

Industry Post-Regulation

E-Cigarette Summit 2017

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ECigIntelligence

www.ECigIntelligence.com

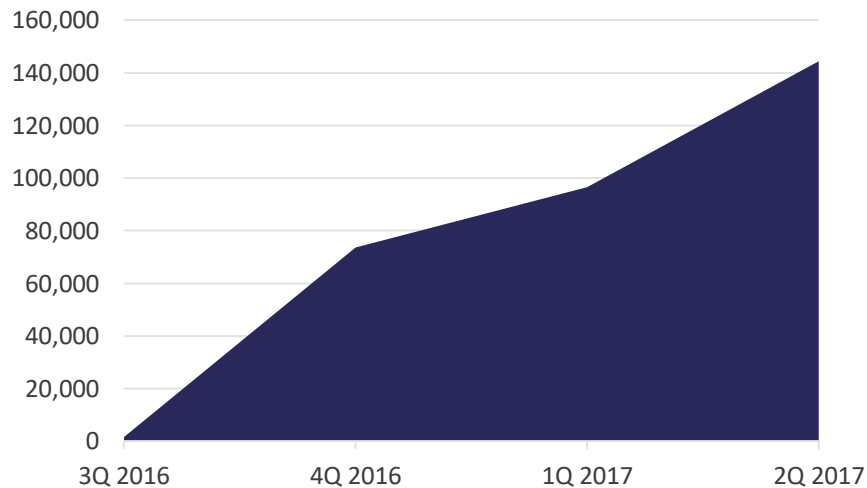
Agenda

- 1** Post-TPD: Has regulation been a success?
- 2** Heated Tobacco: a success?
- 3** Innovation: what next?

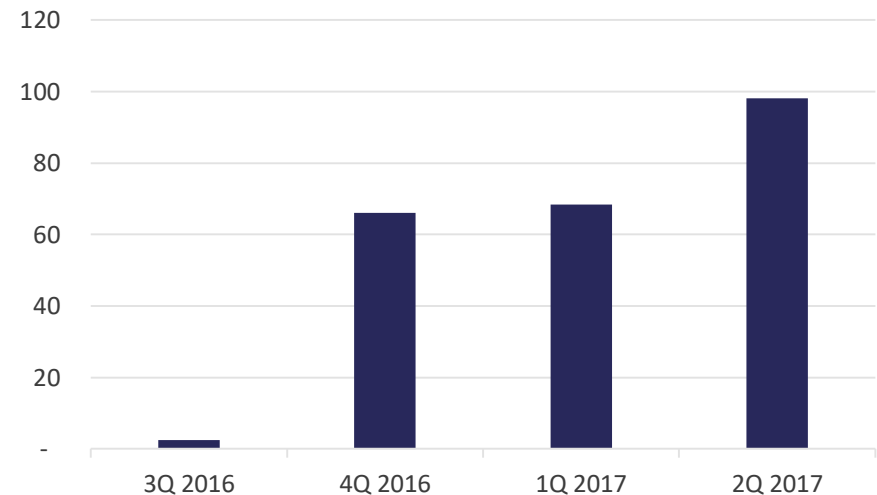
TPD: Has it been a success?

- Products notified: c. 150,000; 32,000+ in UK
- Companies notifying: 2,500+
- EC's Common Entry Gate stretched to breaking:
 - Peak: 40,000 submissions in one day; averaged 1,000+ per day
 - huge problems with early notifications, system now upgraded
- Peak of activity pre November 2016 and May 2017 deadlines
- More submissions per company: increasing confidence in the regulatory system?

