

Putting the Experience of Chinese Inventors into Context

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UNITED STATES
PATENT AND TRADEMARK OFFICE



Outline

- Data and Methods
- Growth in PTO Filings
 - Focus on foreign co-invention
- Patent examination findings
- Issue and citation rates

Data and Methods

- Data come from internal USPTO data systems
 - Used by patent examiners at USPTO to manage the prosecution of applications on their dockets
 - Data includes information on the applicants, the subject matter of the inventions, actions taken by examiners, applicant responses, current status, final disposition of the application, etc.
- Forward citations data from TAF

How do we determine country of origin?

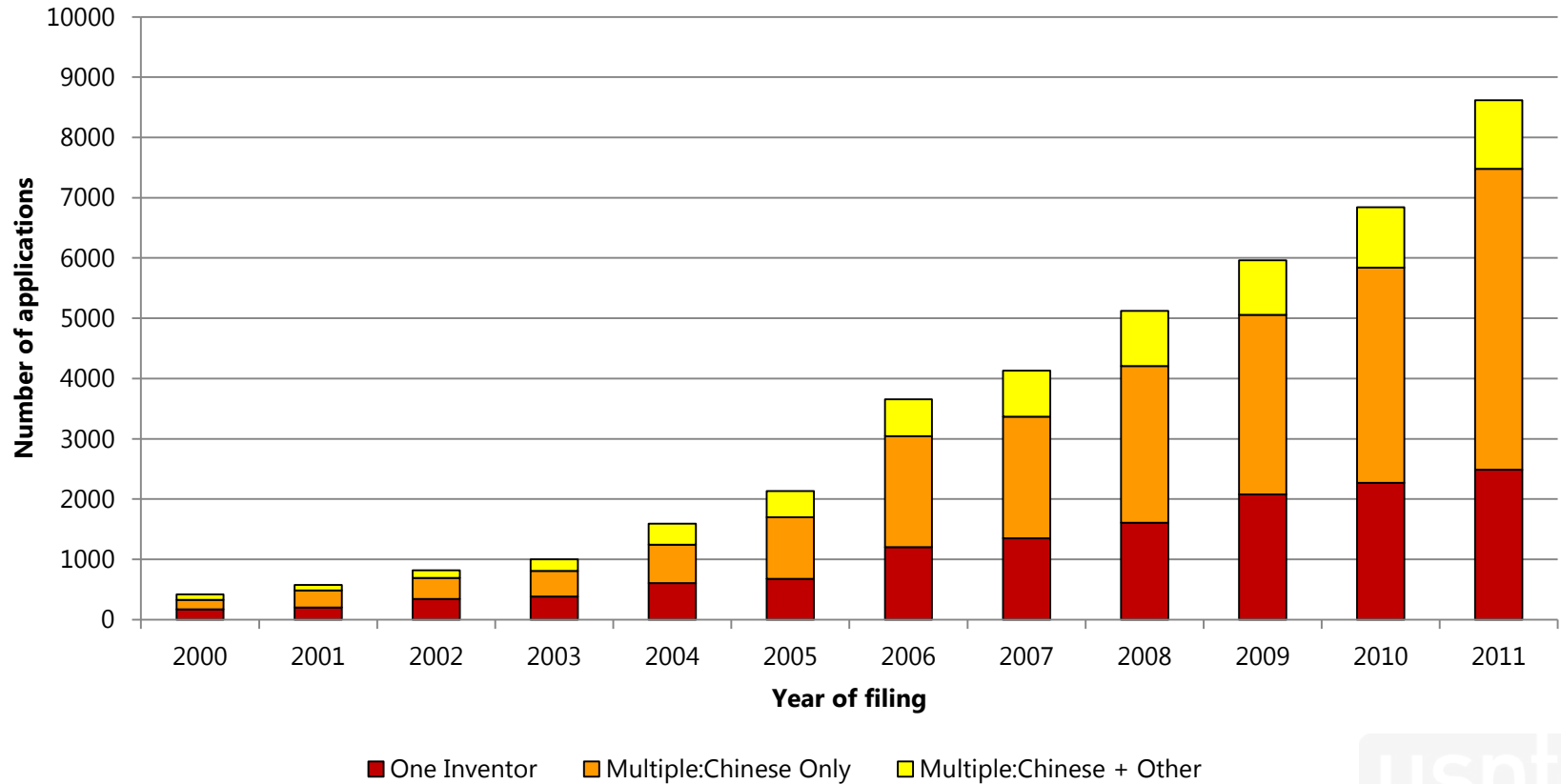
- We define an application's country of origin as the country of residence of the application's first-named inventor.
- For example, an application is considered to be from China, if the residence of the first-named inventor is listed as mainland China.
 - We do not include applications from Hong Kong, Macau, or Taiwan.
 - Can include cases where foreign nationals living in China are first-named inventor

