

<b>PLAINTIFF</b>
U.S. District Court - NDCAL
4:20-cv-05640-YGR-TSH
Epic Games, Inc. v. Apple Inc.
<b>Ex.No. PX-0041</b>
Date Entered _____
By _____

**Subject:** Fwd: App Store Developer Study report  
**From:** "Trystan Kosmynka" [REDACTED]  
**Received(Date):** Wed, 06 Dec 2017 21:25:39 +0000  
**To:** <[REDACTED]>  
**Attachment:** App\_Store\_Developer\_Final\_Report.key  
**Date:** Wed, 06 Dec 2017 21:25:39 +0000

---

Anything in here for us?

Begin forwarded message:

> From: Trystan Kosmynka [REDACTED]  
> Date: December 6, 2017 at 1:17:38 PM PST  
> To: AR SR Management [REDACTED]  
> Subject: Fwd: App Store Developer Study report  
>  
> fyi  
>  
> Begin forwarded message:  
>  
>> From: Steve McGuigan [REDACTED]  
>> Date: December 6, 2017 at 1:14:19 PM PST  
>> To: Monika Gromek <[REDACTED]>, Matt Fischer <[REDACTED]>,  
Stephanie Saffer <[REDACTED]>, Tom Neumayr <[REDACTED]>, Alex  
Rofman <[REDACTED]>, Shaan Pruden <[REDACTED]>, Tanya Washburn  
<[REDACTED]>, Carmina Calderon <[REDACTED]>, Latika  
Kirtane <[REDACTED]>, Emily Blumsack <[REDACTED]>, Smokey  
Fontaine <[REDACTED]>, Sean Cameron <[REDACTED]>,  
Oliver Schusser <[REDACTED]>, Julian Murphy <[REDACTED]>,  
Daniel Erlewine <[REDACTED]>, Pedraum Pardehpooosh  
<[REDACTED]>, Erika Mobley <[REDACTED]>, Kayla Wilson  
<[REDACTED]>, Todd Teresi <[REDACTED]>, Eric Gray  
<[REDACTED]>, Sam Gharabally <[REDACTED]>, Ayman Khalil  
<[REDACTED]>, Elizabeth D'Errico <[REDACTED]>, Trystan  
Kosmynka [REDACTED]  
>> Subject: Fwd: App Store Developer Study report  
>>  
>> \*\* Confidential \*\*  
>>  
>> Per Matt's staff meeting, here are the results from our annual developer survey.  
>>  
>> Please let me know if you have any further questions.  
>>  
>> Steve...  
>>

**Exhibit  
0041**

>>

>>> Begin forwarded message:

>>>

>>> From: James Imahiro <[REDACTED]>

>>> Subject: App Store Developer Study report

>>> Date: December 4, 2017 at 8:22:51 PM PST

>>> To: Philip Schiller <[REDACTED]>, Greg Joswiak <[REDACTED]>, Kevan Parekh <[REDACTED]>

>>> Cc: Matt Fischer <[REDACTED]>, Ron Okamoto <[REDACTED]>

<[REDACTED]> Steve McGuigan <[REDACTED]>, Alex Rofman <[REDACTED]>

<[REDACTED]> Ryan Olson <[REDACTED]>, Seema Vora <[REDACTED]>

<[REDACTED]> Melinda Sammons <[REDACTED]>

>>>

>>> Attached is a study we conducted on App Store developers. The purpose of this study was to better understand marketing and business development issues faced by these developers.

>>>

>>> The study was conducted in the US, China, and Japan among app developers for iOS, macOS, watchOS, or tvOS who were involved in business or marketing decisions of their company and had at least one app published on the App Store within the past two years. A two year range was used in an effort to ensure a large enough sample of respondents. For analysis purposes, developers were segmented into small, mid and large tiers based on the number of downloads over the two year range.

>>>

>>> This is a summary of results. Also included are actions Matt Fischer's team plans to take in FY18 to address the findings from this survey. >>> The study was conducted in May 2017. For FY18, we plan to survey developers earlier in the year and distribute results more expediently and follow up with recommended actions from stakeholders once they come together.

>>>

>>> Please see the report for full details.

>>>

>>> Developer profiles

>>>

>>> Almost all developers surveyed develop apps for iPhone

>>> A low percentage develop for iMessage, macOS, watchOS and tvOS

>>>

>>>

>>>

>>>

>>>

>>>

>>>

>>>

>>>

>>> US

>>> China

>>> Japan

>>>

PX-0041.2

APL-APPSTORE\_09637020

>>> iOS  
>>> 99%  
>>> 100%  
>>> 99%  
>>>  
>>> iPhone  
>>> 96%  
>>> 100%  
>>> 97%  
>>>  
>>> iPad  
>>> 82%  
>>> 56%  
>>> 70%  
>>>  
>>> iMessage  
>>> 9%  
>>> 5%  
>>> 7%  
>>>  
>>> macOS  
>>> 16%  
>>> 6%  
>>> 11%  
>>>  
>>> watchOS  
>>> 12%  
>>> 6%  
>>> 9%  
>>>  
>>> tvOS  
>>> 10%  
>>> 1%  
>>> 4%  
>>>  
>>>  
>>> Over two-thirds of Apple developers also develop for other operating systems and platforms. Of those who do, top mentions include:  
>>>  
>>>  
>>>  
>>>  
>>>  
>>>  
>>>  
>>> US  
>>> China

>>> Japan  
>>>  
>>> Android Mobile  
>>> 86%  
>>> 95%  
>>> 84%  
>>>  
>>> HTML 5  
>>> 49%  
>>> 53%  
>>> 37%  
>>>  
>>> Windows  
>>> 31%  
>>> 28%  
>>> 38%  
>>>  
>>>  
>>> The primary business model for Apple apps varies by country  
>>>  
>>>  
>>>  
>>> US  
>>> China  
>>> Japan  
>>>  
>>> No monetization model  
>>> 29%  
>>> 21%  
>>> 20%  
>>>  
>>> Paid  
>>> 24%  
>>> 7%  
>>> 18%  
>>>  
>>> Freemium  
>>> 18%  
>>> 30%  
>>> 22%  
>>>  
>>> Ad supported  
>>> 9%  
>>> 12%  
>>> 27%  
>>>  
>>> Subscription

>>> 7%  
>>> 1%  
>>> 3%  
>>>  
>>> E-Commerce  
>>> 5%  
>>> 19%  
>>> 3%  
>>>  
>>> Paymium  
>>> 3%  
>>> 7%  
>>> 3%  
>>>  
>>> Other  
>>> 5%  
>>> 2%  
>>> 3%  
>>>  
>>> Don't know  
>>> 1%  
>>> 1%  
>>> 1%  
>>>  
>>> About 60% use Sales & Trends reports  
>>> A large majority of developers (81% to 90%) have at least some budget for apps marketing  
>>> Word-of-mouth is the most effective marketing activity to keep existing users coming back to their company's apps, especially in China (43% vs. 29% in US and Japan)  
>>> In the US, about 50% say word-of-mouth is the most effective marketing activity for driving downloads on the App Store, whereas in China and Japan, 45% say App Store featuring is the most effective  
>>> Social media is the most important channel in driving word-of mouth marketing in the US, and App Store chart ranking is the most important in China and Japan  
>>>  
>>> Satisfaction (satisfied = total very and somewhat satisfied)  
>>>  
>>> 51% to 65% of developers are satisfied with the App Store  
>>> Top reasons for not being satisfied\* include the inability to update metadata without binary submission, the perceived lack of functions other platforms have, having no way to customize the product page, finding the algorithm updates unpredictable, and lack of personalized recommendations  
>>> Satisfaction with elements of the App Store is mixed:  
>>> >>>  
>>>  
>>> US

>>> China  
>>> Japan  
>>>  
>>> Provides tools I need to successfully develop apps  
>>> 68%  
>>> 75%  
>>> 61%  
>>>  
>>> Enables profitability of my apps  
>>> 38%  
>>> 46%  
>>> 32%  
>>>  
>>> Enables discovery of my apps  
>>> 37%  
>>> 47%  
>>> 24%  
>>>  
>>> Provides the tools I need to successfully market apps  
>>> 34%  
>>> 40%  
>>> 27%  
>>>  
>>> Matt Fischer's team's next steps:  
>>>  
>>>  
>>> Satisfaction with the App Store  
>>>  
>>> FY17 Survey Findings (Reason not satisfied):  
>>> FY18 Actions:  
>>>  
>>> Inability to update metadata without binary submission  
>>> Exploring Metadata only submission  
>>>  
>>> No way to customize product page  
>>> Exploring A/B testing tool  
>>>  
>>>  
>>> Developer website  
>>> Awareness of the business and marketing resources at developer.apple.com/app-store is low (27% to 46%).  
>>> Satisfaction with the website's resources is low (39% to 58%). The main reasons for not being satisfied\* among US developers include the information is too broad and not actionable, and it lacks relevant recommendations.  
>>> The resources developers are interested in learning more about are App Store promotion, App Store optimization, user acquisition, and engagement and retention.  
>>> Matt Fischer's team's next steps:

>>>  
>>> Developer Website  
>>>  
>>> FY17 Survey Findings:  
>>> FY18 Actions:  
>>>  
>>> Low awareness of business and marketing resources  
>>> Increase discovery through marketing, SEO and UX improvements  
>>> Localize more content to support international developers  
>>>  
>>> Information too broad, not actionable and lacks relevant recommendations>>>  
Publish content more frequently to encourage habitual usage  
>>> Create more specific guidance on multiple topics  
>>>  
>>> Learn more about:  
>>> App Store Optimization  
>>> App Store Promotion  
>>> User Acquisition  
>>> Engagement and Retention  
>>> Facilitate discovery of existing content through UX improvements  
>>> Publish new content on user acquisition, engagement and retention  
>>>  
>>>  
>>> App Analytics  
>>> Over half (52% to 70%) of developers use App Analytics  
>>> Satisfaction with App Analytics is low (49% to 63%). The main reasons for not being satisfied\* include the data are not granular enough, it lacks uninstalls/deletions, and the data is not real-time  
>>> Requested features for App Analytics include\* search keyword insights, demographic data for app users, benchmarks against similar apps, and diagnostic data  
>>> App Analytics Product team's next steps:  
>>>  
>>>  
>>> App Analytics  
>>>  
>>> FY17 Survey Findings (Reason not satisfied):  
>>> FY18 Actions:  
>>>  
>>> Lack of uninstalls/deletions  
>>> Exploring adding Deletions data  
>>>  
>>> Not real time data  
>>> No plans to address  
>>>  
>>> Data not granular enough  
>>> Add In-App Purchase Data  
>>>

>>>

>>> \* Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions. The percentages reported are calculated based on the number of mentions provided (a respondent may not provide a comment or may have provided more than one comment) divided by the number of respondents who were shown the question.

>>>

>>>

>>

---

---

Anything in here for us?