Total E-cigarette product submissions



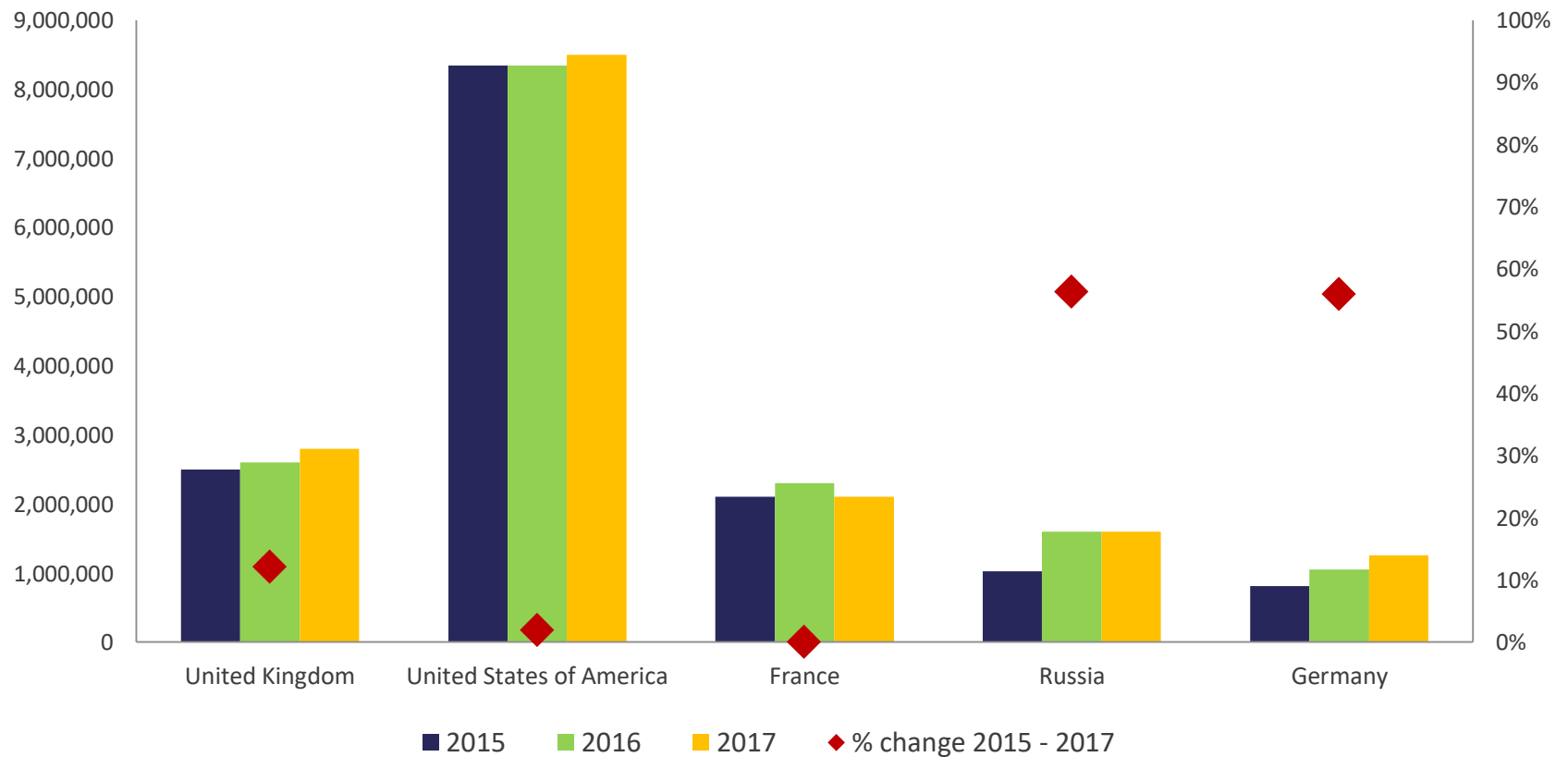
Submissions per Notifying Party





Continuing growth in sector since TPD

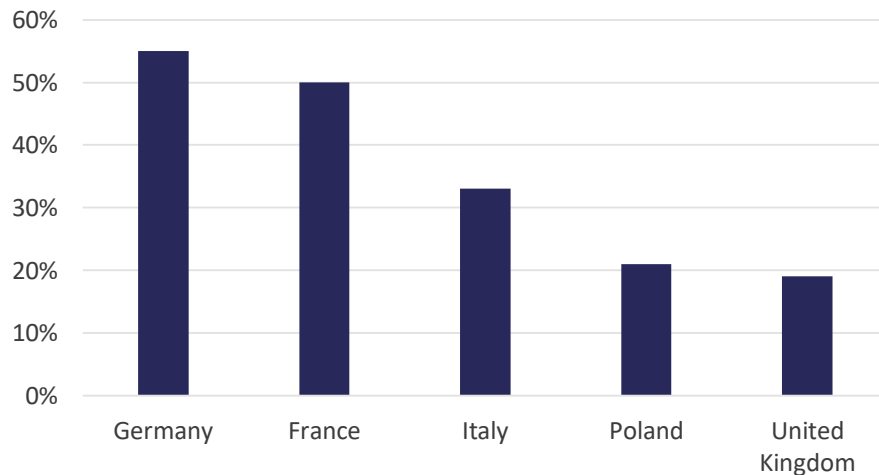
- Most EU countries continue to show growth following TPD implementation
- Well developed markets slow growth or static; new markets growing rapidly
- Many US companies entered EU while uncertainty over Deeming Regulations



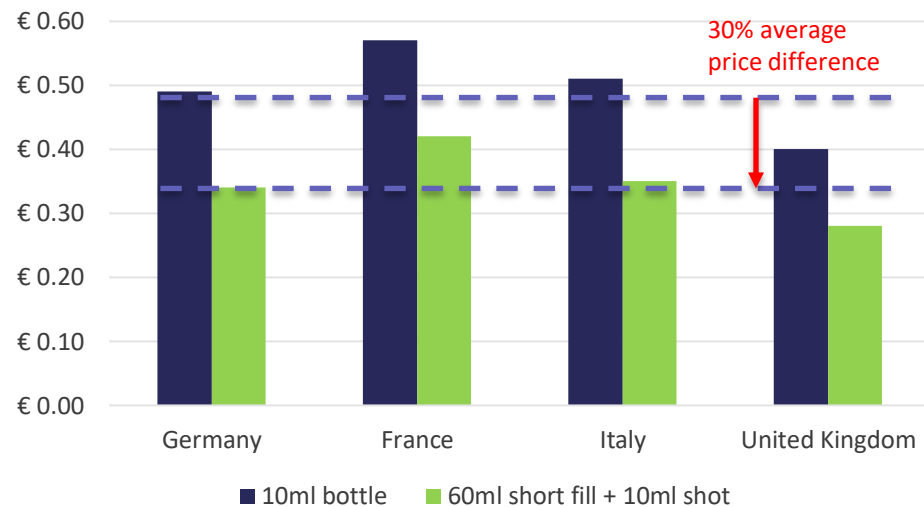
How much of EU market captured by TPD?

- In many countries, regulations only apply to nicotine containing e-liquid
- Shake and Vape: definition?
 - huge cost savings for consumers
 - consumer demand for larger volumes
 - no notification requirement
- Many markets confirmed no enforcement against shake & vape; for others, emerging area of law