The Chinese Experience at USPTO

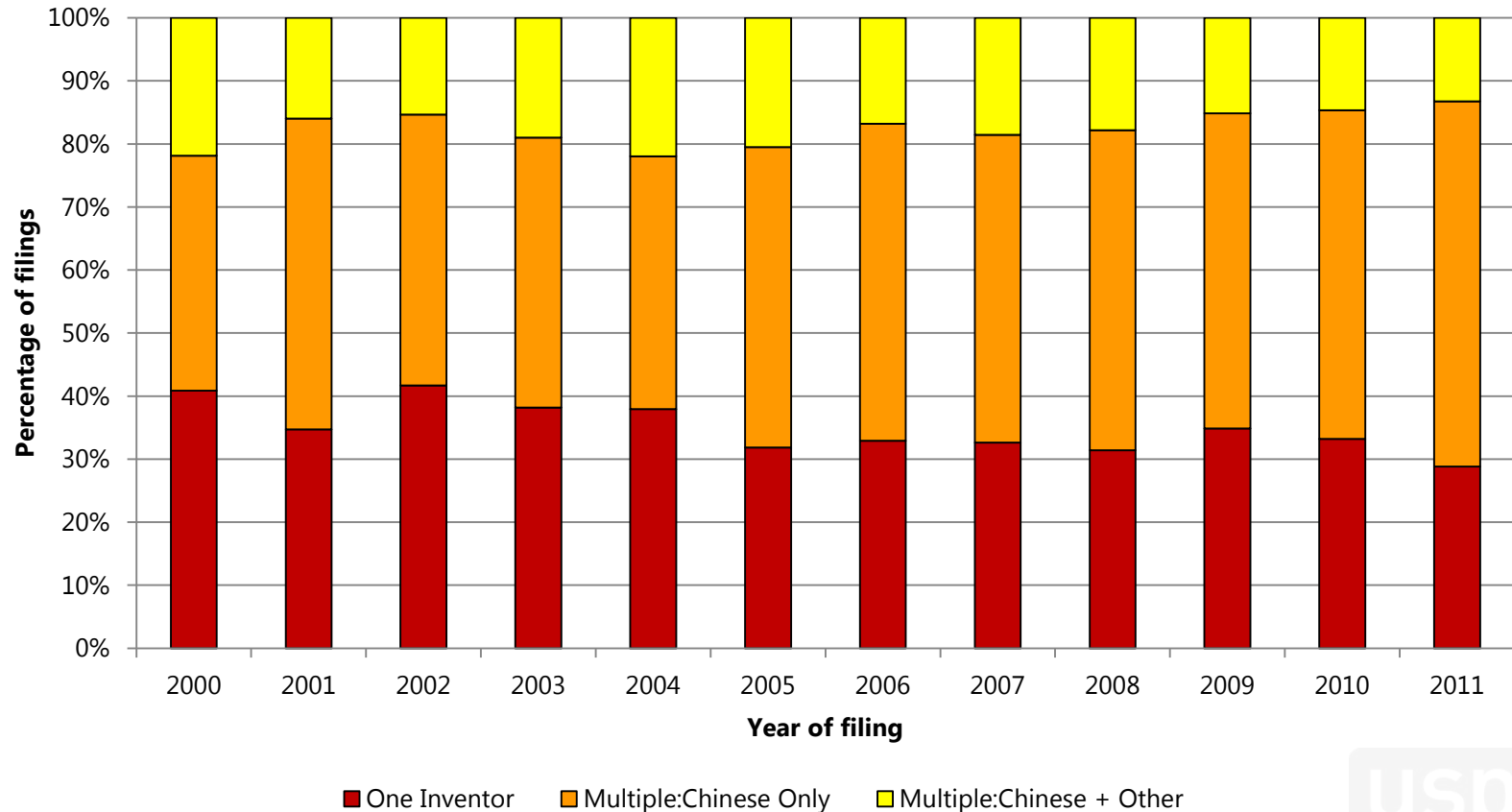
GROWTH IN APPLICATION FILINGS AND FOREIGN CO-INVENTION



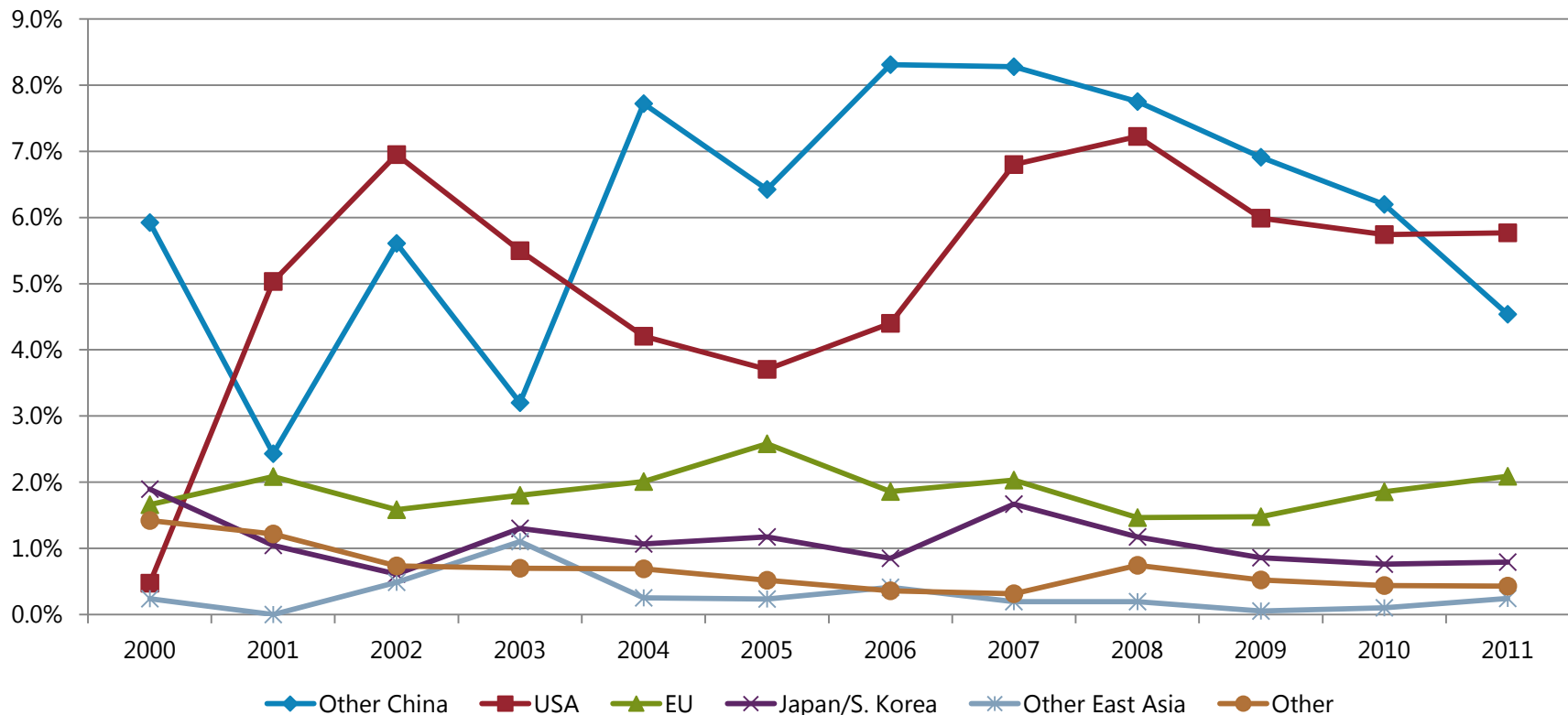
Regular Utility Application Filings to PTO from Mainland China, 2000 - 2011



Shares of Filings from Mainland China with Multiple Inventors and at Least One Non-Chinese Inventor, 2000-2011



Percentage of Applications with at Least One Co-Inventor from Various Countries/Regions, by Year

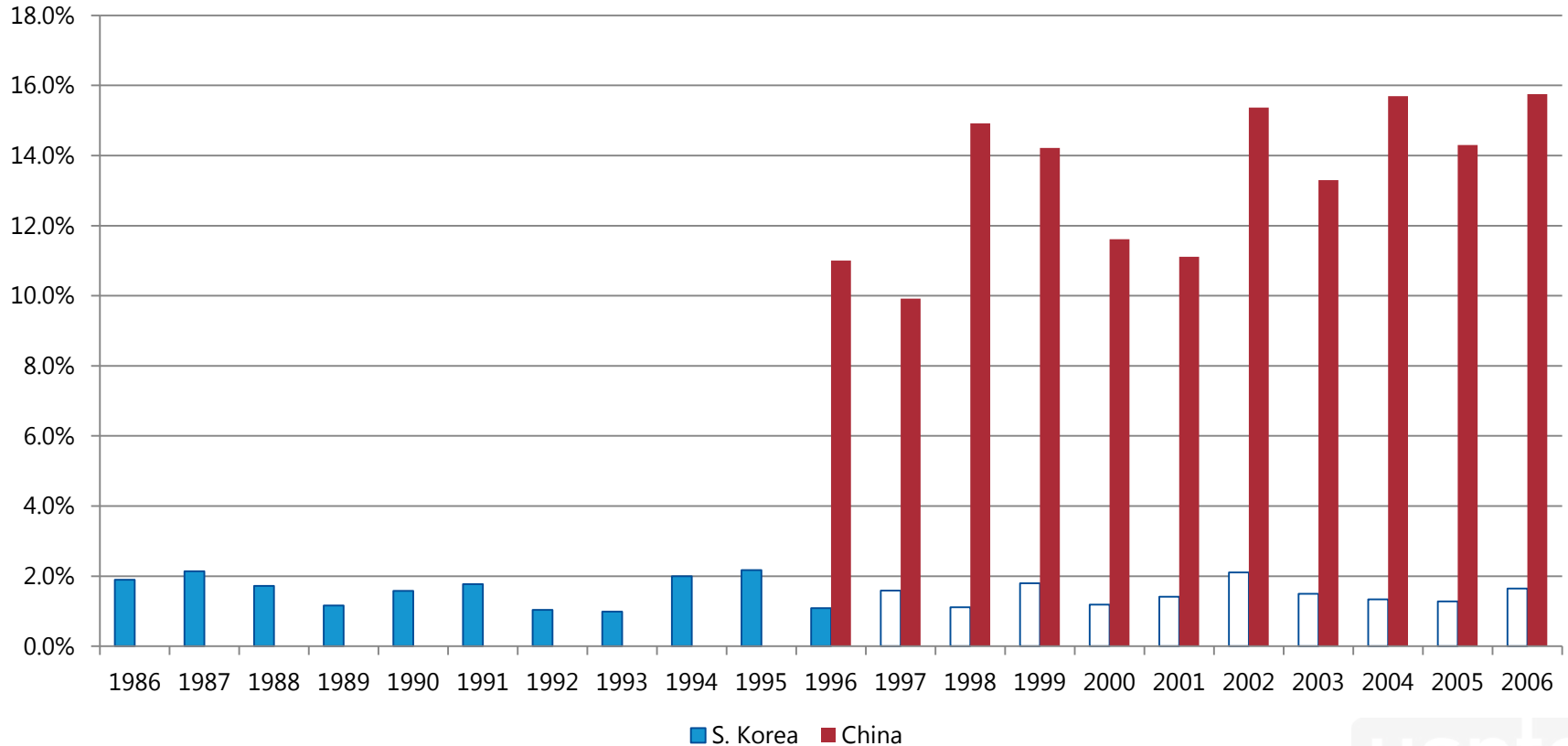


Note: "Other China" includes Taiwan, Hong Kong and Macao

Note: "Other East Asia" includes the ASEAN countries and Mongolia

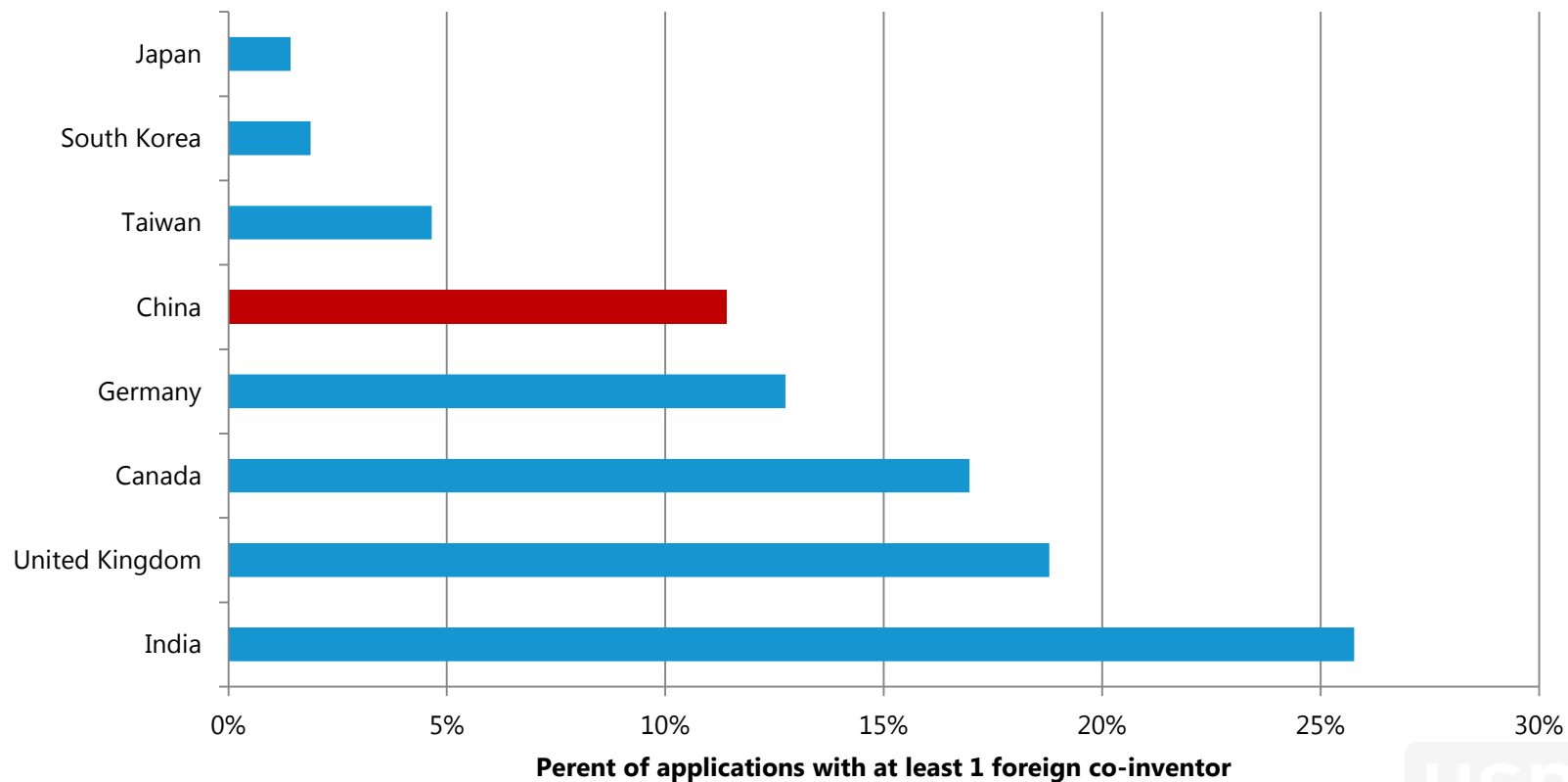
Note: EU includes all EU members plus Switzerland