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**From:** Trystan Kosmynka <[REDACTED]>

**Date:** December 6, 2017 at 1:17:38 PM PST

**To:** AR SR Managment [REDACTED]

**Subject: Fwd: App Store Developer Study report**

fyi

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**Date:** December 6, 2017 at 1:14:19 PM PST

**To:** Monika Gromek [REDACTED] Matt Fischer <[REDACTED]>  
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<[REDACTED]> Carmina Calderon <[REDACTED]> Latika Kirtane  
<[REDACTED]> Emily Blumsack <[REDACTED]> Smokey Fontaine  
<[REDACTED]> Sean Cameron <[REDACTED]> Oliver Schusser  
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<[REDACTED]> Pedraum Pardehpoosh <[REDACTED]> Erika Mobley  
<[REDACTED]>, Kayla Wilson <[REDACTED]> Todd Teresi  
<[REDACTED]>, Eric Gray <[REDACTED]>, Sam Gharabally <[REDACTED]>,  
Ayman Khalil <[REDACTED]>, Elizabeth D'Errico <[REDACTED]> Trystan  
Kosmynka <[REDACTED]>

**Subject: Fwd: App Store Developer Study report**

\*\* Confidential \*\*

PX-0041.8

APL-APPSTORE\_09637026

Per Matt's staff meeting, here are the results from our annual developer survey.

Please let me know if you have any further questions.

Steve...

Begin forwarded message:

**From:** James Imahiro [REDACTED]  
**Subject:** App Store Developer Study report  
**Date:** December 4, 2017 at 8:22:51 PM PST  
**To:** Philip Schiller [REDACTED], Greg Joswiak [REDACTED], Kevan Parekh [REDACTED]  
**Cc:** Matt Fischer [REDACTED], Ron Okamoto <[REDACTED]>, Steve McGuigan [REDACTED], Alex Rofman [REDACTED], Ryan Olson [REDACTED], Seema Vora [REDACTED], Melinda Sammons [REDACTED]

Attached is a study we conducted on App Store developers. The purpose of this study was to better understand marketing and business development issues faced by these developers.

The study was conducted in the US, China, and Japan among app developers for iOS, macOS, watchOS, or tvOS who were involved in business or marketing decisions of their company and had at least one app published on the App Store within the past two years. A two year range was used in an effort to ensure a large enough sample of respondents. For analysis purposes, developers were segmented into small, mid and large tiers based on the number of downloads over the two year range.

This is a summary of results. Also included are actions Matt Fischer's team plans to take in FY18 to address the findings from this survey.

The study was conducted in May 2017. For FY18, we plan to survey developers earlier in the year and distribute results more expediently and follow up with recommended actions from stakeholders once they come together.

Please see the report for full details.

### Developer profiles

- Almost all developers surveyed develop apps for iPhone
- A low percentage develop for iMessage, macOS, watchOS and tvOS

	US	China	Japan
iOS	99%	100%	99%
iPhone	96%	100%	97%
iPad	82%	56%	70%
iMessage	9%	5%	7%
macOS	16%	6%	11%
watchOS	12%	6%	9%
tvOS	10%	1%	4%

- Over two-thirds of Apple developers also develop for other operating systems and platforms. Of those who do, top mentions include:

	US	China	Japan
Android Mobile	86%	95%	84%
HTML 5	49%	53%	37%
Windows	31%	28%	38%

- The primary business model for Apple apps varies by country

	US	China	Japan
No monetization model	29%	21%	20%
Paid	24%	7%	18%
Freemium	18%	30%	22%
Ad supported	9%	12%	27%
Subscription	7%	1%	3%
E-Commerce	5%	19%	3%
Paymium	3%	7%	3%
Other	5%	2%	3%
Don't know	1%	1%	1%

- About 60% use Sales & Trends reports
  - A large majority of developers (81% to 90%) have at least some budget for apps marketing
- Word-of-mouth is the most effective marketing activity to keep existing users coming back to their company's apps, especially in China (43% vs. 29% in US and Japan)
- In the US, about 50% say word-of-mouth is the most effective marketing activity for driving downloads on the App Store, whereas in China and Japan, 45% say App Store featuring is the most effective
- Social media is the most important channel in driving word-of mouth marketing in the US, and App Store chart ranking is the most important in China and Japan

#### **Satisfaction (satisfied = total very and somewhat satisfied)**

- 51% to 65% of developers are satisfied with the App Store
- Top reasons for not being satisfied\* include the inability to update metadata without binary submission, the perceived lack of functions other platforms have, having no way to customize the product page, finding the algorithm updates unpredictable, and lack of personalized recommendations
- Satisfaction with elements of the App Store is mixed:

	US	China	Japan
Provides tools I need to successfully develop apps	68%	75%	61%
Enables profitability of my apps	38%	46%	32%
Enables discovery of my apps	37%	47%	24%
Provides the tools I need to successfully market apps	34%	40%	27%

- Matt Fischer's team's next steps:

Satisfaction with  
the App Store

FY17 Survey Findings (Reason not satisfied):	FY18 Actions:
Inability to update metadata without binary submission	Exploring Metadata only submission
No way to customize product page	

### Developer website

- Awareness of the business and marketing resources at [developer.apple.com/app-store](https://developer.apple.com/app-store) is low (27% to 46%).
- Satisfaction with the website's resources is low (39% to 58%). The main reasons for not being satisfied\* among US developers include the information is too broad and not actionable, and it lacks relevant recommendations.
- The resources developers are interested in learning more about are App Store promotion, App Store optimization, user acquisition, and engagement and retention.
- Matt Fischer's team's next steps:

### Developer Website

#### FY17 Survey Findings:      FY18 Actions:

Low awareness of business and marketing resources

- Information too broad, not actionable and lacks relevant recommendations
- Publish content more frequently to encourage habitual usage
  - Create more specific guidance on multiple topics

- Learn more about:
- App Store Optimization
  - App Store Promotion
  - User Acquisition
  - Engagement and Retention

## App Analytics

- Over half (52% to 70%) of developers use App Analytics
- Satisfaction with App Analytics is low (49% to 63%). The main reasons for not being satisfied\* include the data are not granular enough, it lacks uninstalls/deletions, and the data is not real-time
- Requested features for App Analytics include\* search keyword insights, demographic data for app users, benchmarks against similar apps, and diagnostic data
- App Analytics Product team's next steps:

### App Analytics

<b>FY17 Survey Findings (Reason not satisfied):</b>	<b>FY18 Actions:</b>
Lack of uninstalls/deletions	Exploring adding Deletions data
Not real time data	

Data not granular enough	Add In-App Purchase Data
--------------------------	-----------------------------

\* Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions. The percentages reported are calculated based on the number of mentions provided (a respondent may not provide a comment or may have provided more than one comment) divided by the number of respondents who were shown the question.



# App Store Developer Study

US, China, Japan

Apple Market Research and Analysis  
Fielded May 2017

APPLE CONFIDENTIAL 1

## Why This Report?

Purpose: To understand marketing and business development issues of iOS, macOS, watchOS, and tvOS app developers  
Key areas include:

- Company developer profile
- Business profile
- Marketing profile
- App Store
- Guidance, tools and services
- International expansion

APPLE CONFIDENTIAL 2

PX-0041.16

APL-APPSTORE\_09637034

# Methodology

## App Store Developer Study

### Who did we survey?

App developers for iOS, macOS, watchOS, or tvOS who were involved in business or marketing decisions of their company and had at least one app published on the App Store within the past two years. A two year range was used in an effort to ensure a large enough sample of respondents.

For analysis purposes, developers were segmented into small, mid and large tiers. The App Store analytics team defined the tiers based on app downloads. The downloads were segmented into three tiers since the top developers contribute a large proportion of downloads. The buckets were scaled in size— 93rd and above percentile for large, 71-93 for mid and 70th and below for small. The team wanted to understand if there were differences in results for developers with different levels of downloads.  
**Where?**  
US, China, Japan

### How did we reach them?

Developers were randomly selected from the App Store Analytics team's database and invited to participate in a 15-minute web survey.

### Notes

Statistical testing was conducted at a p<0.05 significance level.

If data reported for large and mid tier groups is higher/lower than the corresponding value for the small tier group, it is indicated with an upward/downward arrow (↑↓). To simplify reporting, results of statistical testing may not be shown for values under 5%.

To simplify reporting, chart labels for values under 3% may not be shown. The term "Top-2 box" refers to the total of the top 2 results in a 5-point scale. Totals, sub-totals, and nets may be off by a point or two due to rounding.

Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions. The percentages reported are calculated based on the number of mentions provided (a respondent may not provide a comment or may have provided more than one comment) divided by the number of respondents who were shown the question.

APPLE CONFIDENTIAL 3

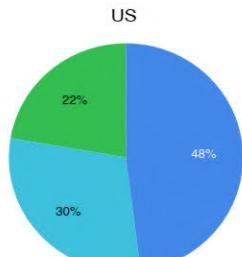
PX-0041.17

APL-APPSTORE\_09637035

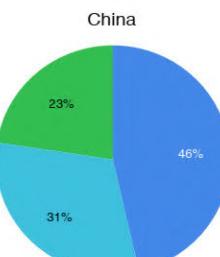
# Company developer profile

APPLE CONFIDENTIAL 4

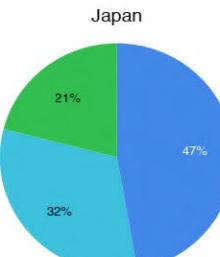
## Developer tier mix



n=1903



n=588



n=500

● Small

● Mid

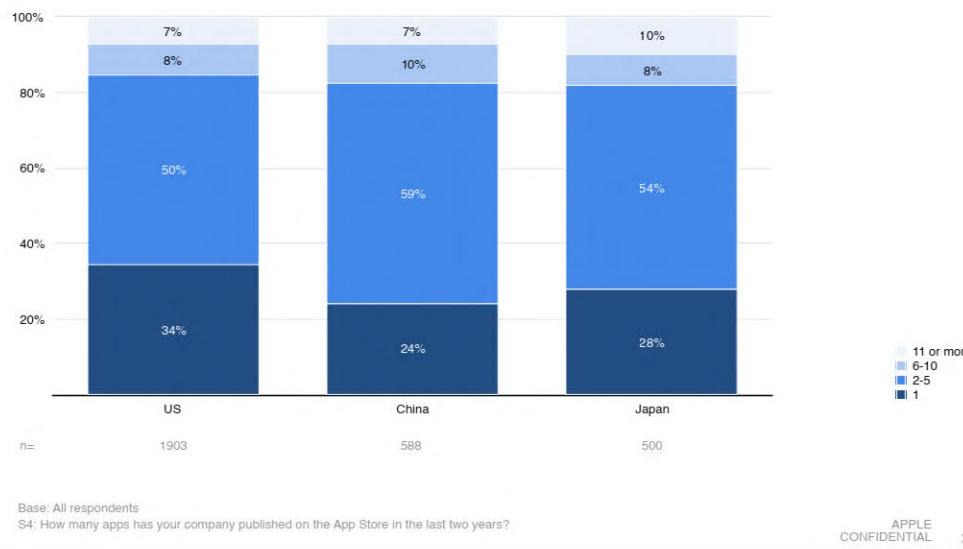
● Large

Base: All respondents  
Development tier - sample data  
Note: Development tier defined by the App Store Analytics team based on number of apps downloaded within the past two years, and tiered by percentile.