Estimated % of total market using non-TPD product



Price of e-liquid (€/ml): TPD 10ml vs Shake&Vape

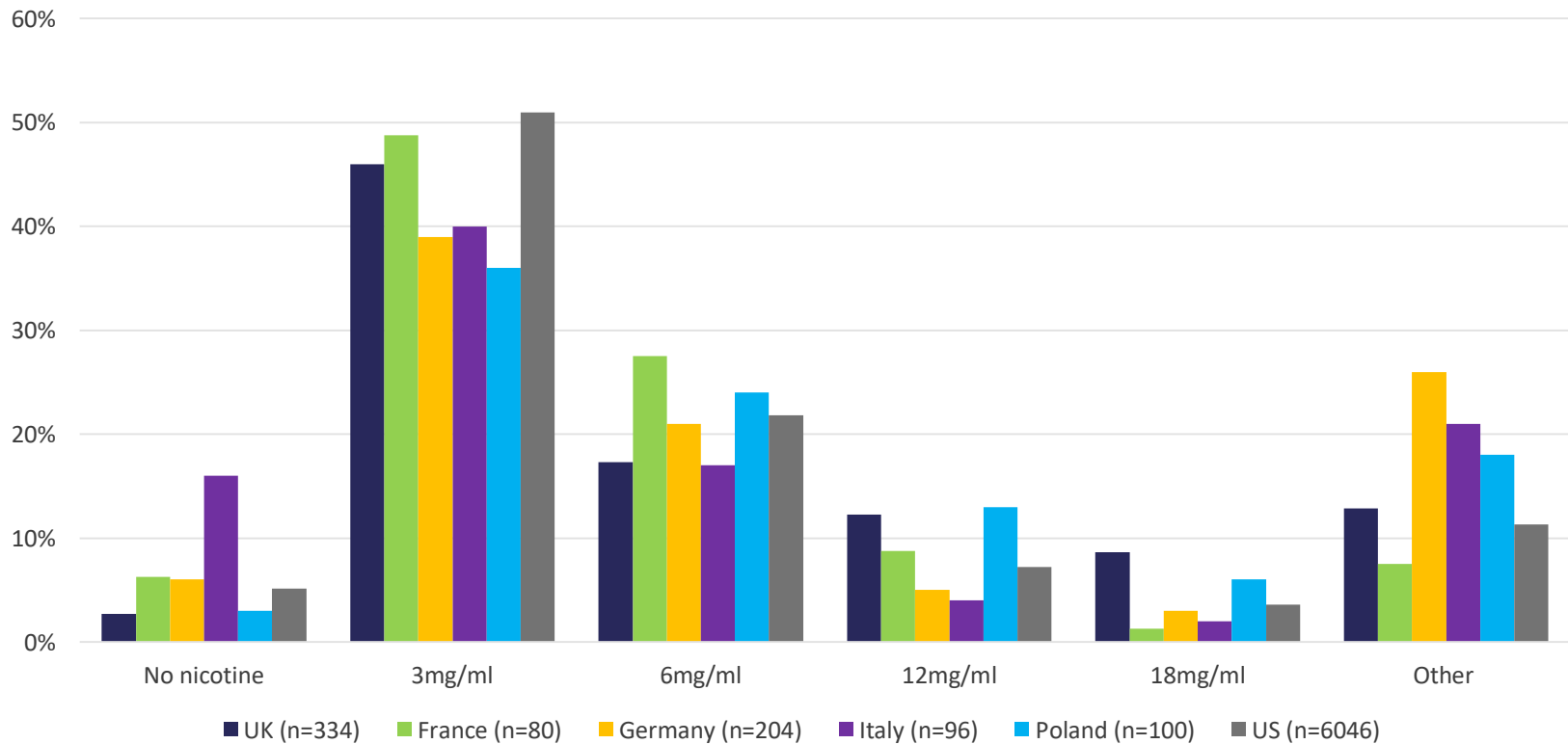




Nicotine strength: consumer preferences suit Shake&Vape

- Among advanced tank users, predominance of 3 and 6 mg/ml liquid
- Shake & Vape products generally cater to these consumers (50ml 0mg + 10ml nic. shot)

Nicotine concentration (mg/ml) among advance tank users

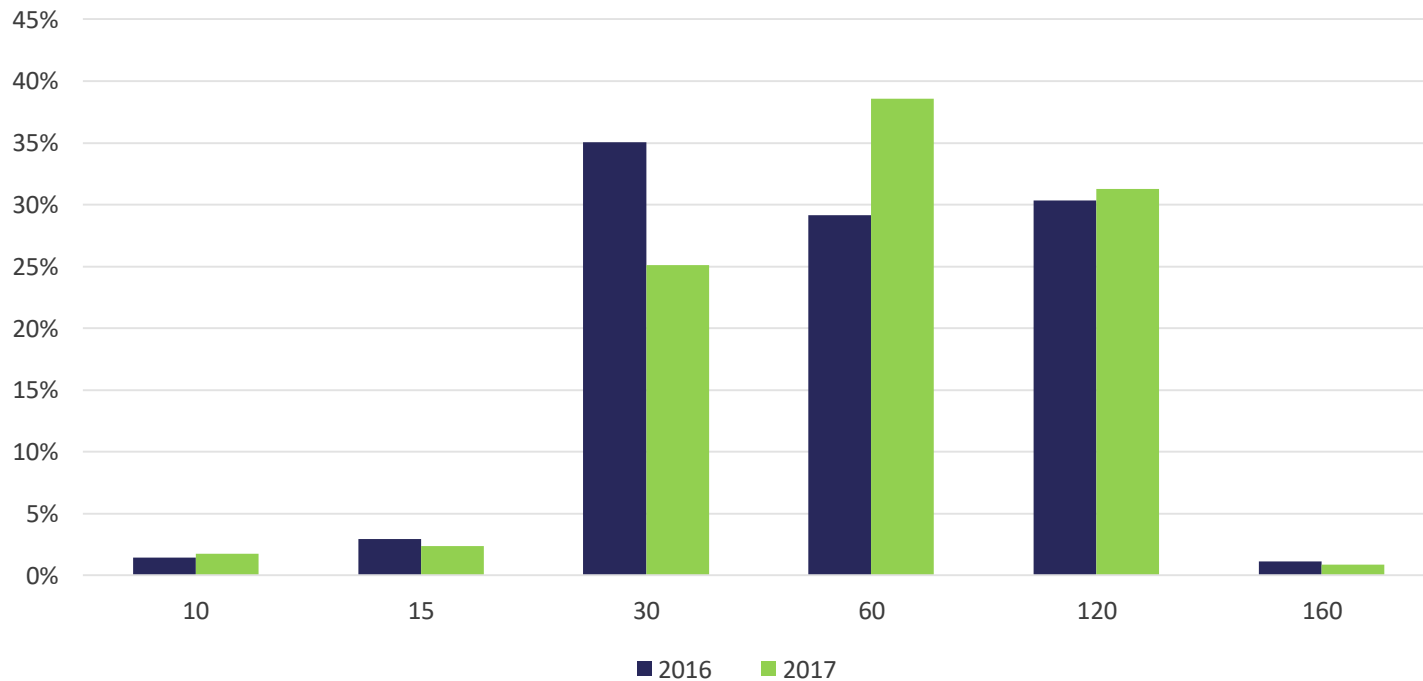




However consumer demand for larger bottle sizes is global

- Consumers are using increasing volume of liquid as power of devices increases/nicotine concentration decreases
- US bottles have been getting larger, with growth in 60ml and 120ml this year at expense of 30ml and smaller