Percentage of applications with at least one foreign co-inventor, South Korea and China high-growth periods



Note: The white bars indicate the results for South Korea for 1997-2006

Percentage of applications with at least one foreign co-inventor, applications received 2012-2014



The Chinese Experience at USPTO

**A LOOK AT THE EXAMINATION OF RECENT
FILINGS WITH COMPARISONS TO FILINGS
FROM OTHER JURISDICTIONS**

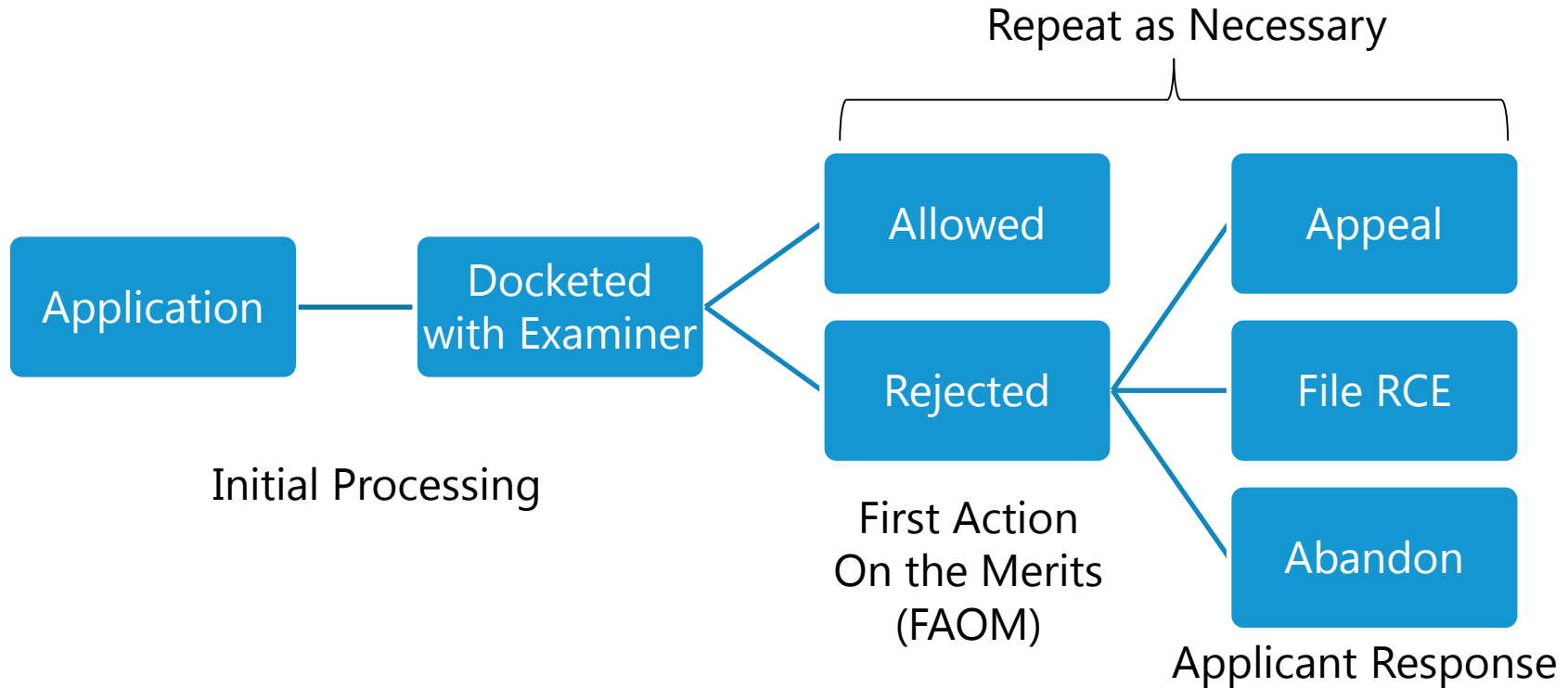


Comparison Groups

- Asian
 - Japan, South Korea, Taiwan, Hong Kong/Macau, [Other East Asian](#), India
- European
 - Germany, United Kingdom, [Other EU Countries](#)
- Other Developed
 - Canada, Australia/New Zealand