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5

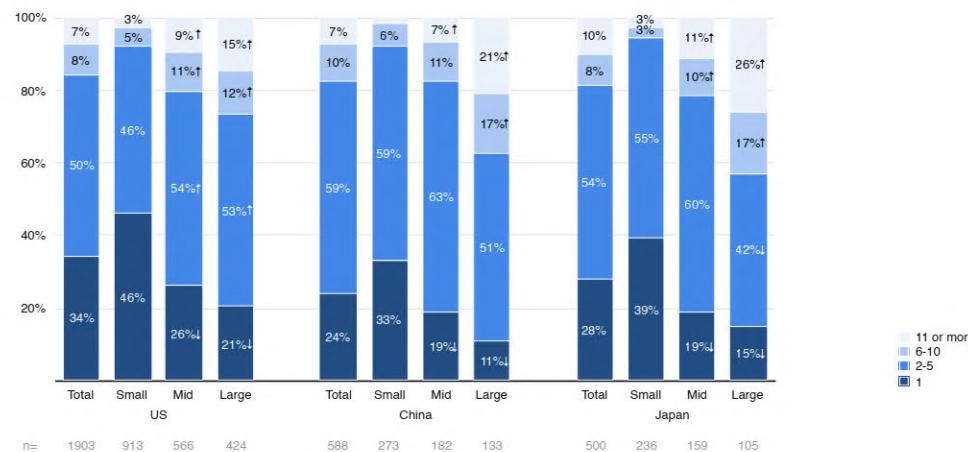
## Number of apps published on the App Store in the past 2 years



PX-0041.20

APL-APPSTORE\_09637038

## Number of apps published on the App Store in the past 2 years



Base: All respondents

S4: How many apps has your company published on the App Store in the last two years?

Note: Arrows denote comparisons to small tier within each country.

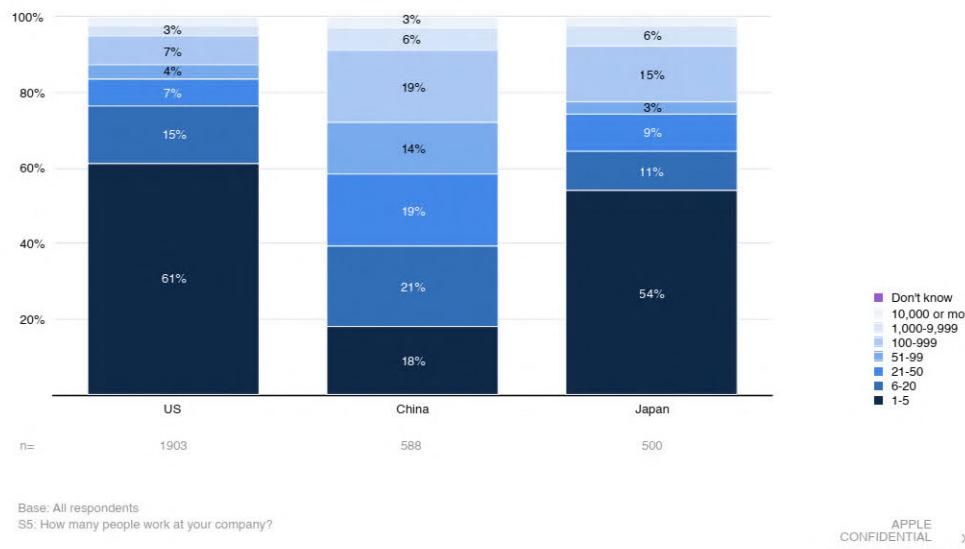
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6

PX-0041.21

APL-APPSTORE\_09637039

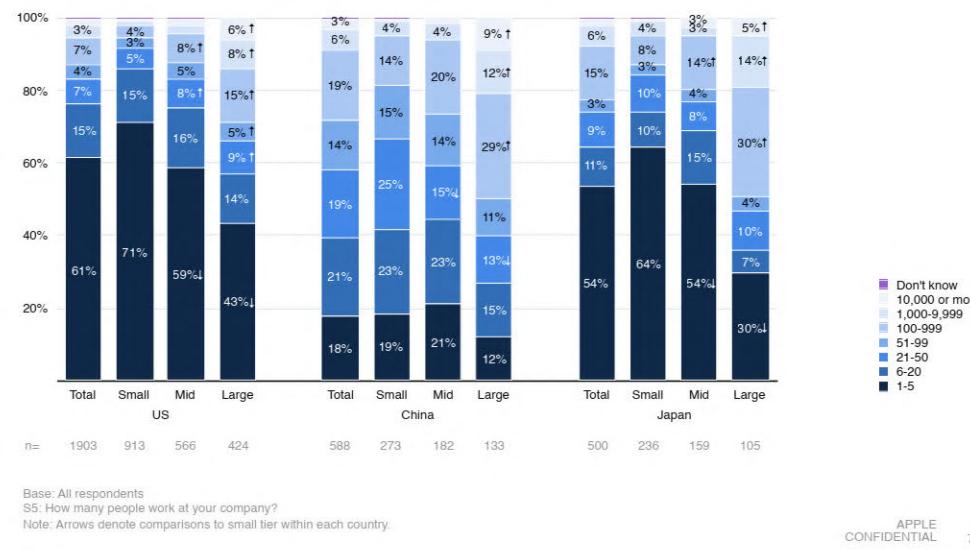
## Number of employees



PX-0041.22

APL-APPSTORE\_09637040

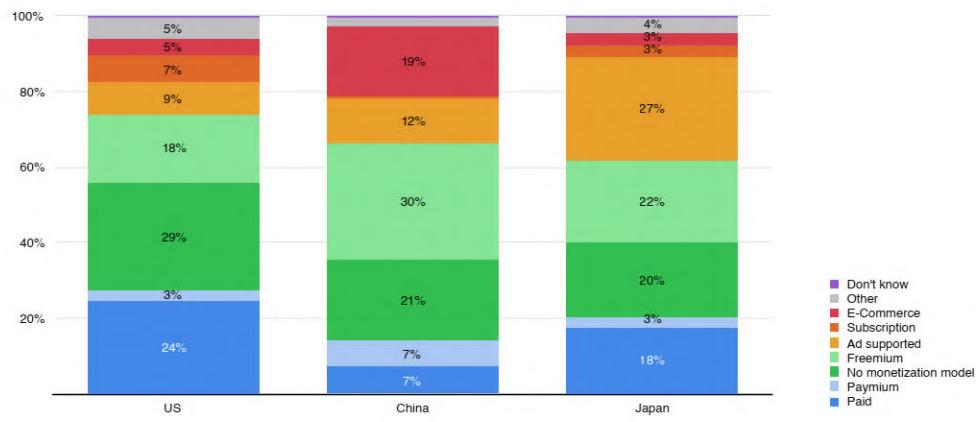
## Number of employees



PX-0041.23

APL-APPSTORE\_09637041

## Primary business model for Apple apps



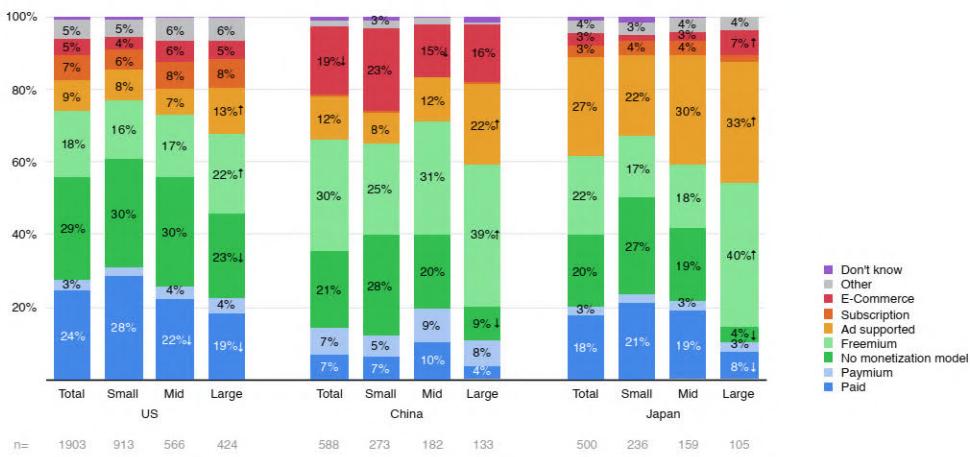
Base: All respondents

A3\_N\_1: What is the primary business model for your company's Apple apps?

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X

## Primary business model for Apple apps



Base: All respondents

A3\_N\_1: What is the primary business model for your company's Apple apps?

Note: Arrows denote comparisons to small tier within each country.

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8

## Primary app development categories

	US	China	Japan
Business	22%	16%	18%
Entertainment	21%	13%	23%
Utilities	21%	28%	21%
Games	21%	22%	29%
Education	21%	16%	21%
Productivity	19%	12%	17%
Lifestyle	15%	17%	19%
Health & Fitness	11%	5%	10%
Social Networking	9%	16%	7%
Photo & Video	8%	3%	11%
Medical	7%	4%	4%
Travel	7%	5%	5%
Reference	7%	3%	3%
Finance	6%	13%	4%
Shopping	6%	10%	3%
Food & Drink	6%	2%	4%
Music	5%	2%	5%
Sports	5%	3%	3%
Navigation	4%	3%	6%
Kids	3%	3%	6%
Books	3%	5%	6%
News	3%	7%	5%
Weather	2%	2%	2%
Magazines & Newspapers	1%	1%	3%
Catalogs	1%	2%	3%
Other	6%	3%	3%

n=

1903 588 500

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

A1: What are the primary categories your company develops apps for? (select all that apply)

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## Primary app development categories