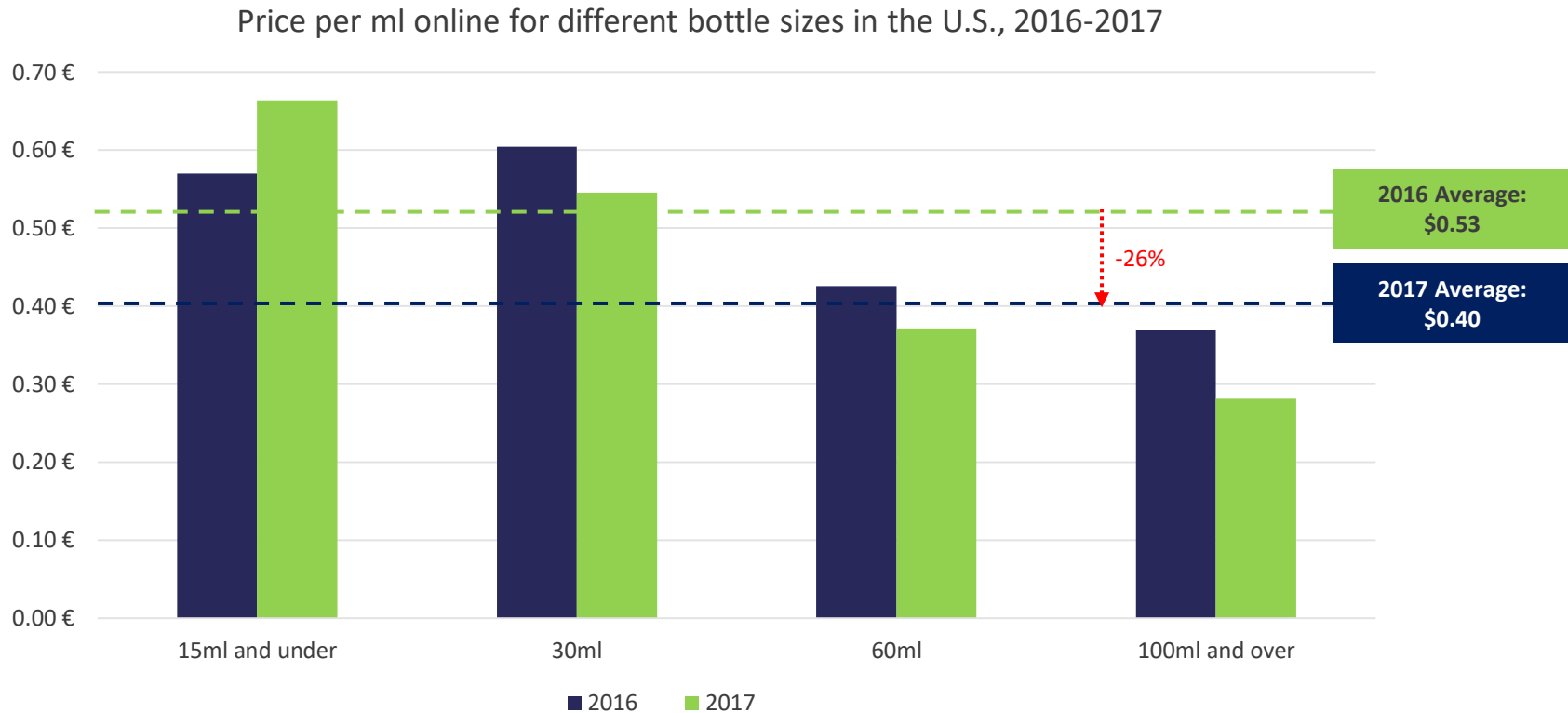
Bottle size (ml) of last e-liquid purchase in the U.S.