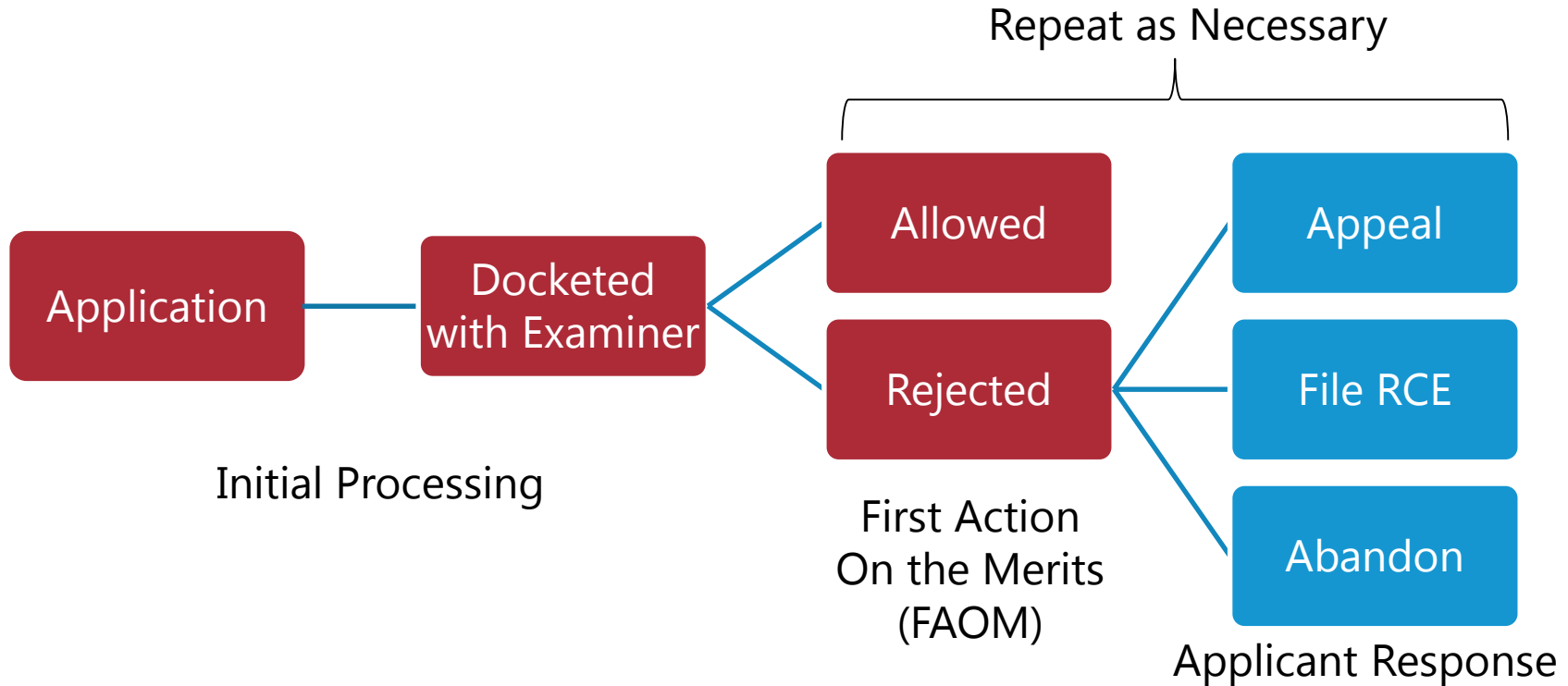
Patent Examination Trends

Examination Milestones

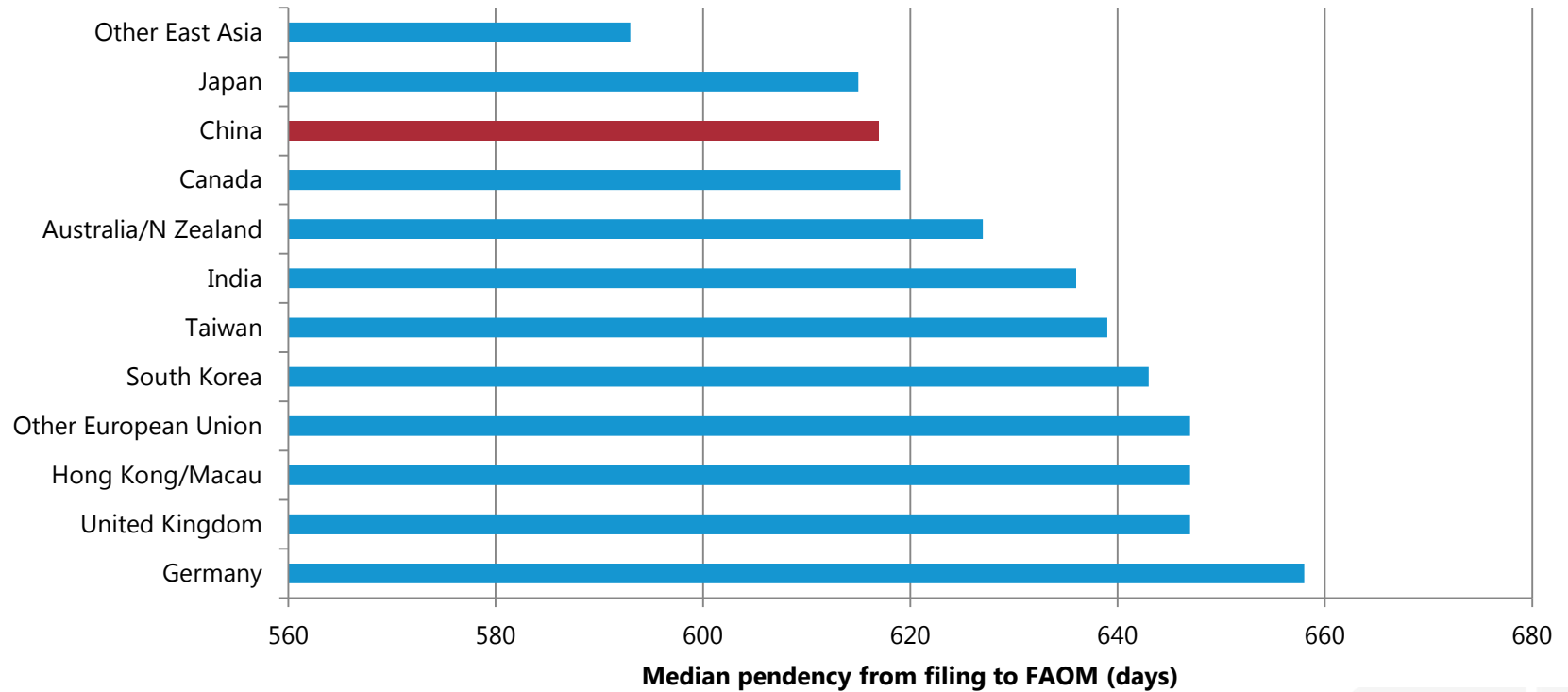


Examination Milestones

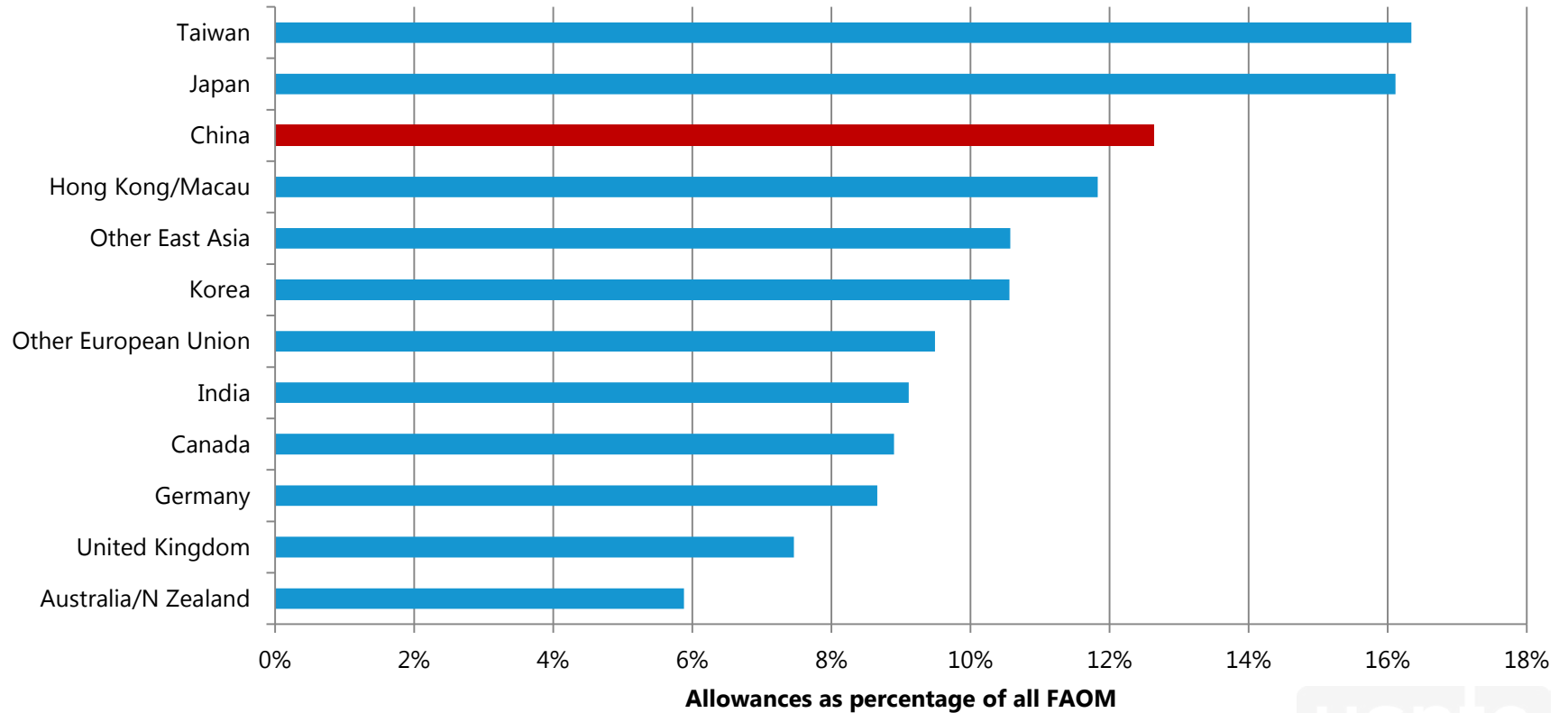
Getting to FAOM



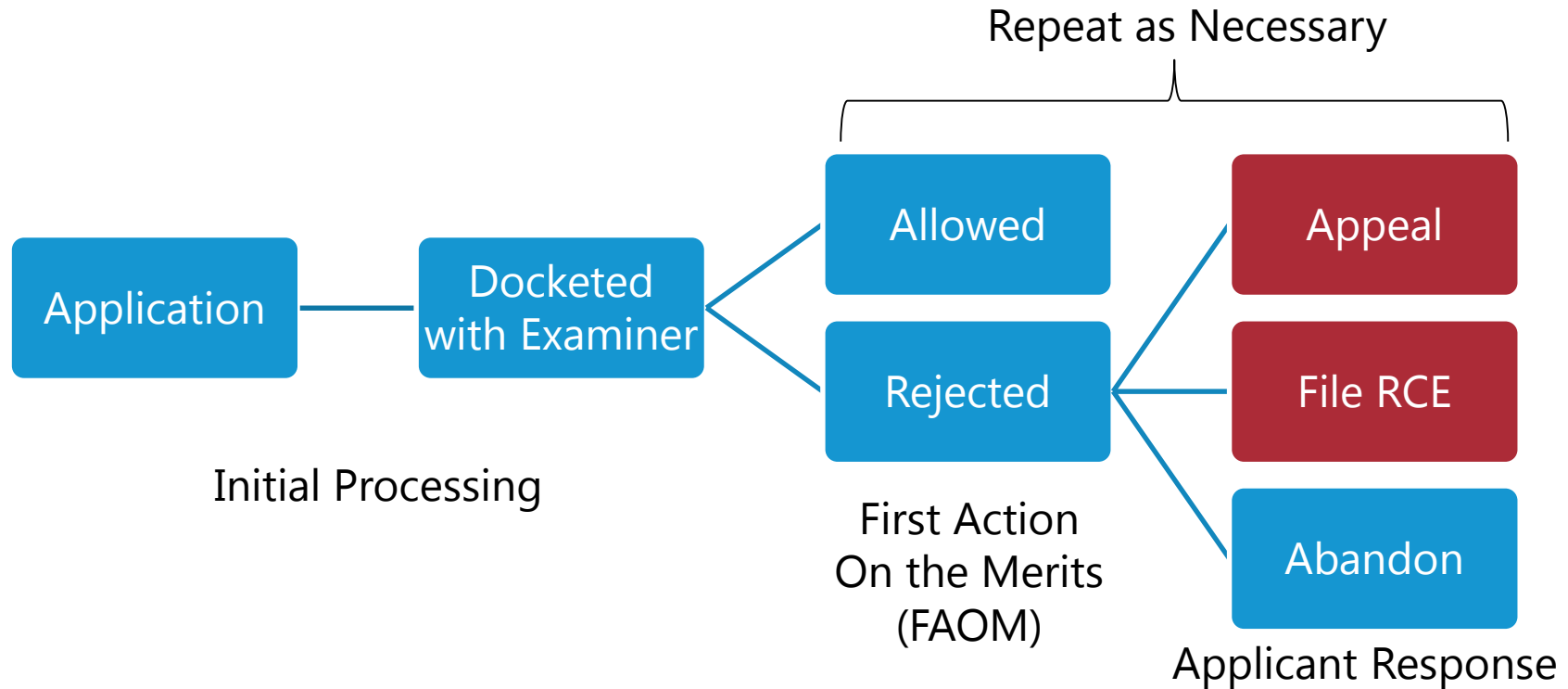
Median Pendency from Filing to FAOM, for Applications with FAOMs between 2012 and 2014



Percentage of First Actions on the Merits That Are Allowances, 2012-2014



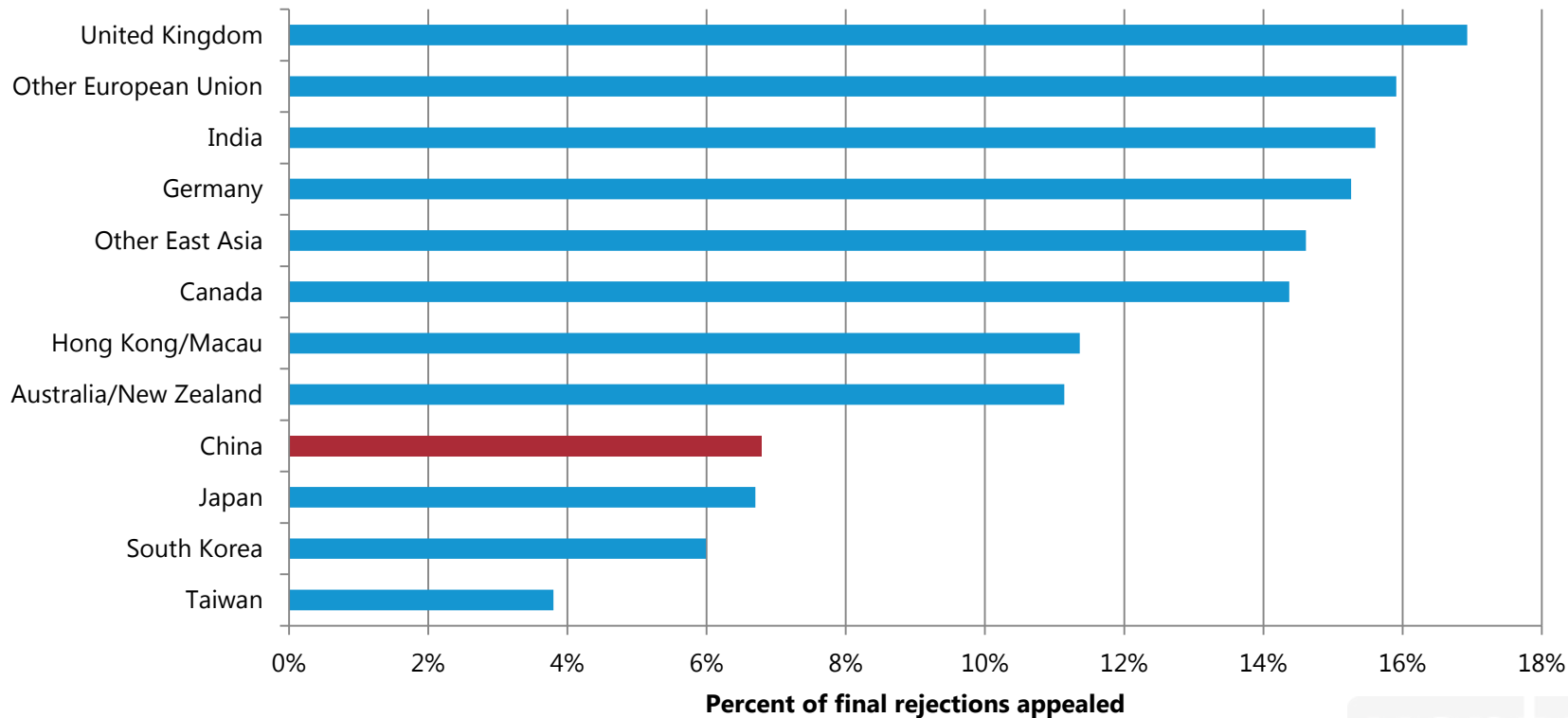
Examination Milestones Dealing with Rejection



