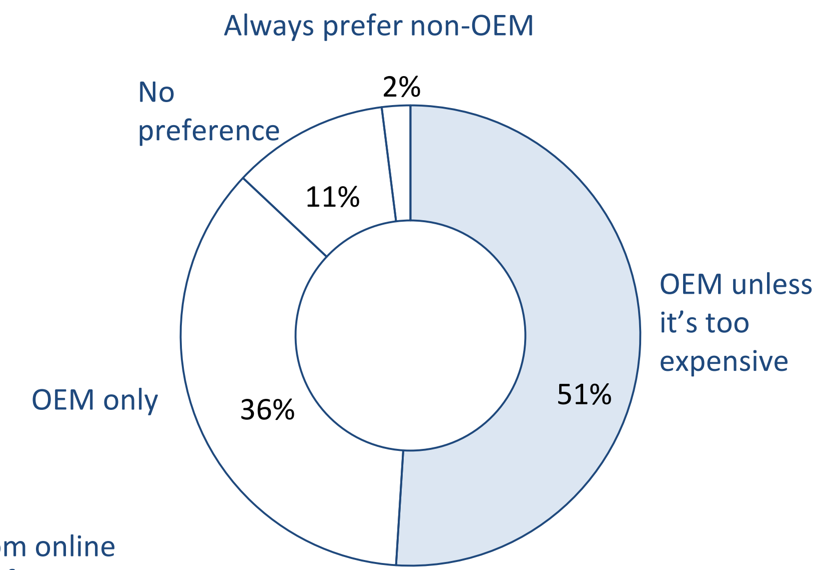
- Certification details:
  - ✓ Certification given by the ministry of industry
  - ✓ Minimum space requirement of roughly 400 m2
  - ✓ Equipment requirement such as car polishing room with air filter equipment or auto collision repair pulling machine
  - ✓ Technicians with certification from department of skill developments in at least 2 of 4 domains including electrician, auto mechanic, polishing technician, and auto denter
  - ✓ 6 month warranty from the workshops for both body work and car polishing
- Certified independent workshops must also be recognized by the specific insurance company to repair cars insured by that company
- Certified independent workshops that also purchase parts from 4S/3S dealers should showcase their expertise by displaying signs with logos of brands they are able to service.
- This is specifically relevant for European brands for which there are limited service options in the market.

While perceived parts quality is most important when selecting the aftermarket channel, perceived value for money will help convince consumers to try non-OEM parts

Key Criteria for Aftermarket Channel



Preference Between OEM and Non-OEM Parts



- Sample size: n=200 from online surveys amongst out-of-warranty drivers in urban areas and channel players' interviews

- Consumers who go to branded service providers and certified independent workshops perceive the quality of non-OEM parts to be equivalent to that of OEM parts.
- Non-OEM parts are priced 50%-100% lower.