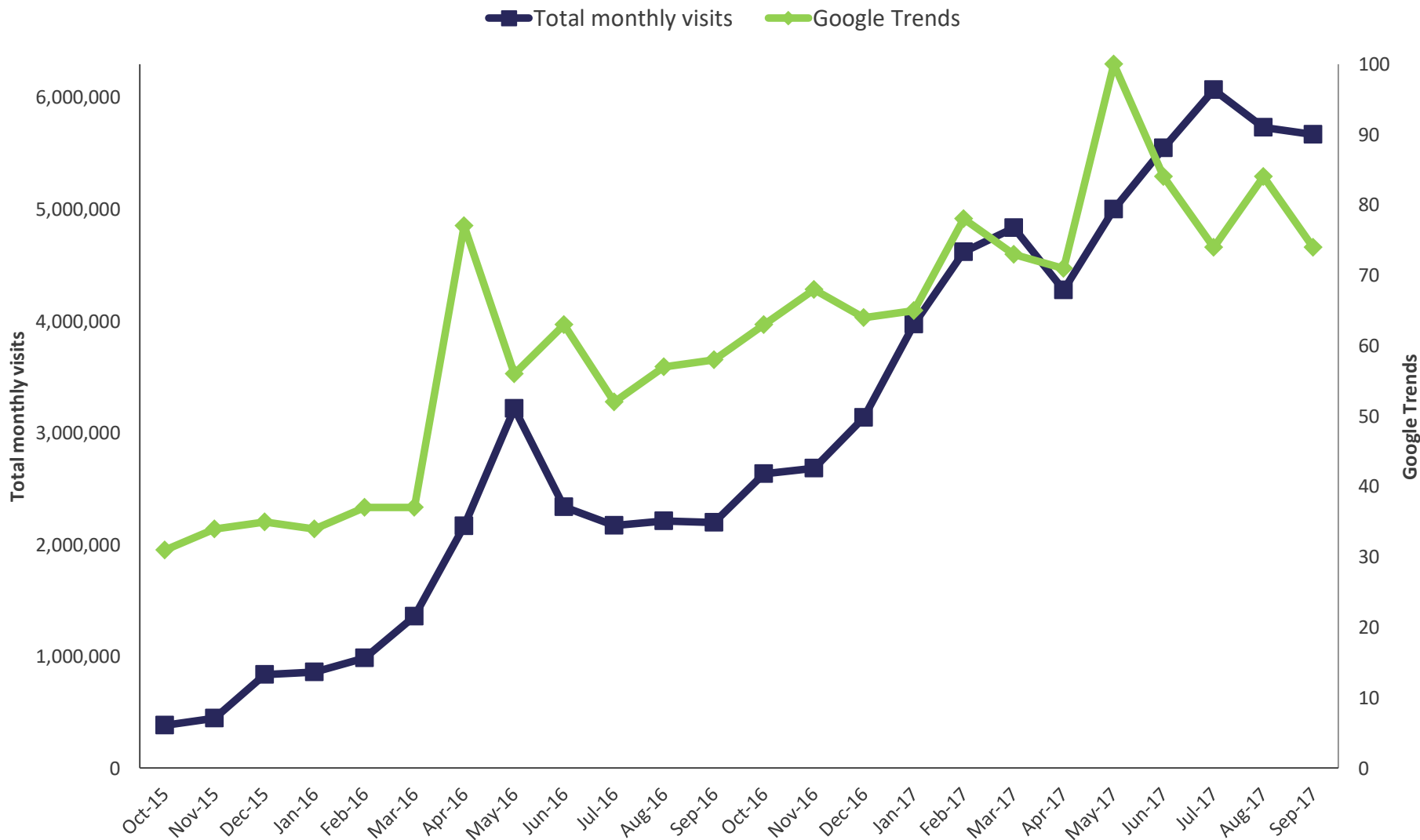


But price difference not as pronounced in US

- Although 10ml bottles are rare in the US, comparison of prices of 60ml with <15ml suggest smaller price difference
- Could be due to regulatory cost savings?