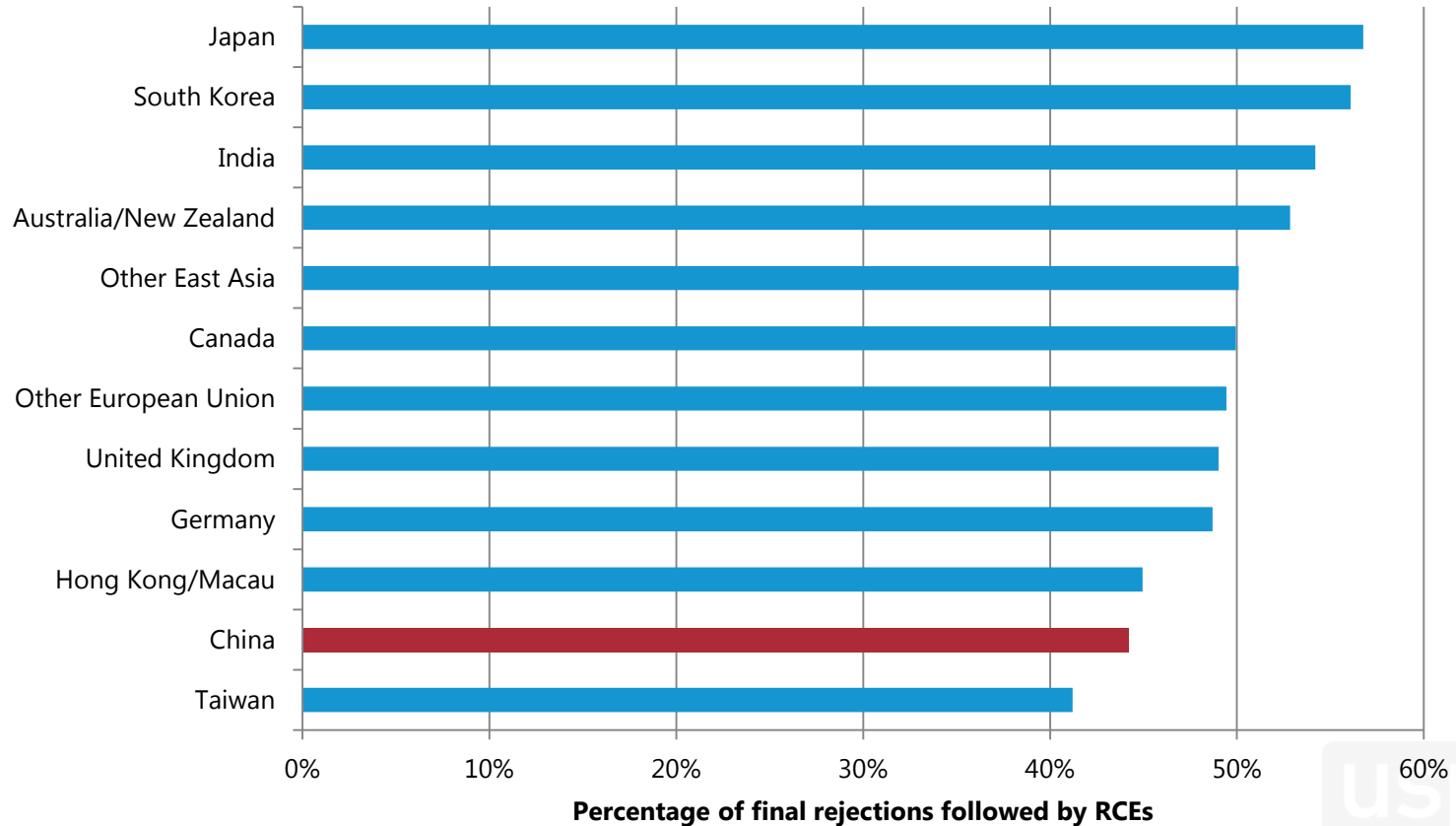
Applicant Responses

- Final rejections aren't *final*, but they terminate initial examination
- Applicants must respond within 90 days
 - Up to three 30-day extensions of time can be purchased.
- Requests for continued examination (RCEs) can be used to re-open an existing examination without filing a new application
- Applicants can also file appeals with the Patent Trial and Appeal Board (PTAB)

Share of Final Rejections Followed by an Appeal within 6 Months, Final Rejections Issued 2005-12

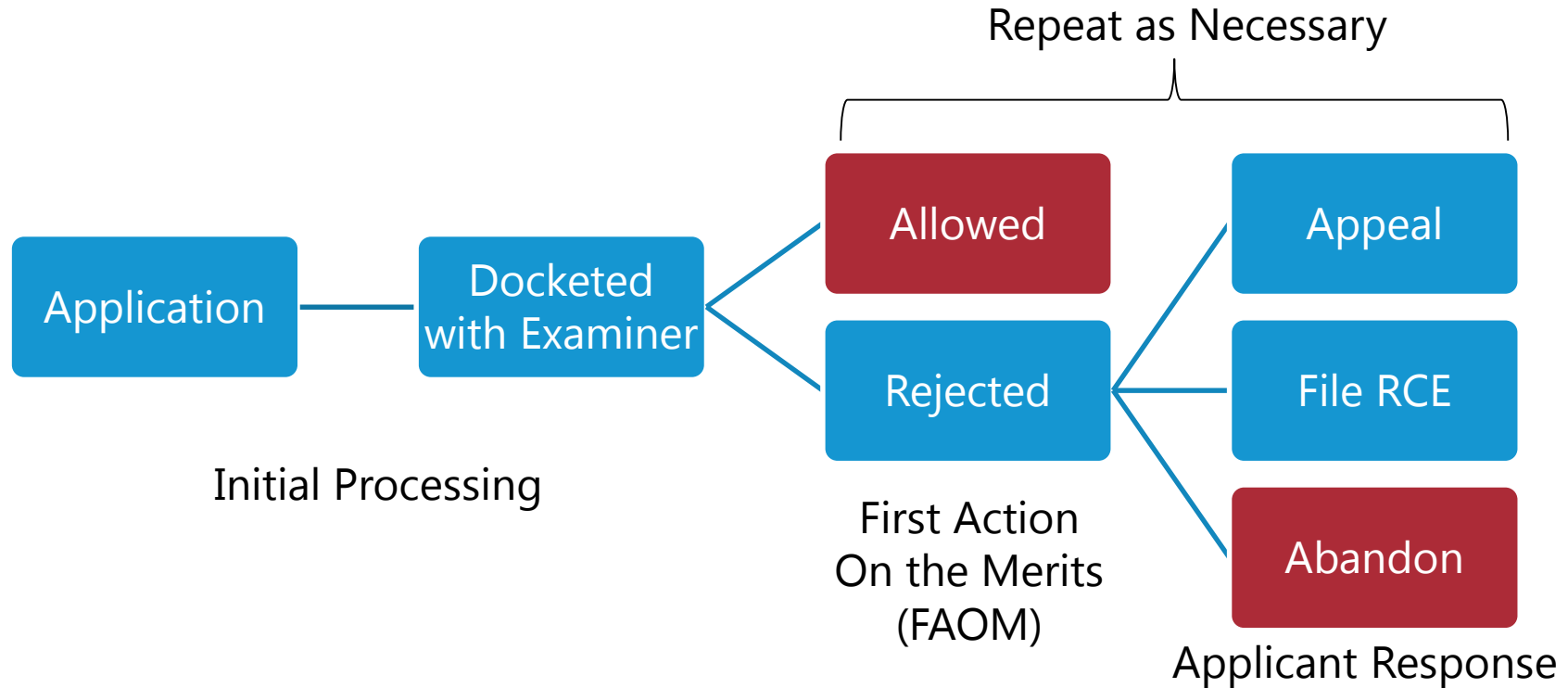


Share of Final Rejections Followed by an RCE within 6 Months, Final Rejections Issued 2005-12