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Business	22%	23%	23%	19%	16%	22%	12% ↓	11% ↑	18%	22%	18%	8% ↓
Entertainment	21%	22%	20%	21%	13%	14%	10%	18%	23%	19%	28%	↑ 24%
Utilities	21%	21%	23%	18%	28%	34%	23%	22% ↓	21%	20%	27%	13%
Games	21%	21%	20%	22%	22%	13%	28% ↑	34% ↑	29%	21%	33% ↑	41% ↑
Education	21%	20%	22%	20%	16%	18%	19%	11%	21%	17%	25%	23%
Productivity	19%	19%	20%	16%	12%	13%	13%	10%	17%	19%	16%	15%
Lifestyle	15%	15%	15%	14%	17%	18%	15%	17%	19%	16%	23%	22%
Health & Fitness	11%	12%	12%	9% ↓	5%	6%	3%	5%	10%	9%	11%	10%
Social Networking	9%	9%	9%	8%	16%	16%	17%	14%	7%	9%	6%	6%
Photo & Video	8%	6%	8%	10% ↑	3%	3%	2%	5%	11%	10%	12%	12%
Medical	7%	6%	8%	8%	4%	4%	3%	3%	4%	5%	5%	2%
Travel	7%	7%	6%	6%	5%	5%	3%	8%	5%	5%	6%	5%
Reference	7%	6%	9% ↑	5%	3%	3%	3%	5%	3%	4%	3%	1%
Finance	6%	5%	5%	6%	13%	7%	15% ↑	21% ↑	4%	3%	6%	5%
Shopping	6%	5%	6%	7%	10%	14%	7% ↓	8%	3%	1%	4%	7% ↑
Food & Drink	6%	6%	6%	5%	2%	2%	3%	0%	4%	3%	6%	3%
Music	5%	5%	6%	5%	2%	1%	1%	4%	5%	6%	6%	5%
Sports	5%	5%	5%	4%	3%	4%	1% ↓	3%	3%	3%	3%	3%
Navigation	4%	3%	4%	4%	3%	4%	2%	5%	6%	6%	5%	6%
Kids	3%	3%	3%	4%	3%	3%	4%	3%	6%	3%	7%	9% ↑
Books	3%	3%	3%	3%	5%	2%	5%	13% ↑	6%	5%	8%	9%
News	3%	2%	2%	4% ↑	7%	6%	5%	13% ↑	5%	3%	9% ↑	5%
Weather	2%	2%	2%	3%	2%	1%	1%	6% ↑	2%	1%	4%	2%
Magazines & Newspapers	1%	1%	2% ↑	2% ↑	1%	1%	0%	3%	3%	1%	3%	5% ↑
Catalogs	1%	0%	2% ↑	1%	2%	2%	3%	2%	3%	2%	3%	5%
Other	6%	7%	6%	4% ↓	3%	4%	2%	2%	3%	3%	4%	3%

n= 1903 913 566 424 588 273 182 133 500 236 159 105

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

A1: What are the primary categories your company develops apps for? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

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9

PX-0041.27

APL-APPSTORE\_09637045

## App platforms

APPLE CONFIDENTIAL 10

PX-0041.28

APL-APPSTORE\_09637046

## Apple platforms developed for

	US	China	Japan
iOS	99%	100%	99%
iPhone	96%	100%	97%
iPad	82%	56%	70%
iMessage	9%	5%	7%
macOS	16%	6%	11%
watchOS	12%	6%	9%
tvOS	10%	1%	4%

n=

1903 588 500



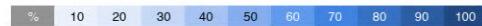
Base: All respondents (excluding those who selected don't know)  
A3\_N\_2: What Apple platforms does your company develop apps for? (select all that apply)

APPLE  
CONFIDENTIAL 11

## Apple platforms developed for

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
iOS	99%	99%	100% ↑	100% ↑	100%	99%	100%	100%	99%	98%	100%	100%
iPhone	96%	94%	98% ↑	98% ↑	100%	99%	100%	100%	97%	95%	96%	100% ↑
iPad	82%	78%	85% ↑	85% ↑	56%	45%	67% ↑	66% ↑	70%	64%	75% ↑	77% ↑
iMessage	9%	9%	8%	10%	5%	3%	7%	8%	7%	3%	4%	17% ↑
macOS	16%	15%	16%	18%	6%	5%	7%	8%	11%	9%	15% ↑	10%
watchOS	12%	9%	13% ↑	17% ↑	6%	3%	6%	12% ↑	9%	6%	9%	16% ↑
tvOS	10%	7%	10% ↑	15% ↑	1%	1%	0%	2%	4%	3%	4%	9% ↑

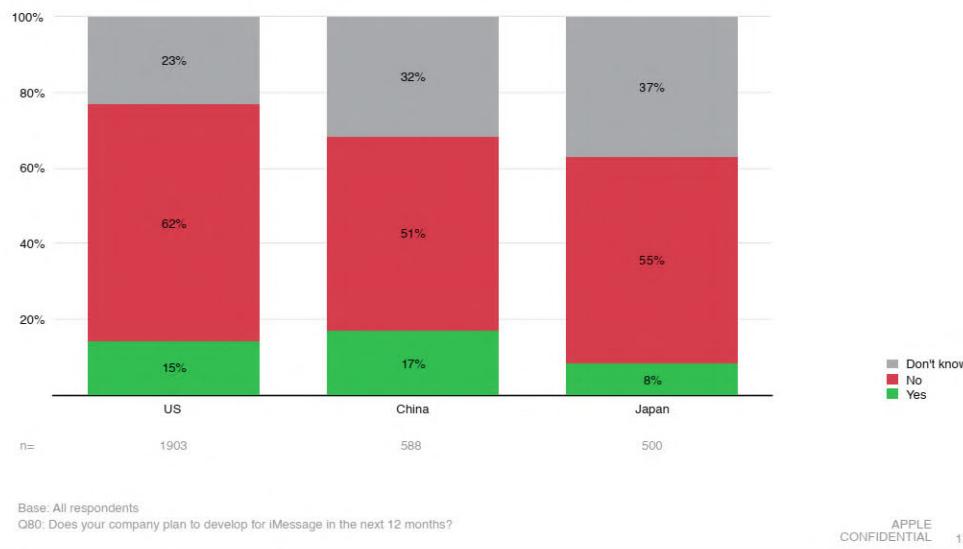
n= 1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents (excluding those who selected don't know)  
A3\_N\_2: What Apple platforms does your company develop apps for? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

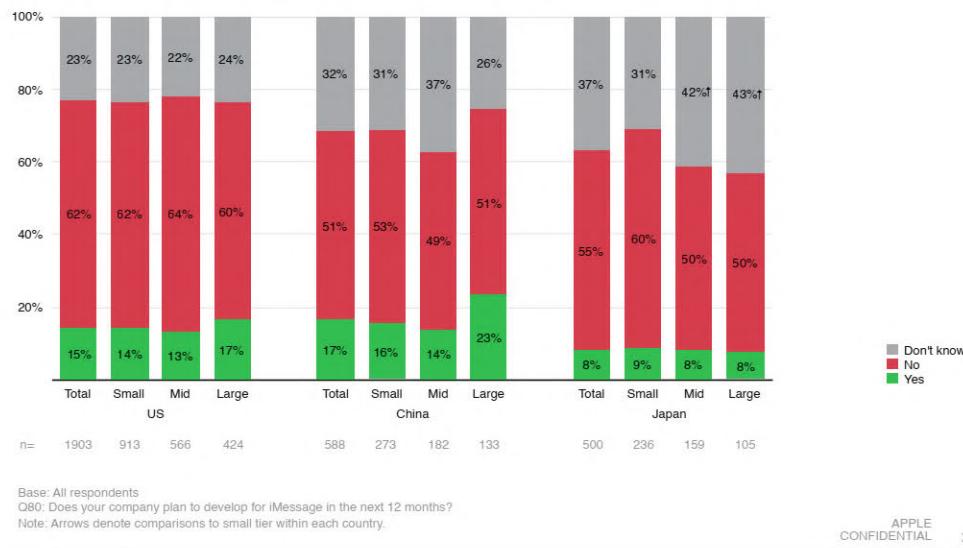
## Plan to develop for iMessage within next 12 months



PX-0041.31

APL-APPSTORE\_09637049

## Plan to develop for iMessage within next 12 months



PX-0041.32

APL-APPSTORE\_09637050

## Reasons company does not plan to develop for iMessage

	US	China	Japan
Low customer awareness	34%	61%	39%
Challenges related to discovery of App Store for iMessage	14%	37%	7%
Limited ability to merchandise	8%	17%	10%
Limited categories	6%	17%	16%
Inability to deep-link	5%	9%	3%
Lack of analytics	4%	20%	44%
Other (net)	47%	8%	14%
Other: Not applicable or appropriate for the app/ business	13%	1%	1%
Other: Not useful or irrelevant	9%	1%	2%
Other: Not interested	5%	0%	1%
Other: There's no market	5%	3%	2%
Don't know	17%	6%	14%

n=

1186 302 273

Base: Companies 10 to 100

Q81: Please tell us why your company is not planning to develop for iMessage. (Select all that apply)

Note: Categories under 5% are not displayed under 'Other (net)'. Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions.

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PX-0041.33

APL-APPSTORE\_09637051

## Reasons company does not plan to develop for iMessage

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Low customer awareness	34%	34%	32%	35%	61%	61%	58%	66%	39%	30%	51% ↑	46% ↑
Challenges related to discovery of App Store for iMessage	14%	13%	14%	17%	37%	39%	39%	28%	7%	4%	13% ↑	6%
Limited ability to merchandise	8%	7%	9%	11%	17%	15%	21%	16%	10%	6%	11%	19% ↑
Limited categories	6%	6%	6%	6%	17%	20%	18%	9% ↓	16%	12%	19%	21%
Inability to deep-link	5%	6%	3%	4%	9%	12%	9%	3% ↓	3%	2%	4%	6%
Lack of analytics	4%	3%	3%	7% ↑	20%	20%	24%	13%	44%	45%	45%	40%
Other	47%	46%	48%	47%	8%	6%	8%	13%	14%	16%	11%	12%
Don't know	17%	18%	16%	15%	6%	4%	9%	6%	14%	17%	6% ↓	17%

n=

1186 567 365 254 302 145 89 68 273 141 80 52



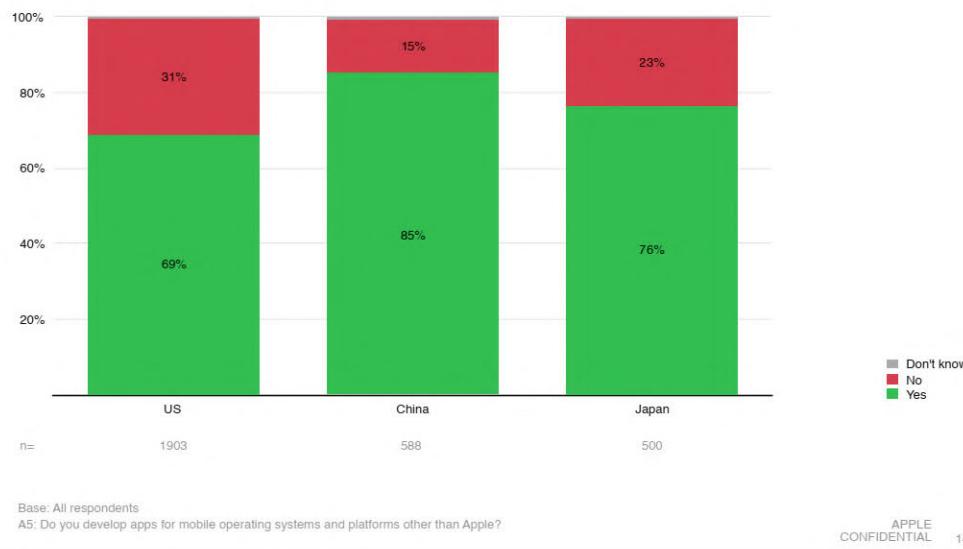
Base: Company does not plan to develop for iMessage in the next 12 months  
Q81: Please tell us why your company is not planning to develop for iMessage. (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