Source: Ipsos Business Consulting Survey

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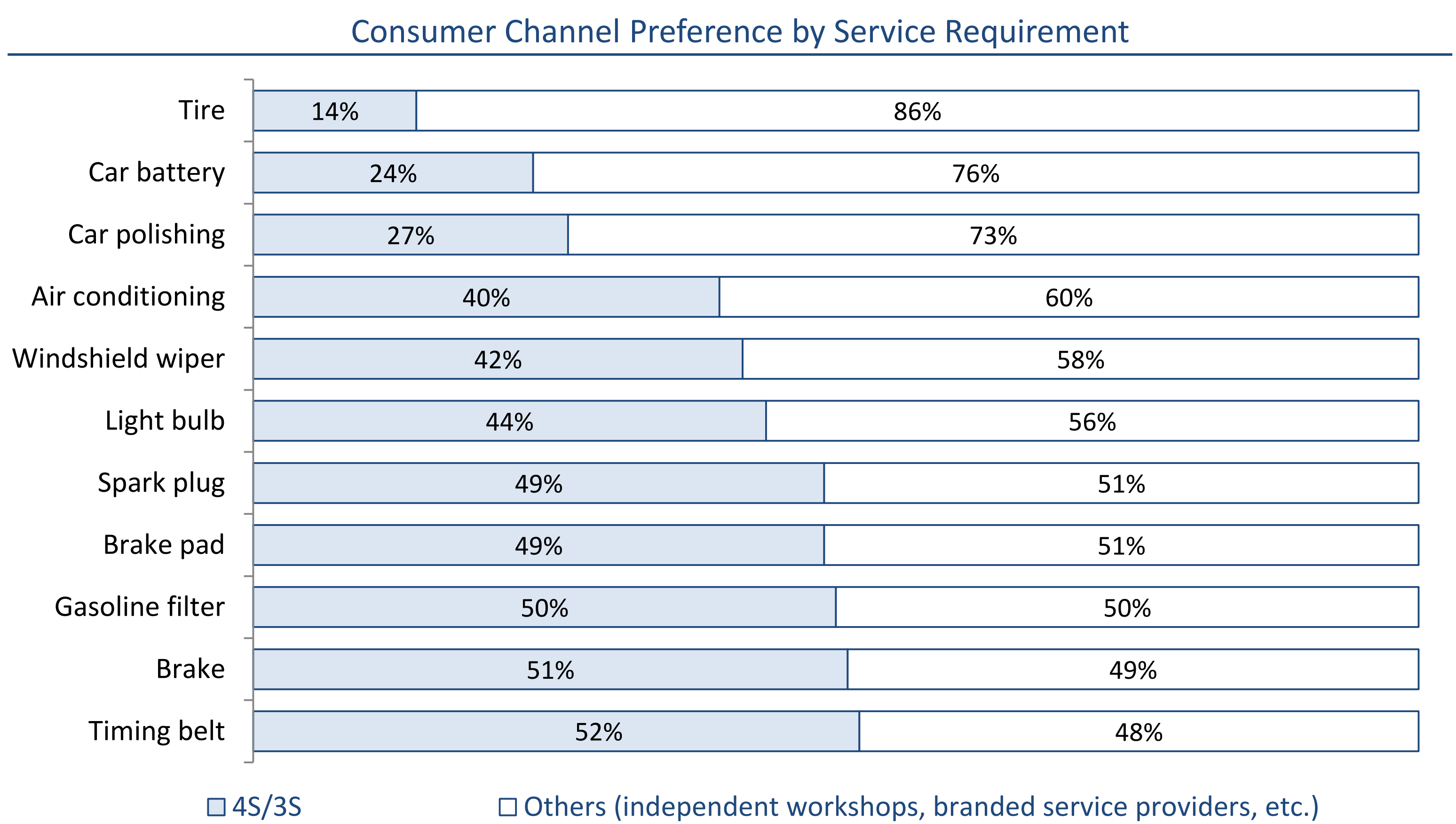
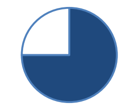
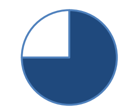
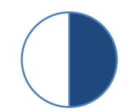
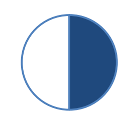
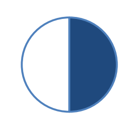
Limited geographical coverage and the high price in the 4S/3S channel are the main drivers for consumers to go to other channels for service and maintenance



- Sample size: n=200, online survey amongst out-of-warranty car owners in urban areas and channel players' interviews

Source: Ipsos Business Consulting Survey

While the drivers for the development of the independent aftermarket are all very positive, relevant barriers also exist which need to be addressed

			Impact
Drivers	**Fast growing out-of-warranty car population**	2.5 million cars were purchased in 2012-2013, under the first car scheme. The warranty for these vehicles will run out by the end of 2016, dramatically increasing the out-of-warranty vehicle population.	
Drivers	**Growth in the second hand car market**	The number of used car sales is expected to grow with a CAGR of 5.5% during 2015-2020, due to an expected decrease in used car prices and an increasingly affluent middle class population. The impact of the new automotive taxation scheme will further increase the attractiveness of used cars.	
Drivers	**Growth of the PV population in the Northeast**	Household income in the Northeast will continue to grow as the local economy benefits from cross-border trade. Khon Kaen will become the main logistic hub between Thailand and Lao PDR. The region is expected to experience the highest PV population growth compared to other regions, with a CAGR of 7% during 2015-2020.	
Barriers	**Challenges from labor shortages**	The automotive parts industry employs more than 550,000 people, however, with the shortage of labor holding a vocational degree, it is expected that the automotive industry could face a labor shortage in the near future. It is estimated that the industry will require an additional supply of 200,000 workers to reach a production target of 3.0 million vehicles by 2020. While some of the labor demand can be met by the use of an immigrant workforce, a shortfall in labor will remain in automotive jobs that require a higher level of technical skills.	
Barriers	**Availability of counterfeit parts**	According to the global intellectual property survey across 25 key countries in 2014, Thailand ranked 2^{nd} last for countries with serious counterfeit problems. This also applies to the auto parts industry, particularly in the independent workshops, which focus on offering the lowest prices.	