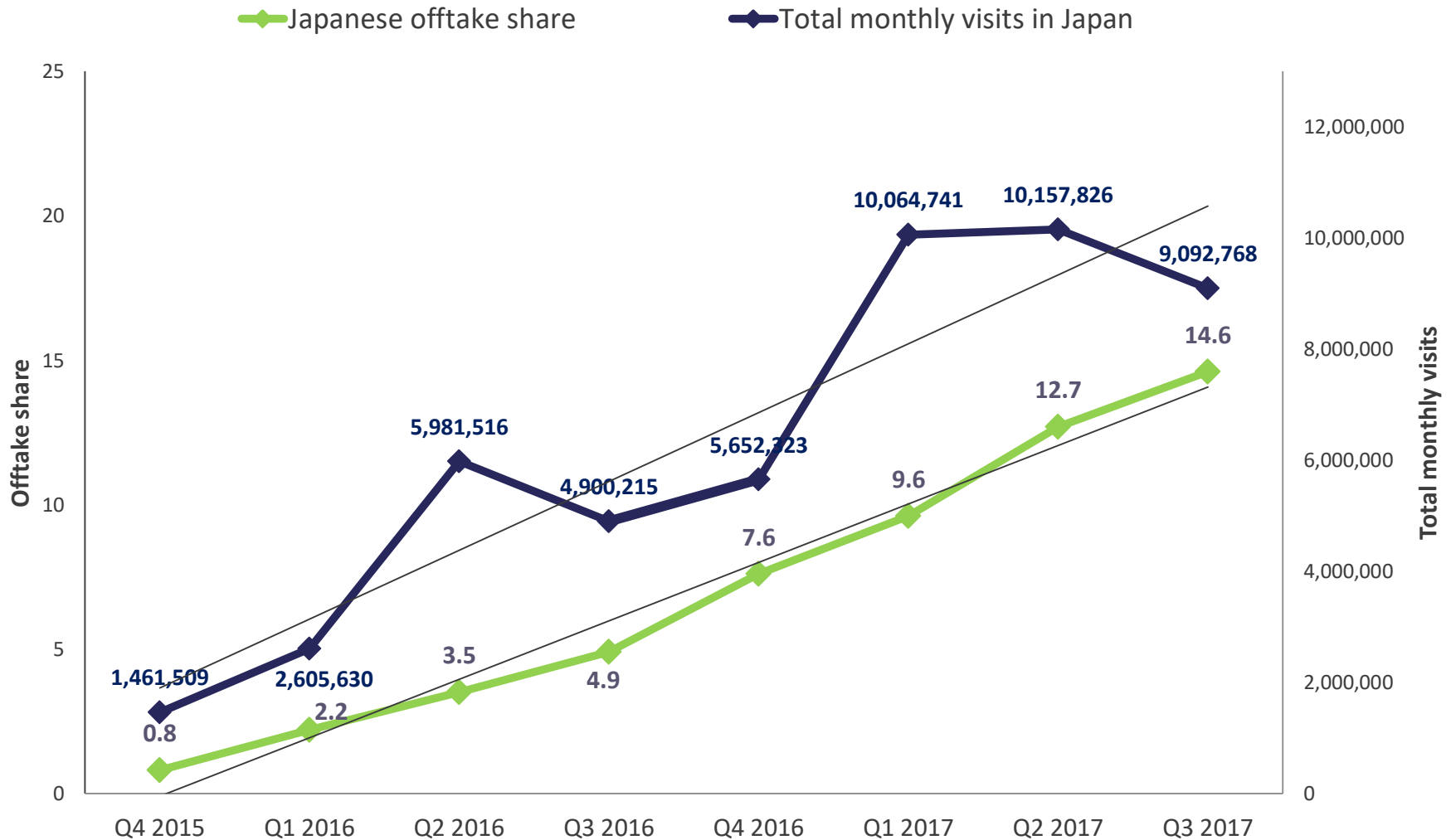


Heated tobacco (t-vapor): online tracking of strong growth



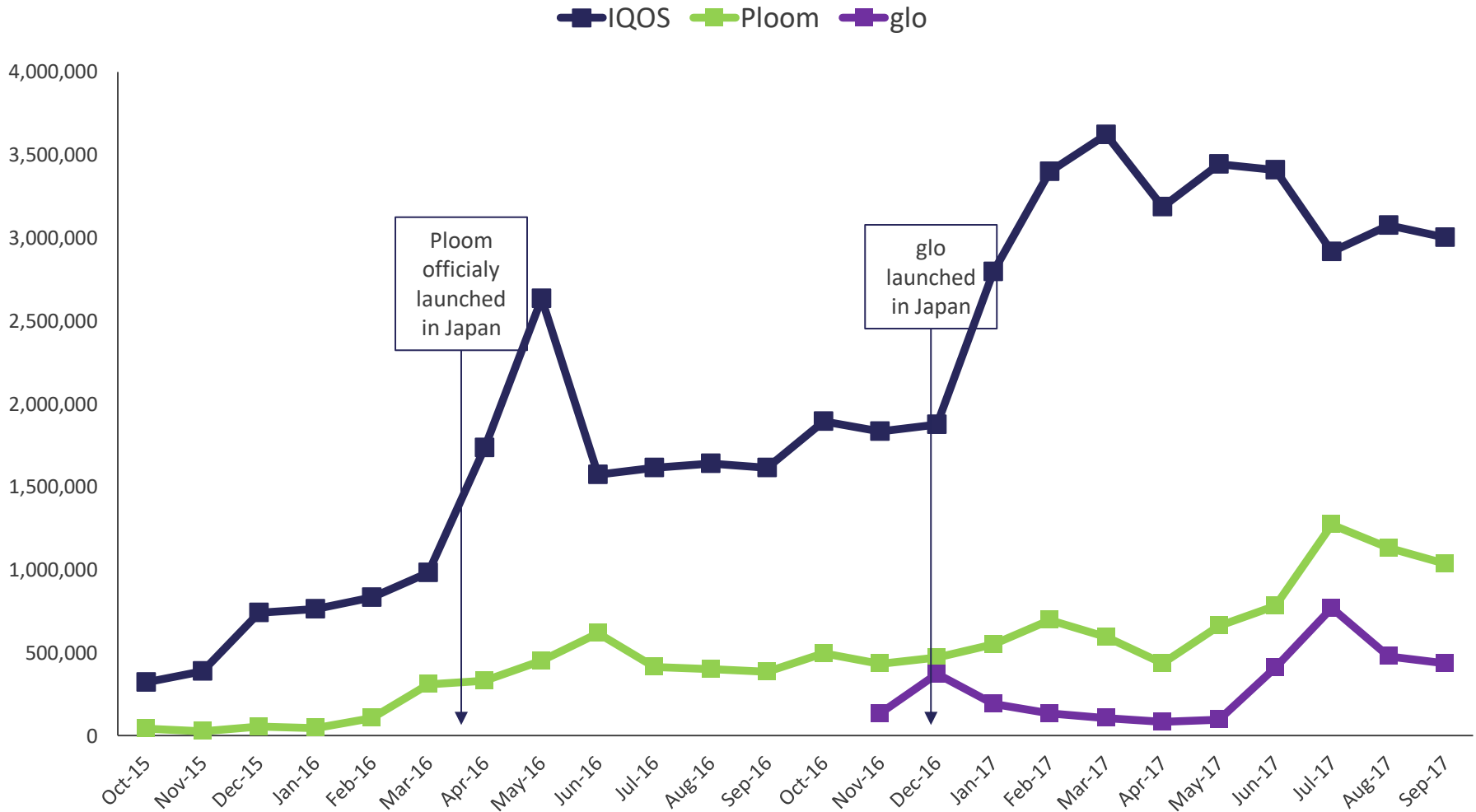
Notes: monthly visits to: IQOS (all official websites), discoverglo.com, discoverglo.jp, ploom.jp. Google Trends Keywords used: IQOS, Ploom Tech, Glo, Heated tobacco, アイコス (IQOS in Japanese); Google Trends data indexed to 100% Source: SimilarWeb and

IQOS in Japan: online traffic and sales correlation



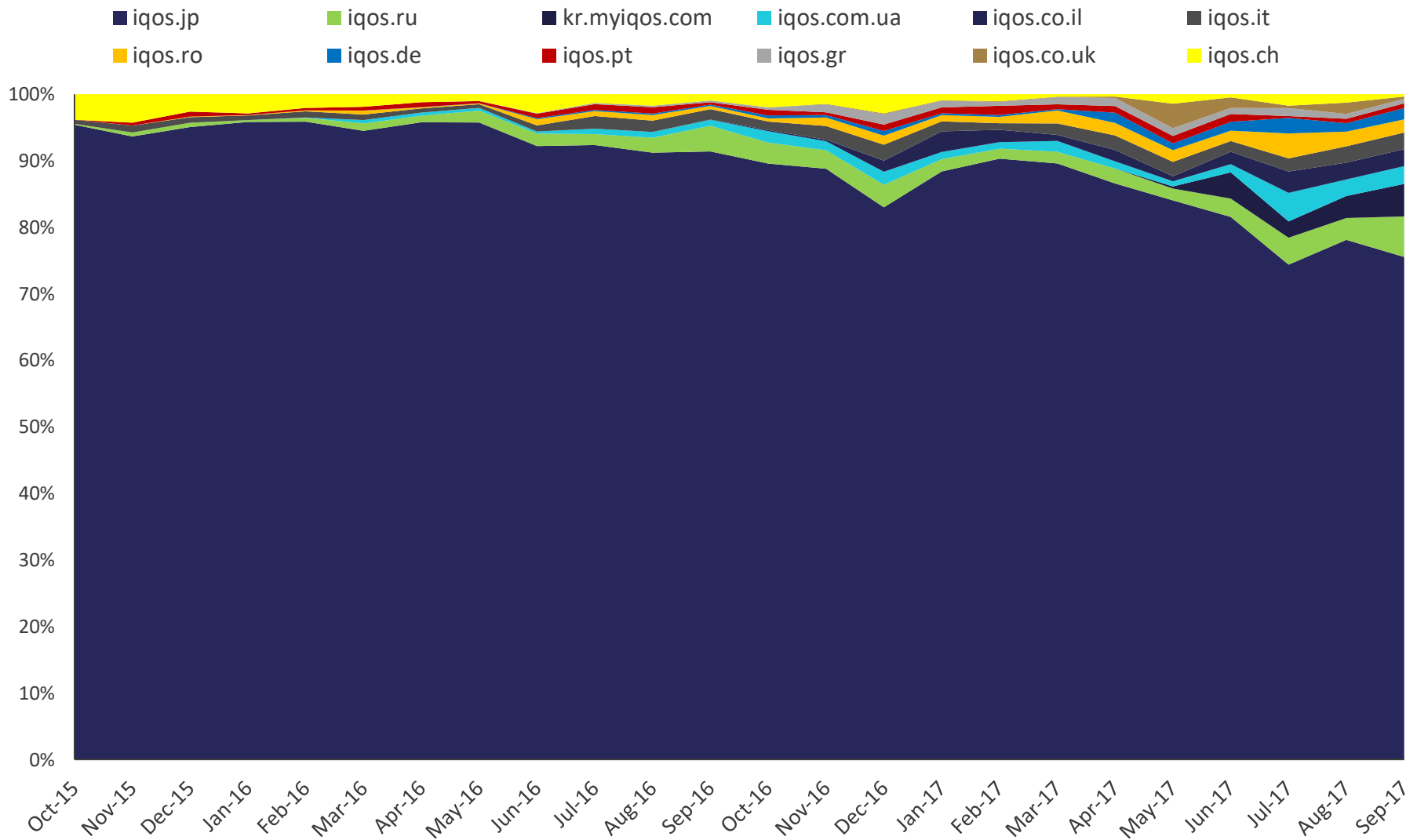
Note: Offtake share represents select C-Store sales volume for HeatSticks as a percentage of the total retail sales volume for cigarettes and heated tobacco units. Monthly visits to: iqos.jp