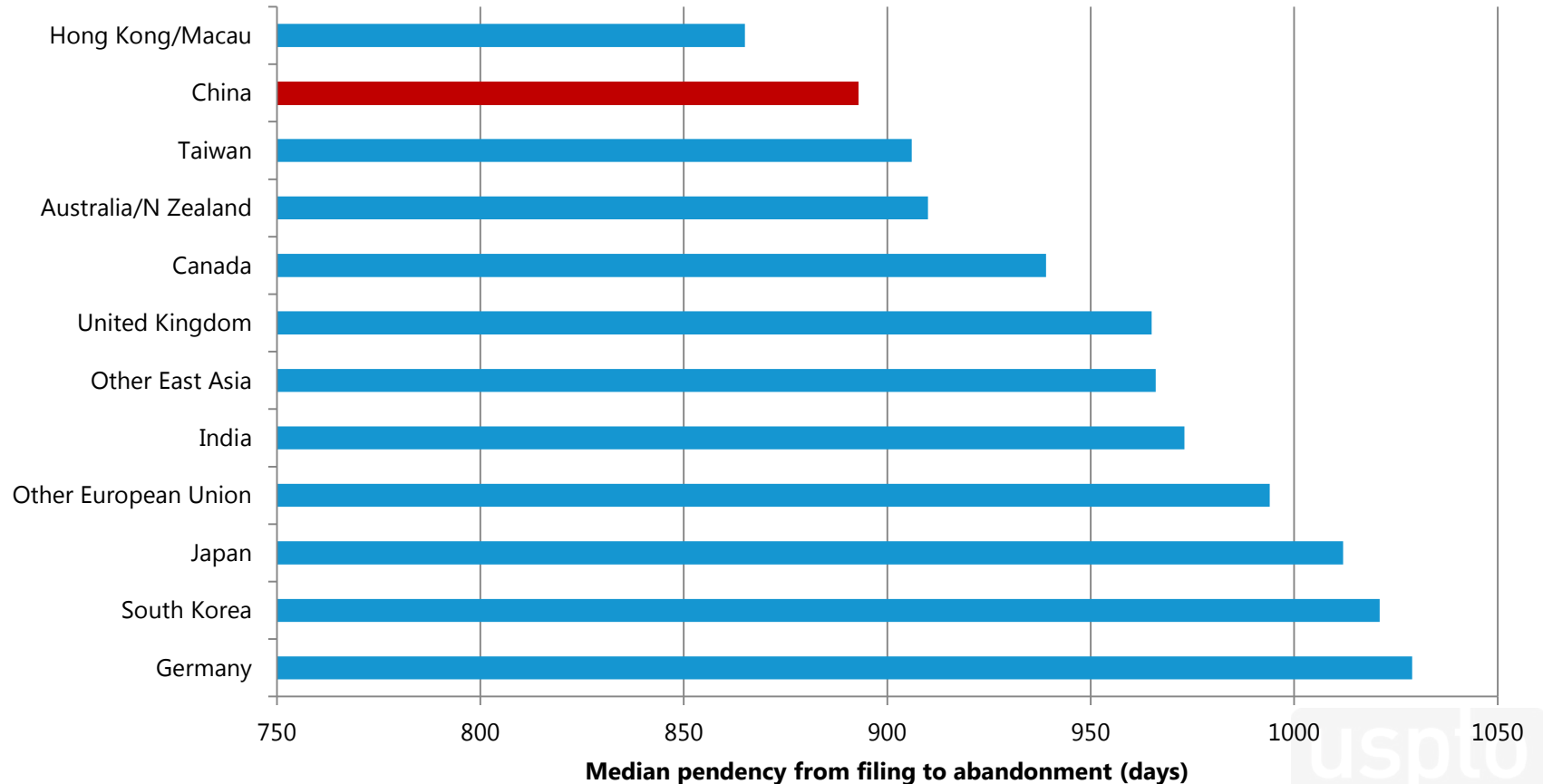


Examination Milestones

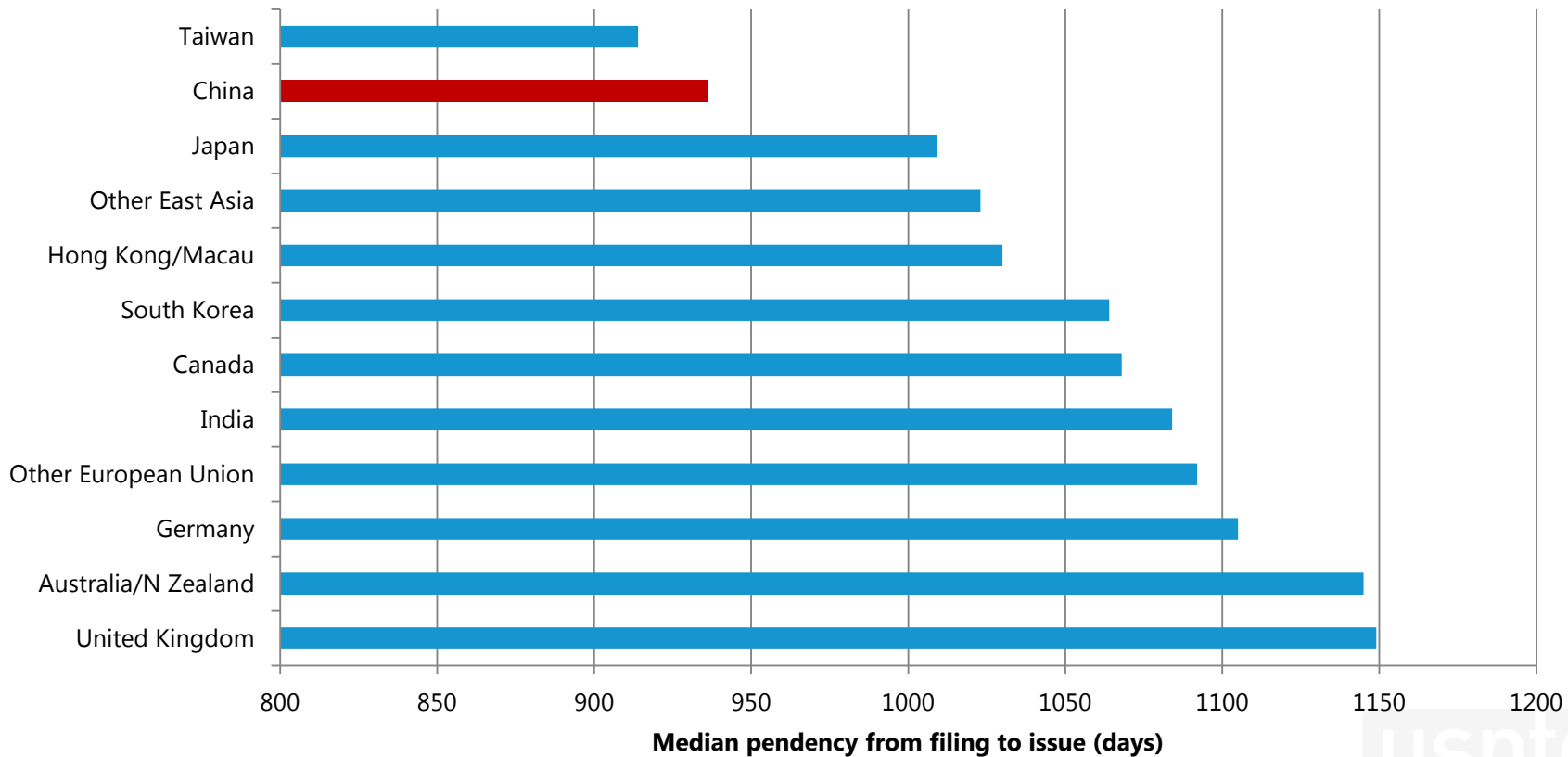
Final Disposition



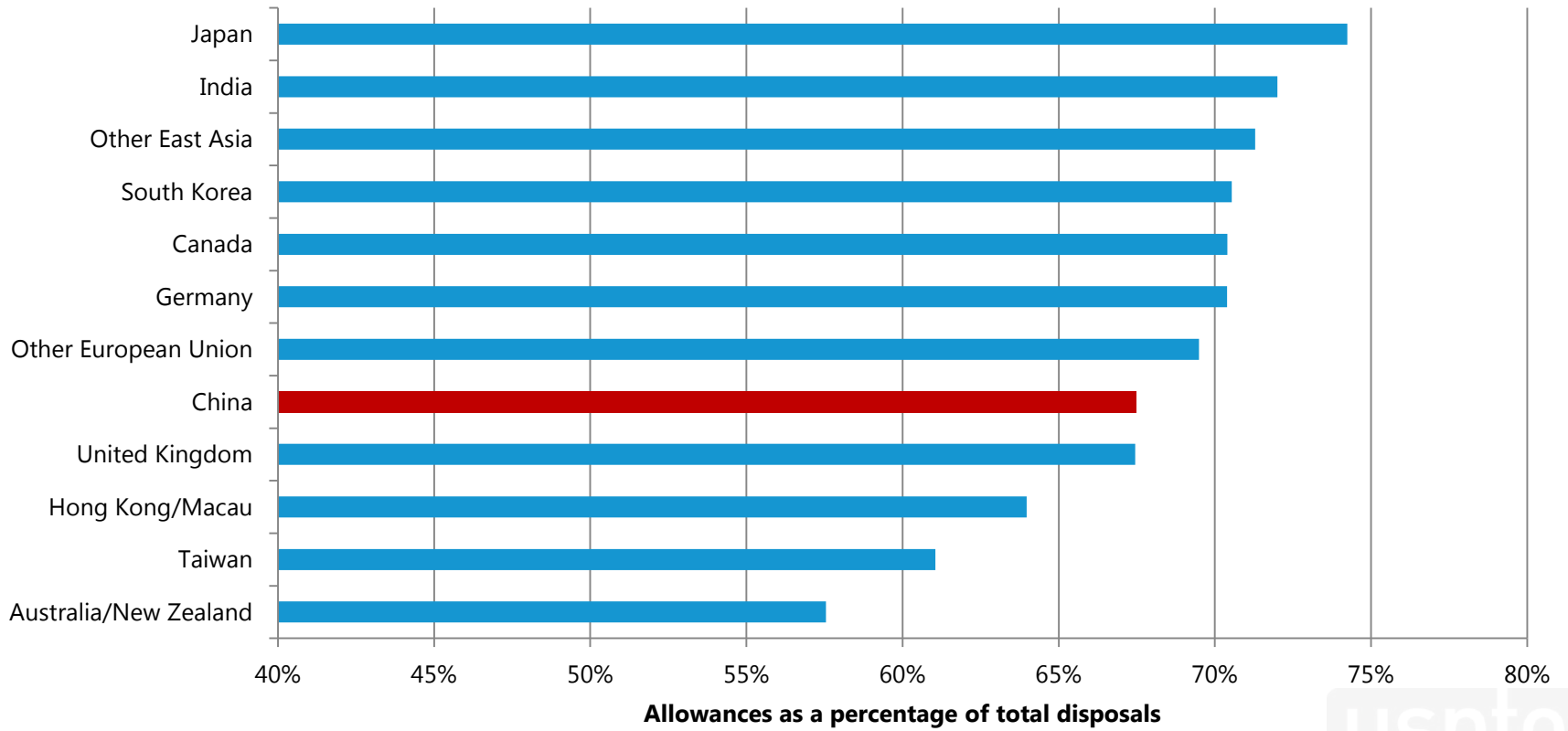
Median Pendency from Filing to Disposal, All Applications Abandoned between 2012-14