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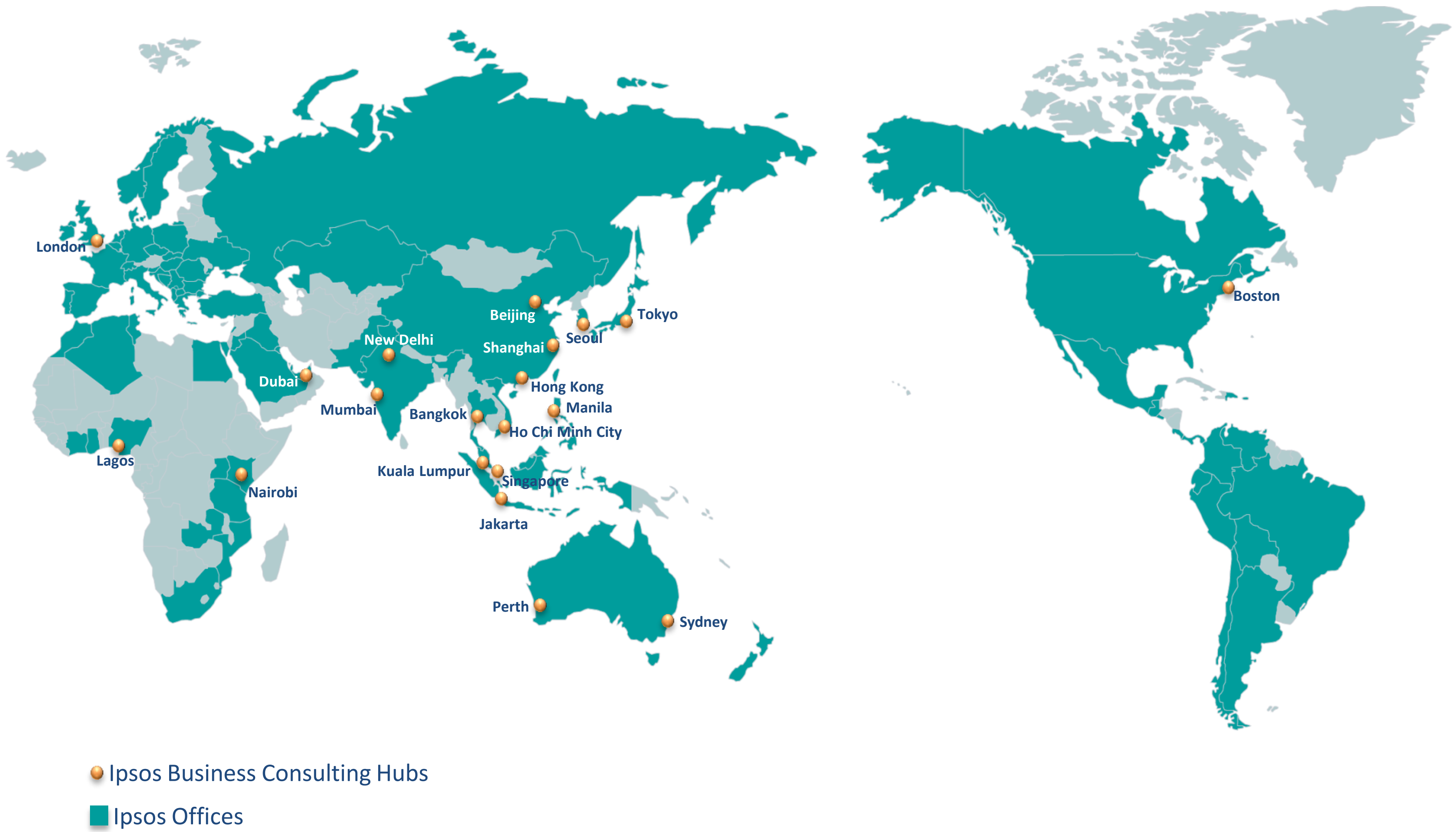

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Automotive Related

		Product coverage	Clients
Auto OEM		Various types of vehicles: • Commercial vehicles • Passenger vehicles	GM, Das Auto., NISSAN, HONDA The Power of Dreams, TOYOTA
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Vehicle Parts		Various types of parts & components for vehicles: • Engine and engine parts • Filters • Tires • Other parts	BOSCH, MICHELIN, VOLVO PENTA, COOPERTIRES, ZF, Cummins
Other Vehicle Related		Other auto-related products: • Automotive lubricant • Automotive painting • Automotive accessories	CALTEX, Shell, bp, Chevron, ExxonMobil, ARMORED AUTOGROUP

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Authors of this Paper

Markus Scherer
Global Automotive Sector Leader

Industry focus:
Automotive OEM
Construction Vehicles
Vehicle Parts
Automotive Lubricants