PX-0041.34

APL-APPSTORE\_09637052

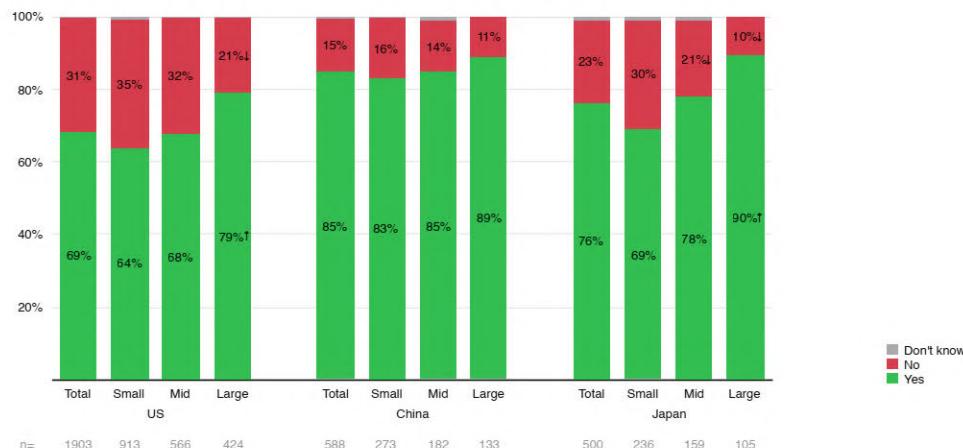
## Develops apps for operating systems and platforms other than Apple



PX-0041.35

APL-APPSTORE\_09637053

## Develops apps for operating systems and platforms other than Apple



Base: All respondents

A5: Do you develop apps for mobile operating systems and platforms other than Apple?

Note: Arrows denote comparisons to small tier within each country.

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## Other operating systems and platforms apps are developed for

	US	China	Japan
Android (net)	86%	96%	85%
Android Mobile	86%	95%	84%
Android Wear	5%	5%	6%
Android TV	4%	8%	4%
HTML5	49%	53%	37%
Windows	31%	28%	38%
Amazon (net)	11%	1%	10%
Fire OS	10%	1%	9%
Amazon Fire TV	4%	0%	3%
Virtual reality	7%	6%	10%
Augmented reality	7%	4%	8%
Roku TV	3%	0%	1%
Game consoles	3%	0%	3%
Other	8%	0%	3%
Don't know	1%	2%	1%

n=

1306 499 381



Base: Develops apps for non-Apple OS and platforms

A6: What other operating systems and platforms does your company develop apps for? (select all that apply)

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## Other operating systems and platforms apps are developed for

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Android (net)	86%	83%	87%	93% ↑	96%	96%	94%	99%	85%	77%	89% ↑	95% ↑
Android Mobile	86%	82%	86%	92% ↑	95%	95%	92%	98%	84%	75%	88% ↑	94% ↑
Android Wear	5%	5%	5%	5%	5%	4%	5%	6%	6%	6%	2%	10%
Android TV	4%	4%	3%	5%	8%	7%	7%	12%	4%	3%	3%	5%
HTML5	49%	49%	50%	49%	53%	56%	53%	49%	37%	38%	32%	39%
Windows	31%	33%	31%	30%	28%	29%	30%	23%	38%	40%	36%	37%
Amazon (net)	11%	10%	9%	17% ↑	1%	2%	0%	2%	10%	4%	11% ↑	20% ↑
Fire OS	10%	9%	8%	14% ↑	1%	2%	0%	2%	9%	4%	11% ↑	17% ↑
Amazon Fire TV	4%	3%	3%	6% ↑	0%	1%	0%	0%	3%	0%	3% ↑	7% ↑
Virtual reality	7%	6%	7%	8%	6%	4%	5%	9%	10%	5%	11%	19% ↑
Augmented reality	7%	6%	9%	6%	4%	5%	2%	4%	8%	7%	6%	12%
Roku TV	3%	2%	2%	4%	0%	0%	0%	0%	1%	0%	2%	0%
Game consoles	3%	1%	3%	5% ↑	0%	0%	0%	2% ↑	3%	1%	3%	4%
Other	8%	8%	7%	9%	0%	0%	1%	1%	3%	5%	3%	0% ↓
Don't know	1%	1%	0%	1%	2%	1%	4% ↑	0%	1%	1%	2%	1%

n= 1306 585 385 336 499 227 154 118 381 163 124 94

% | 10 20 30 40 50 60 70 80 90 100 |

Base: Develops apps for non-Apple OS and platforms

A6: What other operating systems and platforms does your company develop apps for? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
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## App business growth

APPLE CONFIDENTIAL 16

## Expected growth areas for Apple app business in next 12 months

	US	China	Japan
Increasing user base through organic growth	54%	54%	42%
New apps	44%	42%	48%
Increasing engagement/monetization of existing users	32%	60%	33%
New business models	20%	44%	25%
Increasing user base through paid app installs	18%	15%	18%
New platform support	16%	12%	14%
International markets	15%	20%	20%
Don't know	11%	3%	9%

n=

1903 588 500



Base: All respondents

A7: In which of the following areas does your company expect to drive the most growth for its Apple app business in the next 12 months? (select all that apply) APPLE

CONFIDENTIAL

17

## Expected growth areas for Apple app business in next 12 months

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Increasing user base through organic growth	54%	50%	55%	60% ↑	54%	52%	53%	60%	42%	34%	45% ↑	56% ↑
New apps	44%	44%	45%	42%	42%	43%	41%	40%	48%	43%	54% ↑	50%
Increasing engagement/monetization of existing users	32%	26%	32% ↑	45% ↑	60%	52%	63% ↑	71% ↑	33%	23%	33% ↑	55% ↑
New business models	20%	20%	17%	24%	44%	49%	40%	41%	25%	28%	21%	23%
Increasing user base through paid app installs	18%	19%	16%	20%	15%	11%	17% ↑	22% ↑	18%	19%	20%	13%
New platform support	16%	15%	17%	16%	12%	15%	10%	9%	14%	14%	17%	11%
International markets	15%	14%	13%	20% ↑	20%	15%	22%	26% ↑	20%	16%	20%	31% ↑
Don't know	11%	14%	11%	8% ↓	3%	3%	4%	4%	9%	12%	9%	3% ↓

n=

1903 913 566 424 588 273 182 133 500 236 159 105

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

A7: In which of the following areas does your company expect to drive the most growth for its Apple app business in the next 12 months? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
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## Method to measure apps' success

	US	China	Japan
Downloads	56%	61%	55%
Revenue	53%	53%	69%
Customer engagement/time spent with app	45%	66%	30%
Ratings and reviews	43%	29%	31%
Performance on App Store charts	18%	34%	27%
App Store featuring	14%	35%	19%
Media interest	12%	20%	19%
Benchmarking against competitors	10%	24%	12%
Awards and accolades	9%	13%	5%
Investments and funding	7%	22%	4%
Other	6%	1%	3%
Don't know	2%	2%	2%

n= 1903 588 500  
% 10 20 30 40 50 60 70 80 90 100

Base: All respondents  
A8\_N\_1: How does your company measure its apps' success? (select all that apply)

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PX-0041.42

APL-APPSTORE\_09637060

## Method to measure apps' success

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Downloads	56%	56%	56%	57%	61%	61%	62%	60%	55%	51%	59%	56%
Revenue	53%	49%	52%	63% ↑	53%	45%	59% ↑	60% ↑	69%	63%	72%	76% ↑
Customer engagement/time spent with app	45%	41%	45%	54% ↑	66%	65%	65%	69%	30%	25%	27%	45% ↑
Ratings and reviews	43%	39%	43%	53% ↑	29%	23%	30%	39% ↑	31%	24%	38% ↑	37% ↑
Performance on App Store charts	18%	15%	17%	24% ↑	34%	24%	39% ↑	48% ↑	27%	18%	33% ↑	36% ↑
App Store featuring	14%	11%	14%	22% ↑	35%	26%	36% ↑	51% ↑	19%	12%	25% ↑	24% ↑
Media interest	12%	10%	12%	15% ↑	20%	21%	18%	22%	19%	17%	22%	20%
Benchmarking against competitors	10%	7%	10%	17% ↑	24%	21%	26%	26%	12%	9%	12%	18% ↑
Awards and accolades	9%	7%	11% ↑	12% ↑	13%	10%	14%	17% ↑	5%	5%	4%	7%
Investments and funding	7%	8%	8%	6%	22%	25%	25%	14% ↓	4%	4%	6%	3%
Other	6%	5%	7% ↑	6%	1%	0%	1%	0%	3%	3%	4%	1%
Don't know	2%	3%	1%	1% ↓	2%	2%	2%	1%	2%	3%	1%	2%

n=

1903 913 566 424 588 273 182 133 500 236 159 105

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

A8\_N\_1: How does your company measure its apps' success? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Most important method to measure apps' success

	US	China	Japan
Revenue	37%	26%	50%
Customer engagement/time spent with app	24%	32%	13%
Downloads	19%	17%	17%
Ratings and reviews	7%	2%	4%
App Store featuring	3%	8%	3%
Investments and funding	2%	5%	1%
Performance on App Store charts	2%	4%	3%
Media interest	1%	1%	2%
Benchmarking against competitors	1%	3%	2%
Awards and accolades	0%	0%	1%
Other	4%	1%	3%
Don't know	2%	2%	2%

n=

1903 588 500



Base: All respondents

A8\_N\_2: And which of these is most important in measuring your apps success?

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## Most important method to measure apps' success

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Revenue	37%	35%	36%	44% ↑	26%	23%	30%	27%	50%	47%	50%	53%
Customer engagement/time spent with app	24%	22%	24%	27%	32%	34%	30%	32%	13%	11%	10%	21% ↑
Downloads	19%	23%	19%	10% ↓	17%	18%	15%	15%	17%	21%	15%	12%
Ratings and reviews	7%	6%	6%	8%	2%	3%	1%	3%	4%	4%	6%	2%
App Store featuring	3%	2%	3%	3%	8%	6%	8%	11%	3%	2%	5%	4%
Investments and funding	2%	2%	2%	0% ↓	5%	6%	4%	2%	1%	1%	3%	0%
Performance on App Store charts	2%	2%	2%	2%	4%	2%	5% ↑	8% ↑	3%	2%	6%	1%
Media interest	1%	1%	1%	0%	1%	1%	1%	0%	2%	3%	1%	0%
Benchmarking against competitors	1%	1%	1%	1%	3%	4%	3%	1%	2%	2%	0%	3%
Awards and accolades	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%
Other	4%	4%	5%	4%	1%	0%	1%	0%	3%	3%	4%	1%
Don't know	2%	3%	1%	1% ↓	2%	2%	2%	1%	2%	3%	1%	2%

n= 1903 913 566 424 588 273 182 133 500 236 159 105

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

A8\_N\_2: And which of these is most important in measuring your apps success?