Median Pendency from Filing to Disposal, All Patents Issued between 2012-14



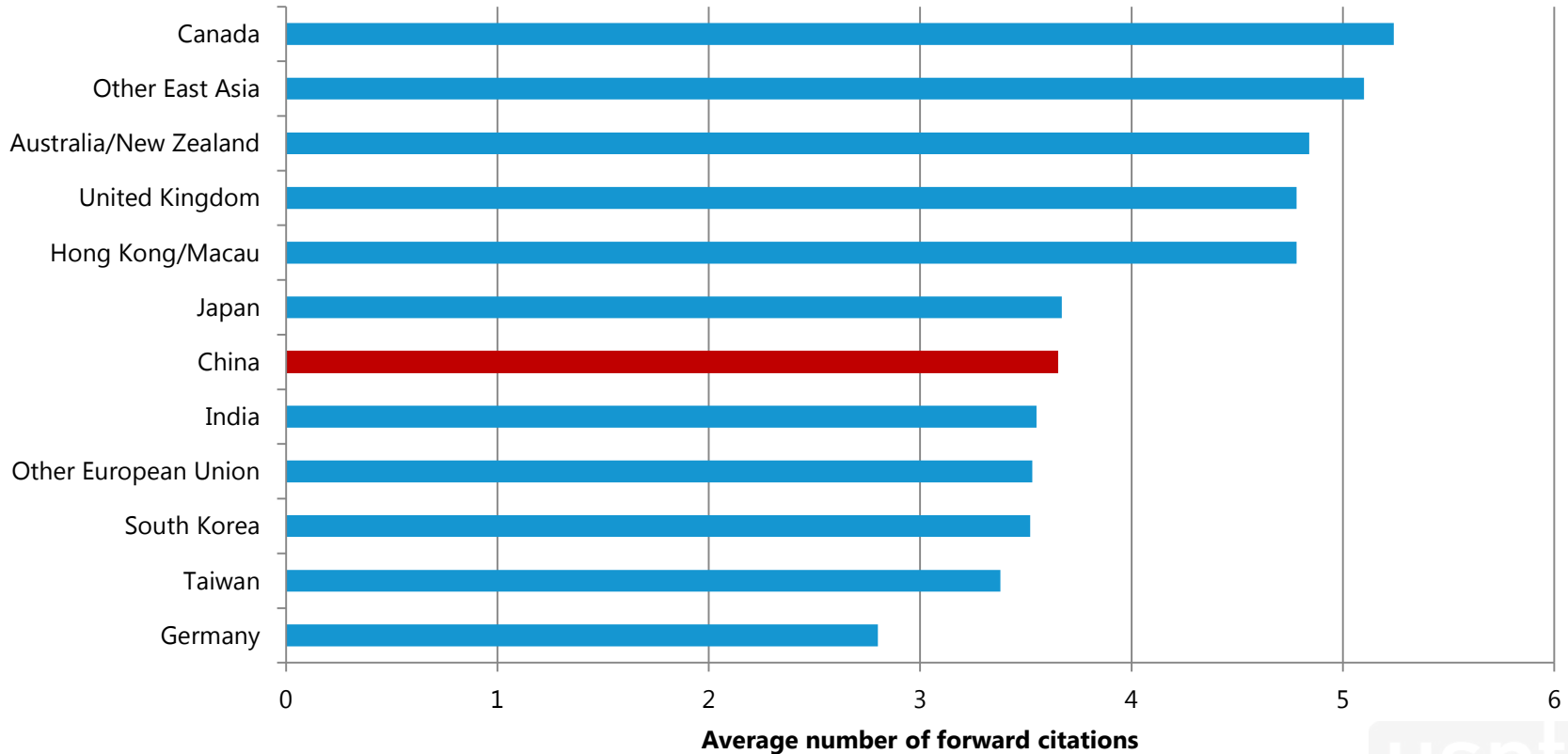
Comparing Issue Rates by Country of Origin, Applications Disposed Between 2012 and 2014



Epilogue

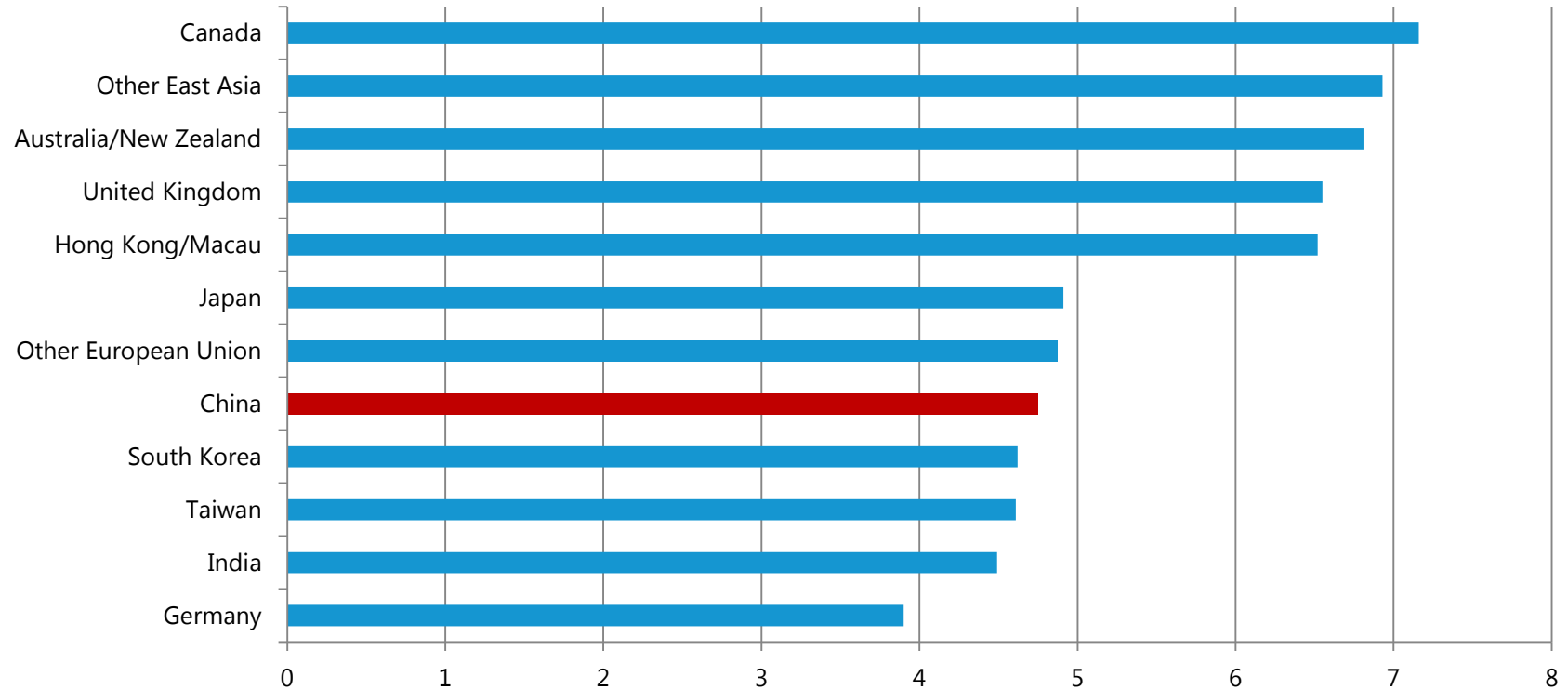
CITATION RATES

Average Number of 3-Year Forward Citations, by Country of Origin, Patents Issued Between 2001 and 2008



Note: Cited by patents issued by USPTO

Average Number of 5-Year Forward Citations, by Country of Origin, Patents Issued Between 2001 and 2008



Note: Cited by patents issued by USPTO

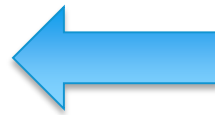
Summary

- The number of Chinese applications to USPTO has grown at a 31-percent annual rate since 2000.
 - Compared to 6-percent rate for all international applications
- Foreign co-invention rate is comparable to those for applications from other countries
- Relatively short pendency to first action and disposal
- First action allowance rate is relatively high
- Relatively low use of appeals to USPTO
- Relatively low use of RCEs
- Average issue and forward citation rates

BACK UPS

Other East Asian Countries

- Singapore
- Malaysia
- Indonesia
- Thailand
- Cambodia
- Myanmar
- Vietnam
- Philippines
- Laos
- Mongolia
- Brunei