Ph: +852 2839 0647
E: markus.scherer@ipsos.com

Natee Ruengjirachuporn
Head of Consulting
Thailand

Industry focus:
Automotive
Agribusiness
Industrial
Healthcare

Ph: +66 2697 0106
E: natee.ruengjirachuporn@ipsos.com

Nut Khunnawesh
Consultant
Thailand

Industry focus:
Automotive
Healthcare
Agribusiness
Government Segment

Ph: +66 2697 0100
E: nut.khunnawesh @ipsos.com

Rasita Kriangkrairat
Associate Consultant
Thailand

Industry focus:
Automotive
Healthcare
Consumer Products

Ph: +66 2697 0100
E: rasita kriangkrairat@ipsos.com

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automotive.bc@ipsos.com

CONTACT US

YOUR IPSOS BUSINESS CONSULTING CONTACTS

WWW.IPSOSCONSULTING.COM

AUSTRALIA

PERTH
Ground Floor, 338 Barker Road
Subiaco, WA, 6008
Australia
australia.bc@ipsos.com
Telephone 61 (8) 9321 5415

SYDNEY
Level 13, 168 Walker Street
North Sydney 2060
NSW, Australia
australia.bc@ipsos.com
Telephone 61 (2) 9900 5100

GREATER CHINA

BEIJING
12th Floor, Union Plaza
No. 20 Chao Wai Avenue
Chaoyang District, 100020
Beijing, China
china.bc@ipsos.com
Telephone 86 (10) 5219 8899

SHANGHAI
31/F Westgate Mall
1038 West Nanjing Road
200041
Shanghai, China
china.bc@ipsos.com
Telephone 86 (21) 2231 9988

HONG KONG
22/F Leighton Centre
No 77 Leighton Road
Causeway Bay
Hong Kong
hongkong.bc@ipsos.com
Telephone 852 3766 2288

INDIA

MUMBAI
5th, 6th and 7th Floor, Boston House
Suren Road, Andheri (East) 400-093
Mumbai, India
india.bc@ipsos.com
Telephone 91 (22) 6620 8000

NEW DELHI
C-1 First Floor
Green Park Extension
110 016
New Delhi, India
india.bc@ipsos.com
Telephone 91 (11) 4618 3000

INDONESIA

Graha Arda, 3rd Floor
Jl. H.R. Rasuna Said Kav B-6, 12910
Kuningan
Jakarta, Indonesia
indonesia.bc@ipsos.com
Telephone 62 (21) 527 7701

JAPAN

Hulic Kamiyacho Building
4-3-13, Toranomon
Minato-ku, 105-0001
Tokyo, Japan
japan.bc@ipsos.com
Telephone 81 (3) 6867 8001

KENYA

Acorn House
97 James Gichuru Road
Lavington
P.O. Box 68230
00200 City Square
Nairobi, Kenya
africa.bc@ipsos.com
Telephone 254 (20) 386 2721-33

MALAYSIA

18th Floor, Menara IGB
No. 2 The Boulevard
Mid Valley City
Lingkaran Syed Putra, 59200
Kuala Lumpur, Malaysia
malaysia.bc@ipsos.com
Telephone 6 (03) 2282 2244

NIGERIA

Block A, Obi Village
Opposite Forte Oil
MM2 Airport Road, Ikeja
Lagos, Nigeria
africa.bc@ipsos.com
Telephone 234 (806) 629 9805

PHILIPPINES

1401-B, One Corporate Centre
Julia Vargas cor. Meralco Ave
Ortigas Center, Pasig City, 1605
Metro Manila, Philippines
philippines.bc@ipsos.com
Telephone 63 (2) 633 3997

SINGAPORE

3 Killiney Road #05-01
Winsland House I, S239519
Singapore
singapore.bc@ipsos.com
Telephone 65 6333 1511

SOUTH KOREA

12th Floor, Korea Economic Daily Building, 463 Cheongpa-Ro
Jung-Gu 100-791
Seoul, South Korea
korea.bc@ipsos.com
Telephone 82 (2) 6464 5100

THAILAND

21st and 22nd Floor, Asia Centre Building
173 Sathorn Road South
Khwaeng Tungmahamek
Khet Sathorn 10120
Bangkok, Thailand
thailand.bc@ipsos.com
Telephone 66 (2) 697 0100

UAE

4th Floor, Office No 403
Al Thuraya Tower 1
P.O. Box 500611
Dubai Media City, UAE
uae.bc@ipsos.com
Telephone 971 (4) 4408 980

UK

Minerva House
5 Montague Close
SE1 9AY
London, United Kingdom
europe.bc@ipsos.com
Telephone 44 (20) 3059 5000

USA

31 Milk Street
Suite 1100
Boston, MA 02109
United States of America
us.bc@ipsos.com
Telephone 1 (617) 526 0000

VIETNAM

Level 9A, Nam A Bank Tower
201-203 CMT8 Street, Ward 4
District 3
HCMC, Vietnam
vietnam.bc@ipsos.com
Telephone 84 (8) 3832 9820