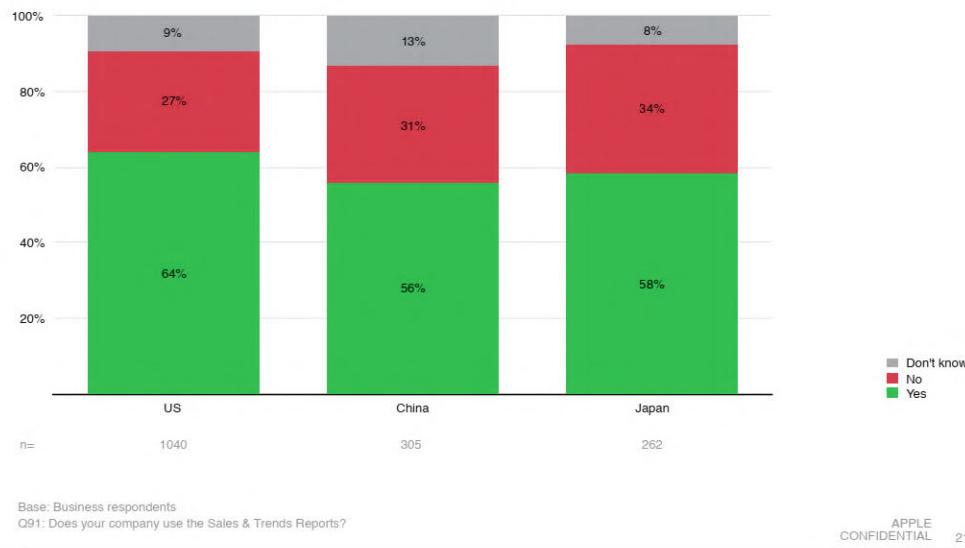
Note: Arrows denote comparisons to small tier within each country.

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CONFIDENTIAL X

## Business profile

APPLE CONFIDENTIAL 20

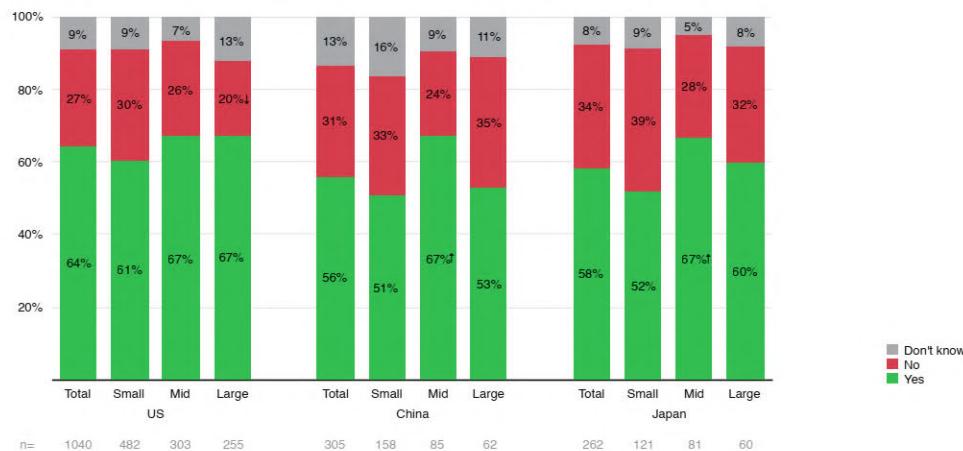
## Uses Sales & Trends Reports



PX-0041.47

APL-APPSTORE\_09637065

## Uses Sales & Trends Reports



Base: Business respondents

Q91: Does your company use the Sales & Trends Reports?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

PX-0041.48

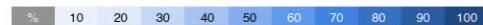
APL-APPSTORE\_09637066

## Reasons not using Sales & Trends Reports

	US	China	Japan
Did not know of reports	25%	26%	28%
Sales and Trends data ingested into a third party tool	18%	46%	28%
Reports not granular enough	12%	27%	17%
Other	33%	7%	26%
Don't know	19%	10%	17%

n=

277 94 89



Base: Business respondents who do not use the Sales & Trends Reports  
Q92: Why doesn't your company use Sales and Trends Reports? (select all that apply)

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## Reasons not using Sales & Trends Reports

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Did not know of reports	25%	30%	23%	14% ↓	26%	27%			28%			
Sales and Trends data ingested into a third party tool	18%	12%	17%	35% ↑	46%	40%			28%			
Reports not granular enough	12%	10%	11%	22% ↑	27%	15%			17%			
Other	33%	35%	34%	26%	7%	14%			26%			
Don't know	19%	16%	23%	22%	10%	17%			17%			

n=

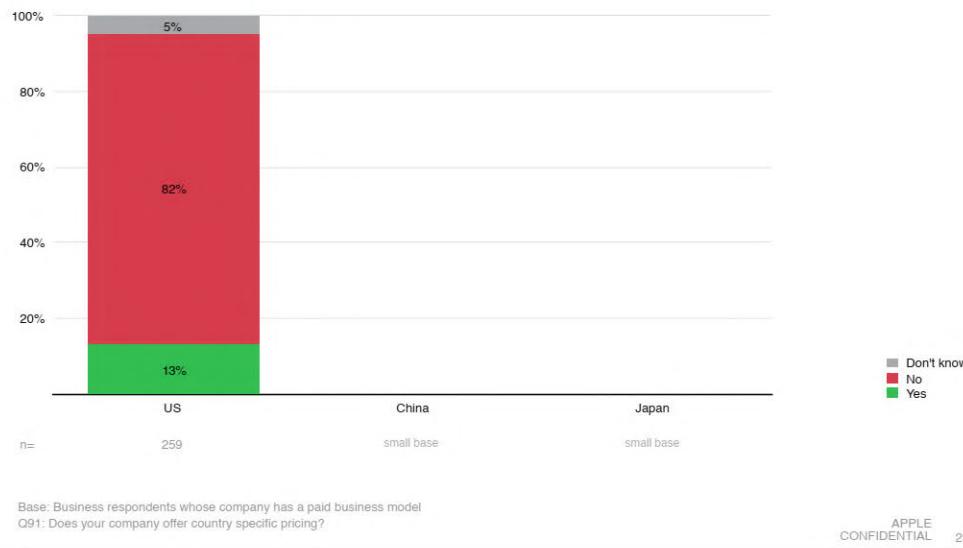
277 147 79 51 94 52 small base small base 89 small base small base small base



Base: Business respondents who do not use the Sales & Trends Reports  
Q92: Why doesn't your company use Sales and Trends Reports? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Offers country-specific pricing



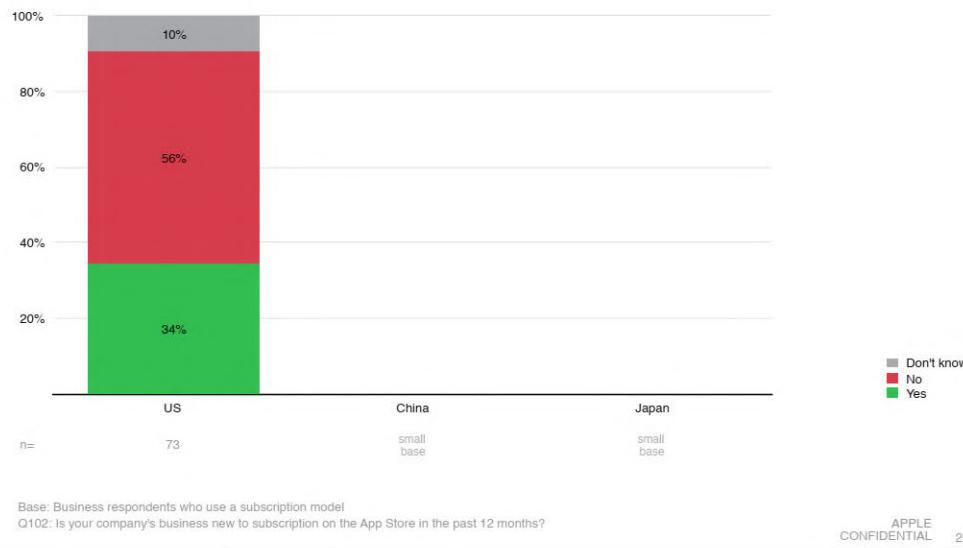
PX-0041.51

APL-APPSTORE\_09637069

## App Store subscription

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## New to subscription on the App Store in past 12 months



PX-0041.53

APL-APPSTORE\_09637071

## Awareness of App Store subscription features

	US	China	Japan
Territory pricing	49%		
Subscription data in Sales & Trends	48%		
85% revenue after 1 year	41%		
Expanding price tiers	38%		
Price preservation during price increases	32%		
Upgrades, Downgrades, Crossgrades	30%		
Subscriptions available to categories	27%		
Multi-app subscription	26%		
Improved customer communication of price increases	21%		
I am not aware of any of the subscription features listed above	29%		

n= 73 small base small base

Base: Business respondents who use a subscription model  
Q95: Which of the following App Store subscription features are you aware of? (select all that apply)

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PX-0041.54

APL-APPSTORE\_09637072

## Use of App Store subscription features

	US	China	Japan
Subscription data in Sales & Trends	36%		
85% revenue after 1 year	16%		
Upgrades, Downgrades, Crossgrades	12%		
Territory pricing	8%		
Expanding price tiers	8%		
Subscriptions available to categories	7%		
Price preservation during price increases	7%		
Improved customer communication of price increases	4%		
Multi-app subscription			
Don't know	3%		
None of these	52%		

n=

73 small base small base



Base: Business respondents who use a subscription model

Q96: And which of the following App Store subscription features does your company currently use? (select all that apply)

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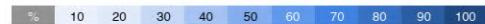
## How heard about App Store subscription features

	US	China	Japan
iTunes Connect	46%		
Tech publications or industry forums	40%		
Developer.apple.com/app-store	27%		
Word of mouth from other developers I know	25%		
Internet searches	17%		
Social media	14%		
Other	17%		
Don't know	2%		

n=

52 small base

small base



Base: Aware of at least one App Store subscription feature and use a subscription model  
Q97: How did you hear about the App Store subscription features? (select all that apply)

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## Subscriptions features plan to implement in the next 12 months