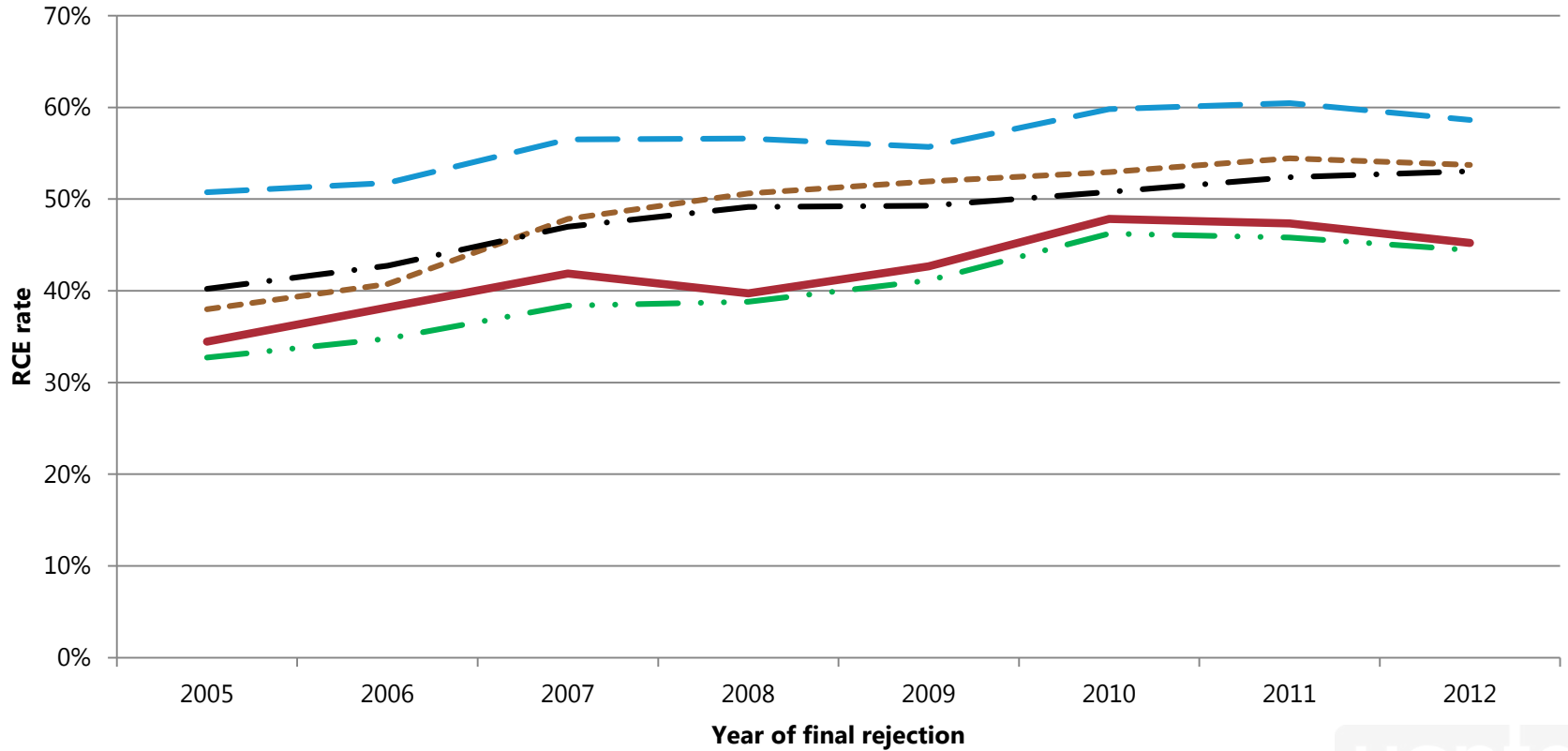


Other European Union Countries

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland



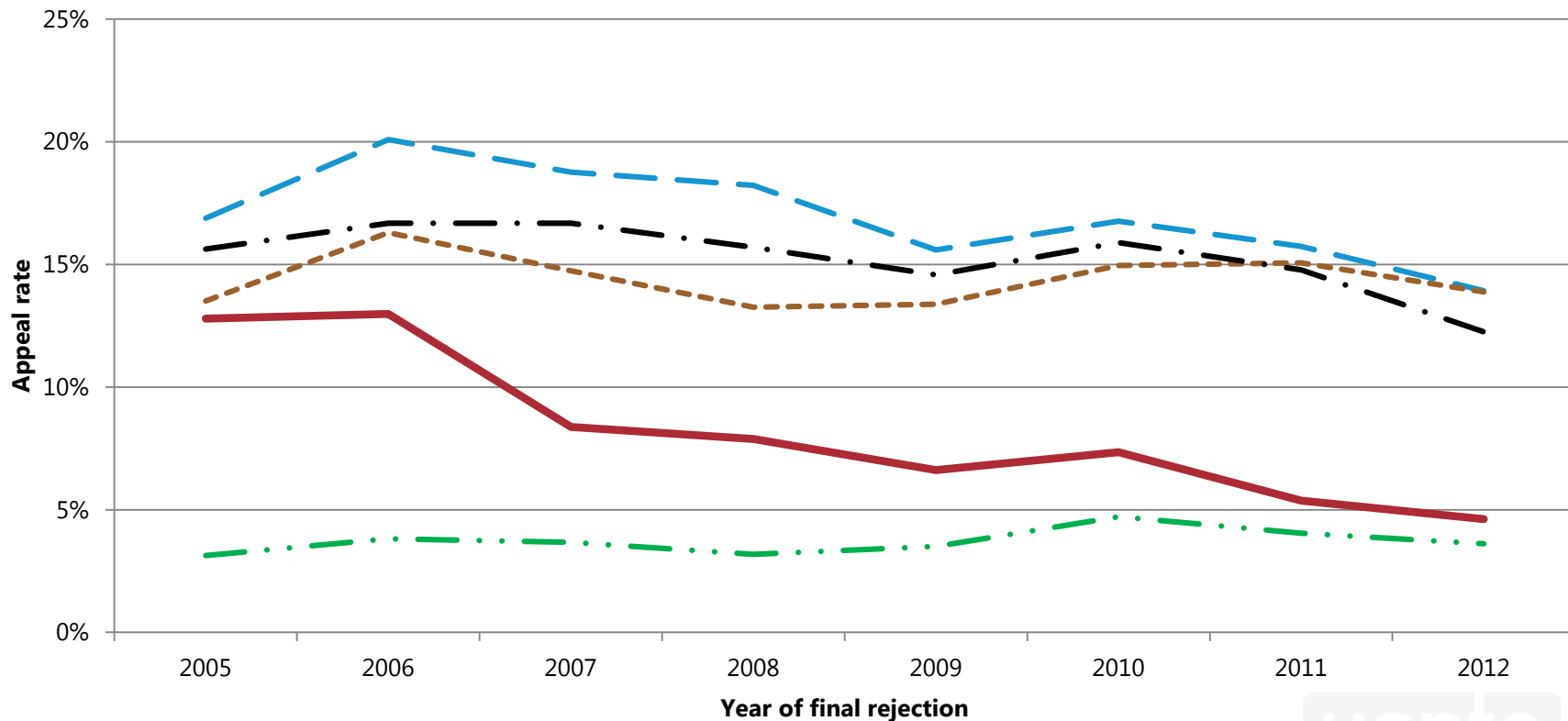
RCE rates by year of final rejection, selected countries, 2005-2012



China Japan Canada Germany Taiwan

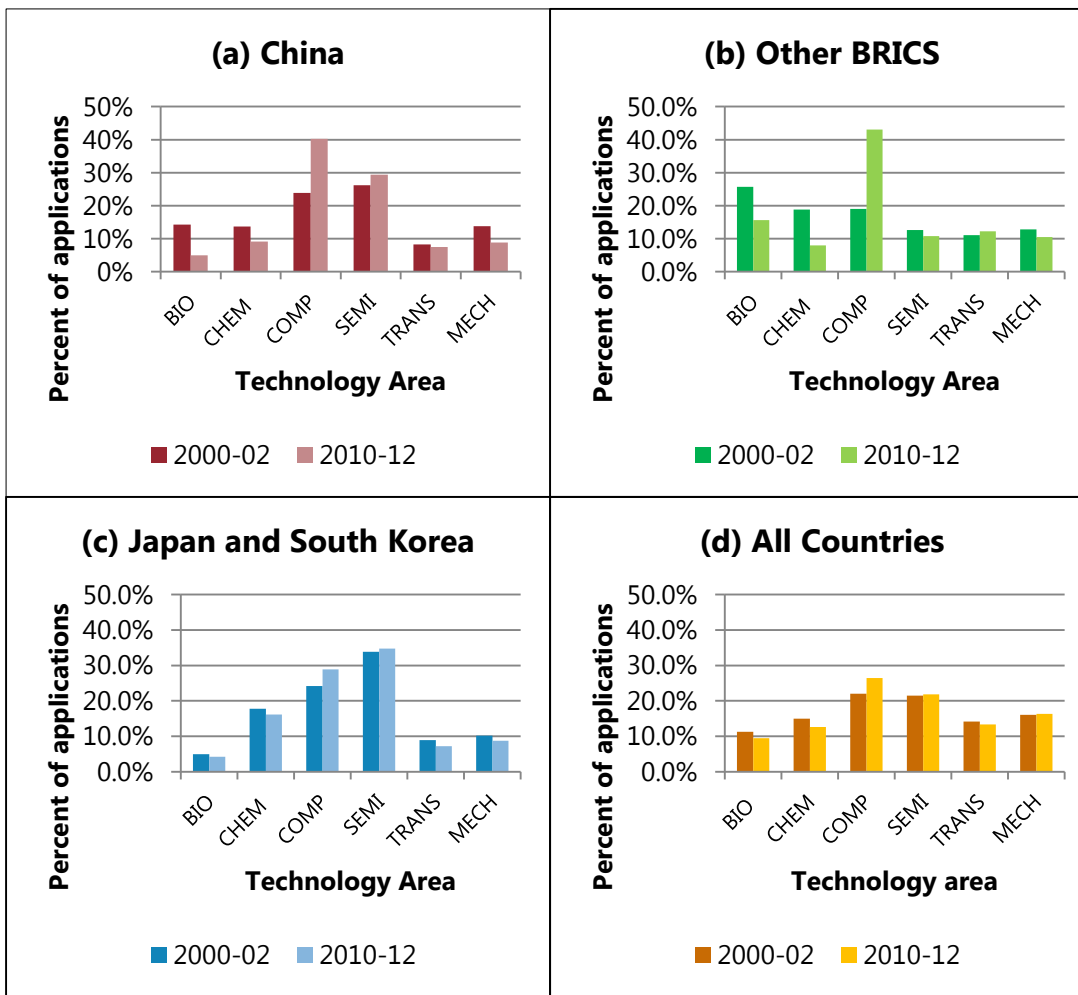


Appeal rates by year of final rejection, selected countries, 2005-2012



China United Kingdom Canada Germany Taiwan

Change in Technology Mix, Applications to the PTO from Various Countries, 2000-02 to 2010-12



The Geographic Mix of Applications from China, 2000-12