Heated Tobacco: new entrants in Japan



Notes: monthly visits to: iqos.jp, discoverglo.com AND discoverglo.jp, ploom.jp
 Source: SimilarWeb, September 2017

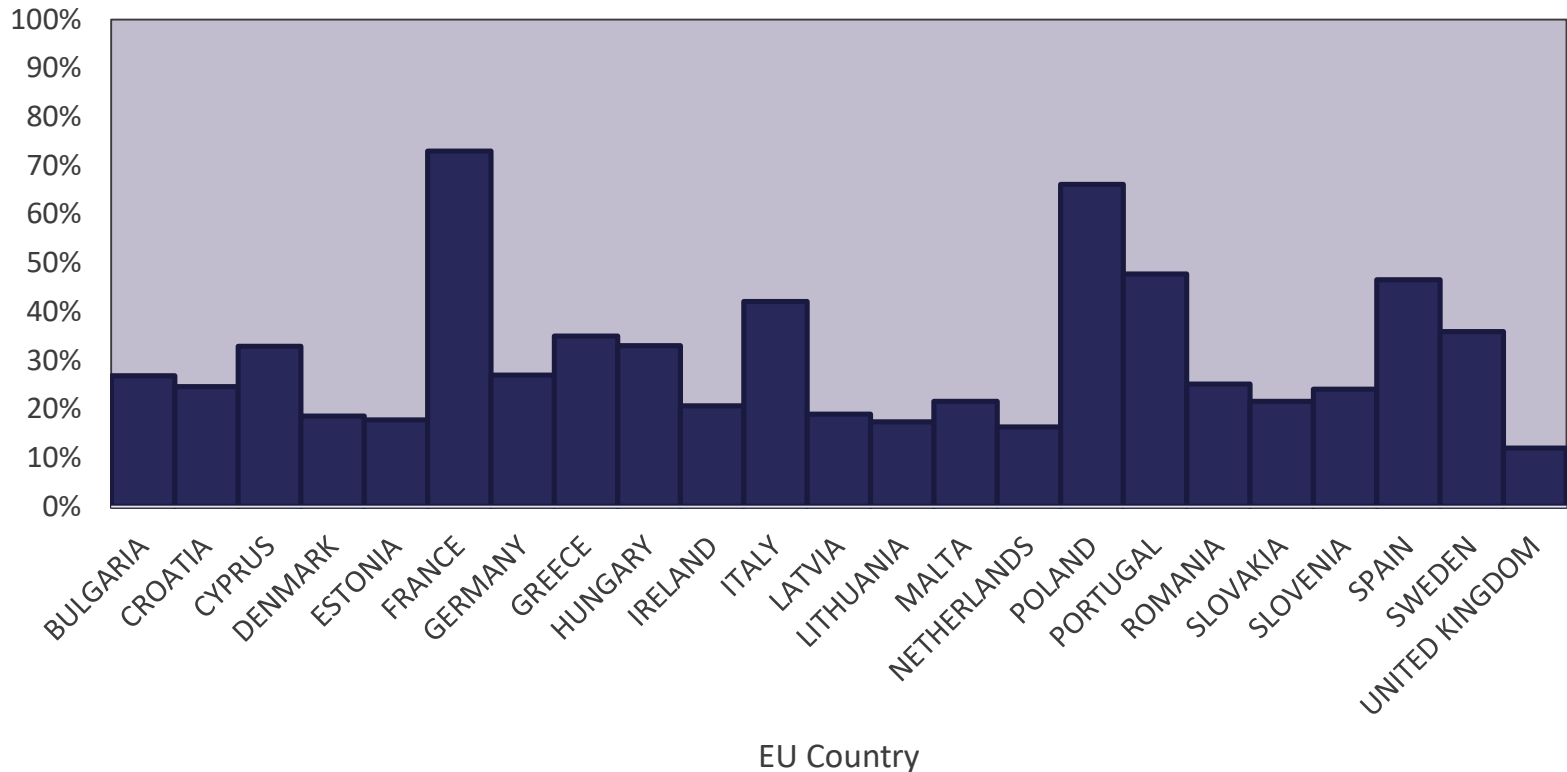
IQOS traffic share globally: slow growth in non-Japan markets