	US	China	Japan
Expanding price tiers	7%		
Upgrades, Downgrades, Crossgrades	6%		
Territory pricing	4%		
Multi-app subscription	4%		
Price preservation during price increases	3%		
Subscriptions available to categories	1%		
Don't know	15%		
Aware of subscription features, no plans to implement	33%		
Not aware of any subscription features	38%		

n= 73 small base small base

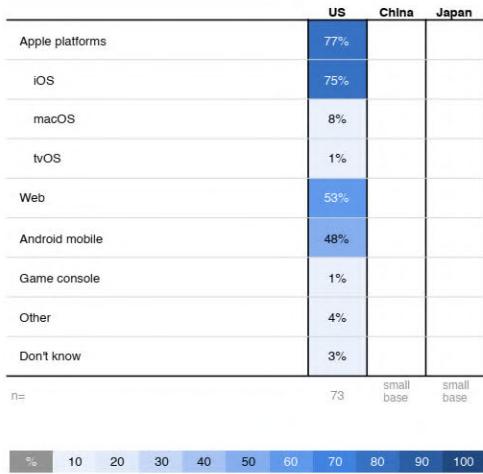
% 10 20 30 40 50 60 70 80 90 100

Base: Business respondents who use a subscription model

Q98: Which of the following subscription features is your company planning to implement in the next 12 months? (select all that apply)

APPLE  
CONFIDENTIAL 29

## Platforms company offers to subscribe to products



Base: Business respondents who use a subscription model  
Q99: On which platforms does your company offer the opportunity to subscribe to its products? (select all that apply)

APPLE  
CONFIDENTIAL 30

## Areas where company sees the most growth for subscription business on Apple platforms

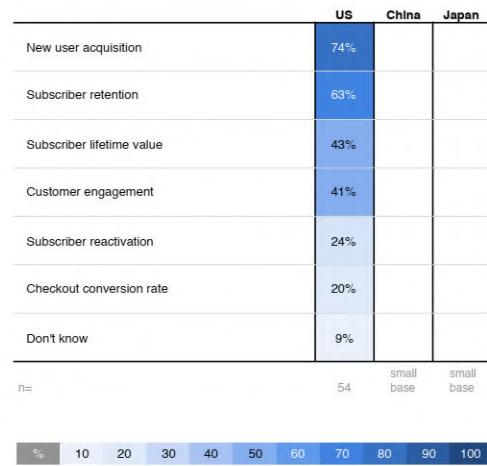


Base: Business respondents who offer opportunity to subscribe to Apple platforms

Q100: In which of the following areas does your company see the most growth for its subscription business on Apple platforms? (select all that apply)

APPLE  
CONFIDENTIAL  
31

## Areas where company sees the most growth for subscription business on platforms other than Apple



Base: Business respondents who offer opportunity to subscribe to platforms other than Apple

Q101: In which of the following areas does your company see the most growth for its subscription business on other platforms? (select all that apply)

APPLE  
CONFIDENTIAL

32

## Marketing profile

APPLE CONFIDENTIAL 33

## US: Annual marketing budget for apps

	Total	Small	Mid	Large
\$0	19%	21%	19%	17%
More than \$0 but less than \$10,000	50%	54% ↓	50%	40% ↓
\$10,000 - \$99,999	10%	10%	8%	15% ↑
\$100,000 - \$999,999	4%	2%	5%	7% ↑
\$1,000,000 or more	1%	1%	1%	4% ↑
Don't know	3%	2%	5%	5% ↑
Prefer not to respond	11%	10%	13%	12%

n= 863 431 263 169



Base: Marketing respondents in the US and reached this point in the survey  
F1\_USA: What is your company's annual marketing budget for apps?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL 34

## China: Annual marketing budget for apps

	Total	Small	Mid	Large
0 RMB	10%	13%	9%	4% ↓
More than 0 RMB but less than 50,000 RMB	28%	27%	32%	23%
50,000 - 199,999 RMB	18%	25%	15%	10% ↓
200,000 - 1,999,999 RMB	15%	12%	14%	21%
2,000,000 RMB or more	9%	3%	6%	24% ↑
Don't know	4%	3%	5%	3%
Prefer not to respond	17%	17%	18%	15%

n= 283 115 97 71



Base: Marketing respondents in China and reached this point in the survey  
Q124\_CHN: What is your company's annual marketing budget for apps?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL 35

## Japan: Annual marketing budget for apps

Japan			
	Total	Small	Mid
Large			
¥0	18%	22%	14%
More than ¥0 but less than ¥249,999	35%	43%	33%
¥250,000 - ¥999,999	7%	8%	9%
¥1,000,000 - ¥9,999,999	6%	4%	8%
¥10,000,000 or more	6%	0%	1%
Don't know	16%	16%	19%
Prefer not to respond	11%	8%	15%

n=

238 115 78



Base: Marketing respondents in Japan and reached this point in the survey  
Q125\_JPN: What is your company's annual marketing budget for apps?  
Note: Arrows denote comparisons to small tier within each country.

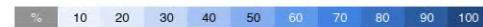
APPLE  
CONFIDENTIAL 36

## Percentage of app marketing budget allocated to user acquisition marketing for Apple apps

	US	China	Japan
0%	11%	2%	6%
1-24%	23%	20%	21%
25-49%	7%	18%	10%
50-74%	8%	18%	9%
75-99%	6%	5%	5%
100%	12%	6%	7%
Don't know	15%	8%	30%
Prefer not to respond	19%	21%	12%

N=

695      256      194



Base: Marketing budget is more than 0 and reached this point in the survey  
Q126: About what percentage of your company's app marketing budget is allocated to user acquisition marketing for Apple apps?

APPLE  
CONFIDENTIAL 37

## Percentage of app marketing budget allocated to user acquisition marketing for Apple apps

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
0%	11%	10%	10%	13%	2%	2%	0%	4%	6%	6%	6%	
1-24%	23%	25%	21%	21%	20%	23%	23%	13%	21%	24%	18%	
25-49%	7%	9%	5%	7%	18%	18%	19%	18%	10%	10%	12%	
50-74%	8%	7%	9%	8%	18%	16%	16%	24%	9%	7%	4%	
75-99%	6%	5%	7%	6%	5%	2%	5%	12% †	5%	7%	4%	
100%	12%	14%	12%	8%	6%	5%	7%	7%	7%	4%	12%	
Don't know	15%	14%	15%	16%	8%	7%	14%	3%	30%	36%	27%	
Prefer not to respond	19%	16%	21%	21%	21%	27%	17%	19%	12%	7%	16%	

n= 695 341 213 141 256 100 88 68 194 90 67 small base



Base: Marketing budget is more than 0 and reached this point in the survey  
Q126: About what percentage of your company's app marketing budget is allocated to user acquisition marketing for Apple apps?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Percentage of app marketing budget allocated to retention marketing for Apple apps

	US	China	Japan
0%	29%	4%	10%
1-24%	26%	31%	19%
25-49%	4%	16%	7%
50-74%	1%	9%	3%
75-99%	1%	2%	2%
100%	2%	1%	3%
Don't know	17%	15%	42%
Prefer not to respond	20%	22%	15%

n=

695 256 194



Base: Marketing budget is more than 0 and reached this point in the survey  
Q126: About what percentage of your company's app marketing budget is allocated to retention marketing for Apple apps?

APPLE  
CONFIDENTIAL 38

## Percentage of app marketing budget allocated to retention marketing for Apple apps

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
0%	29%	28%	29%	29%	4%	4%	2%	4%	10%	9%	12%	
1-24%	26%	28%	25%	22%	31%	26%	33%	35%	19%	21%	15%	
25-49%	4%	4%	5%	3%	16%	19%	13%	15%	7%	7%	4%	
50-74%	1%	1%	2%	2%	9%	8%	9%	10%	3%	2%	3%	
75-99%	1%	1%	0%	1%	2%	2%	2%	3%	2%	2%	3%	
100%	2%	3%	2%	1%	1%	2%	0%	1%	3%	2%	4%	
Don't know	17%	18%	15%	18%	15%	13%	20%	12%	42%	48%	36%	
Prefer not to respond	20%	17%	22%	23%	22%	26%	20%	19%	15%	9%	22% ↑	

n= 695 341 213 141 256 100 88 68 194 90 67 small base



Base: Marketing budget is more than 0 and reached this point in the survey  
Q126: About what percentage of your company's app marketing budget is allocated to retention marketing for Apple apps?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Top three most effective marketing activities for driving downloads on the App Store

	US	China	Japan
Word-of-mouth marketing	51%	38%	35%
Social media community outreach	29%	23%	25%
Social media advertising	26%	22%	22%
App Store featuring	19%	45%	45%
Email outreach	18%	3%	6%
Search engine referrals	17%	28%	20%
App Store product page optimization	12%	14%	16%
Influencer marketing	11%	11%	12%
PR outreach	11%	18%	12%
Other community outreach	10%	10%	11%
Cross promotion in my company's other apps	8%	13%	9%
Ad network advertising	6%	11%	12%
TV/print/radio/outdoor advertising	4%	6%	13%
Push notifications	4%	7%	3%
In-app messaging	2%	4%	1%
Cross promotion or advertising in other developers' apps	1%	13%	3%
Other	8%	1%	4%
Don't know	8%	3%	5%

n=

863 283 238



Base: Marketing respondents

C1: Which are the top three most effective marketing activities for driving downloads of your company's apps on the App Store? (select up to three)

APPLE  
CONFIDENTIAL 39

## Top three most effective marketing activities for driving downloads on the App Store

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Word-of-mouth marketing	51%	55%	50%	45% ↓	38%	37%	47%	27%	35%	43%	26% ↓	
Social media community outreach	29%	31%	28%	23% ↓	23%	26%	30%	10% ↓	25%	29%	23%	
Social media advertising	26%	28%	24%	25%	22%	26%	12% ↓	28%	22%	19%	24%	
App Store featuring	19%	16%	16%	33% ↑	45%	38%	47%	52%	45%	35%	50% ↑	
Email outreach	18%	18%	18%	17%	3%	4%	1%	1%	6%	7%	4%	
Search engine referrals	17%	17%	17%	17%	28%	24%	34%	27%	20%	19%	24%	
App Store product page optimization	12%	12%	11%	15%	14%	7%	18% ↑	21% ↑	16%	17%	15%	
Influencer marketing	11%	9%	11%	15% ↑	11%	16%	12%	1% ↓	12%	10%	15%	
PR outreach	11%	8%	11%	15% ↑	18%	26%	14% ↓	10% ↓	12%	11%	13%	
Other community outreach	10%	10%	11%	9%	10%	10%	13%	4%	11%	17%	8%	
Cross promotion in my company's other apps	8%	5%	8%	15% ↑	13%	10%	14%	14%	9%	7%	8%	
Ad network advertising	6%	7%	5%	6%	11%	7%	7%	24% ↑	12%	6%	12%	
TV/print/radio/outdoor advertising	4%	4%	5%	4%	6%	6%	3%	10%	13%	8%	21% ↑	
Push notifications	4%	3%	3%	7%	7%	9%	5%	6%	3%	4%	1%	
In-app messaging	2%	2%	2%	4%	4%	4%	2%	4%	1%	1%	0%	
Cross promotion or advertising in other apps	1%	1%	2%	2%	13%	10%	9%	21% ↑	3%	3%	3%	
Other	8%	8%	9%	8%	1%	1%	1%	0%	4%	3%	8%	
Don't know	8%	10%	8%	5% ↓	3%	3%	2%	6%	5%	7%	4%	

n= 863 431 263 169 283 115 97 71 238 115 78 small base

% 10 20 30 40 50 60 70 80 90 100

Base: Marketing respondents

C1: Which are the top three most effective marketing activities for driving downloads of your company's apps on the App Store? (select up to three)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Top three most effective marketing activities to keep existing users coming back