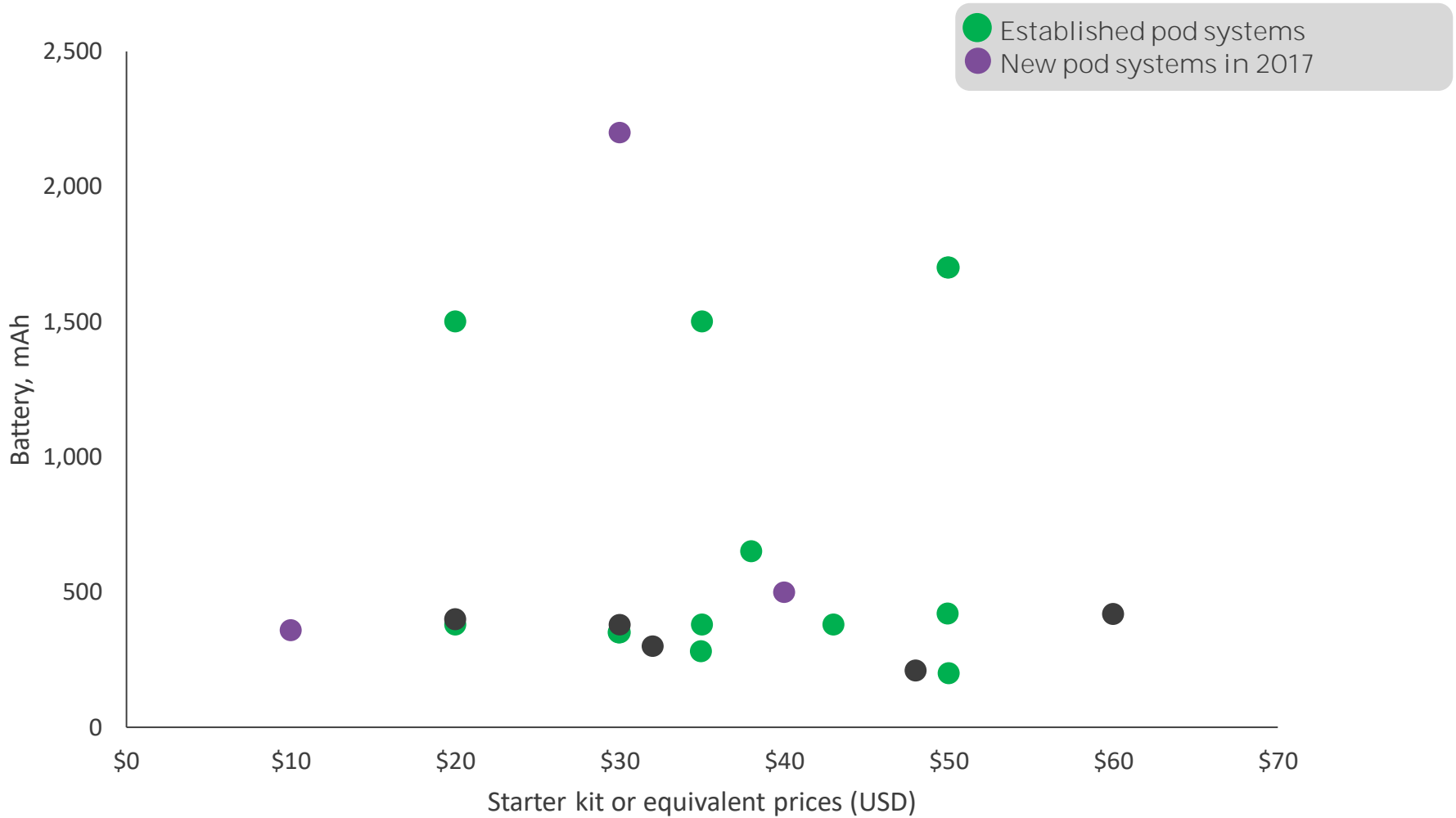
Heated Tobacco: taxation benefit compared to combustibles

% Net excise tax rate; Heated Tobacco vs Combustible Cigarettes





Pod systems in US: new products focus on lower power



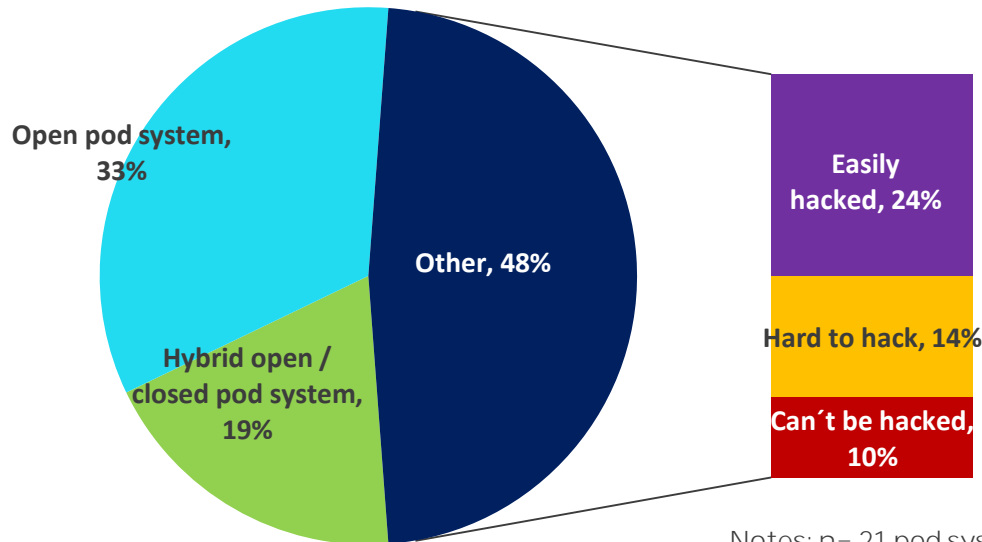
Notes: starter kits come with varying number of empty or prefilled pods
Source: ECigIntelligence October 2017



US Pods: majority refillable; nic. salts preferred



Notes: xAOC/Convenience Database from Nielsen
 Source: Nielsen data provided by Wells & Fargo Securities LLC



Notes: n= 21 pod system devices
 Source: ECigIntelligence