	US	China	Japan
Word-of-mouth marketing	29%	43%	29%
Push notifications	22%	17%	28%
Email outreach	19%	3%	7%
Social media community outreach	18%	21%	24%
Social media advertising	15%	15%	8%
Retargeting users	11%	27%	8%
In-app messaging	10%	15%	11%
App Store featuring	8%	30%	22%
Other community outreach	8%	6%	11%
Influencer marketing	8%	16%	6%
Search engine referrals	6%	17%	14%
Cross promotion in my other apps	6%	8%	7%
PR outreach	6%	12%	16%
App Store product page optimization	4%	13%	8%
Ad network advertising	2%	9%	5%
TV/print/radio/outdoor advertising	2%	4%	6%
Other	10%	1%	8%
Don't know	24%	6%	9%

n= 863 283 238  


Base: Marketing respondents  
C1\_N\_1: Which are the top three most effective marketing activities to keep existing users coming back to your company's apps? (select up to three)

APPLE  
CONFIDENTIAL 40

## Top three most effective marketing activities to keep existing users coming back

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Word-of-mouth marketing	29%	31% ↓	30%	21% ↓	43%	44%	42%	44%	29%	32%	23%	
Push notifications	22%	19%	21%	30% ↑	17%	12%	21%	21%	28%	18%	33% ↑	
Email outreach	19%	17%	19%	24%	3%	4%	3%	1%	7%	7%	6%	
Social media community outreach	18%	18%	18%	18%	21%	28%	16% ↓	17%	24%	23%	27%	
Social media advertising	15%	15%	16%	13%	15%	19%	12%	13%	8%	7%	6%	
Retargeting users	11%	12%	10%	9%	27%	30%	32%	16% ↓	8%	6%	8%	
In-app messaging	10%	8%	10%	17% ↑	15%	15%	16%	14%	11%	10%	12%	
App Store featuring	8%	7%	6%	14% ↑	30%	26%	28%	39% ↓	22%	18%	32% ↑	
Other community outreach	8%	9%	7%	7%	6%	6%	6%	4%	11%	10%	14%	
Influencer marketing	8%	8%	6%	8%	16%	20%	14%	11%	6%	4%	5%	
Search engine referrals	6%	7%	7%	4%	17%	18%	17%	17%	14%	15%	14%	
Cross promotion in my other apps	6%	4%	6%	10% ↑	8%	6%	3%	17% ↑	7%	10%	3% ↓	
PR outreach	6%	5%	5%	8%	12%	16%	13%	6% ↓	16%	20%	12%	
App Store product page optimization	4%	4%	3%	3%	13%	14%	16%	10%	8%	10%	4%	
Ad network advertising	2%	3%	1%	2%	9%	7%	7%	14% ↓	5%	4%	5%	
TV/print/radio/outdoor advertising	2%	2%	2%	2%	4%	4%	4%	6%	6%	5%	10%	
Other	10%	8%	12%	11%	1%	0%	1%	1%	8%	7%	12%	
Don't know	24%	27%	23%	19% ↓	6%	4%	9%	4%	9%	11%	8%	

n= 863 431 263 169 283 115 97 71 238 115 78 small base

% 10 20 30 40 50 60 70 80 90 100

Base: Marketing respondents

C1\_N\_1: Which are the top three most effective marketing activities to keep existing users coming back to your company's apps? (select up to three)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Channels most important in driving word-of-mouth marketing

	US	China	Japan
Organic social media	48%	47%	46%
App Store customer reviews	41%	49%	43%
Company and/or product website	32%	21%	20%
Influencer marketing	27%	32%	28%
Email	24%	6%	9%
App Store chart ranking	24%	58%	50%
App Store trending	23%	51%	33%
Public relations	19%	9%	10%
Physical mailers	2%	1%	4%
Other	5%	0%	2%
Don't know	12%	6%	8%

n=

863 283 238



Base: Marketing respondents

Q122: What channels are most important to driving word-of-mouth marketing? (select all that apply)

APPLE  
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## Channels most important in driving word-of-mouth marketing

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Organic social media	48%	48%	47%	47%	47%	46%	47%	47%	46%	40%	45%	
App Store customer reviews	41%	38%	42%	45%	49%	43%	52%	55%	43%	40%	49%	
Company and/or product website	32%	34%	29%	32%	21%	30%	16% ↓	13% ↓	20%	24%	22%	
Influencer marketing	27%	25%	25%	33% ↑	32%	36%	32%	27%	28%	24%	27%	
Email	24%	26%	23%	21%	6%	10%	4%	1% ↓	9%	9%	12%	
App Store chart ranking	24%	21%	22%	35% ↑	58%	47%	60%	73% ↑	50%	43%	54%	
App Store trending	23%	22%	24%	26%	51%	44%	50%	65% ↑	33%	29%	41%	
Public relations	19%	20%	18%	20%	9%	12%	8%	3% ↓	10%	10%	9%	
Physical mailers	2%	3%	1%	2%	1%	1%	2%	0%	4%	4%	5%	
Other	5%	6%	6%	4%	0%	0%	1%	0%	2%	3%	1%	
Don't know	12%	11%	14%	11%	6%	5%	6%	6%	8%	10%	8%	

n= 863 431 263 169 283 115 97 71 238 115 78 small base

% 10 20 30 40 50 60 70 80 90 100

Base: Marketing respondents

Q12: What channels are most important to driving word-of-mouth marketing? (select all that apply)

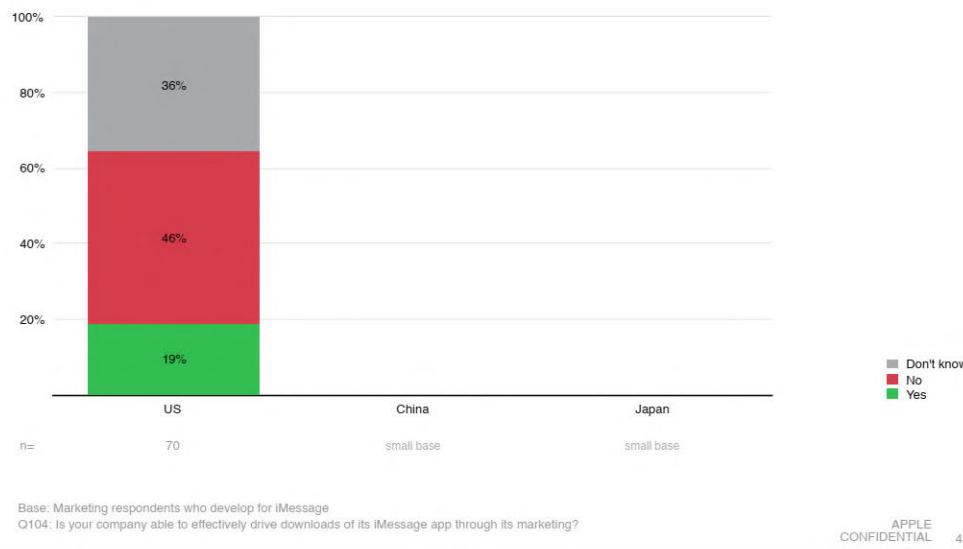
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

PX-0041.74

APL-APPSTORE\_09637092

## Is company able to effectively drive download of iMessage app



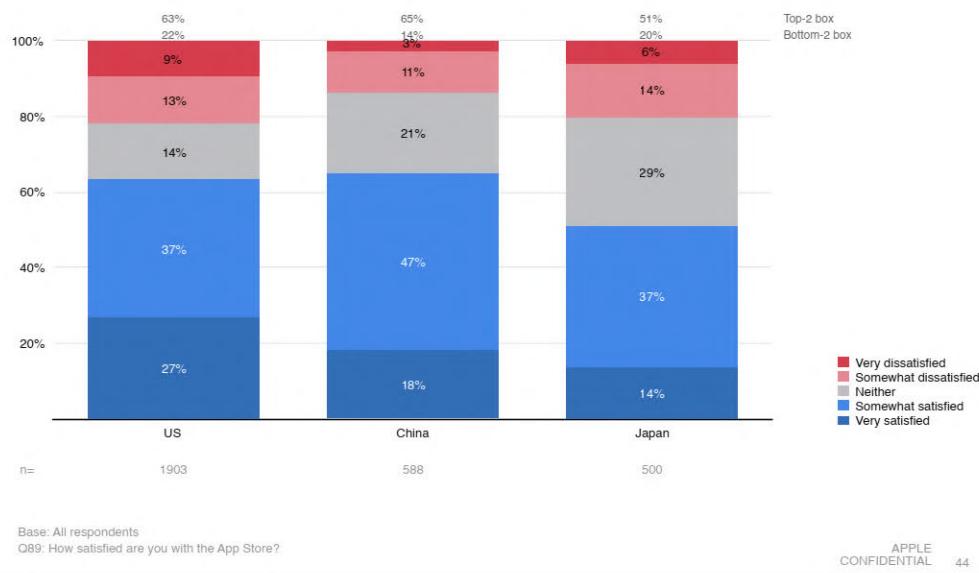
PX-0041.75

APL-APPSTORE\_09637093

## Satisfaction with the App Store

APPLE CONFIDENTIAL - 43

## Satisfaction with the App Store



PX-0041.77

APL-APPSTORE\_09637095

## Reasons not satisfied with the App Store

	US	China	Japan
Inability to update metadata without binary submission	44%	32%	47%
Lack of functions which other platforms have	37%	23%	34%
No way to customize product page	36%	24%	24%
Unpredictable algorithm updates	32%	28%	31%
Lack of real-time monitoring for stability	28%	28%	26%
No personalized recommendations	26%	22%	39%
Lack of product page testing	24%	13%	29%
No introductory pricing	21%	6%	14%
Behavioral data is opt-in	14%	15%	21%
Resources and tools are not fully localized	0%	23%	28%
Other (net)	65%	46%	48%
Other: Search and discoverability issues	19%	5%	14%
Other: Other specific complaint	10%	5%	10%
Other: Issues with publishing, deployment or review process	6%	4%	5%

n=

423 82 102

Base: Not satisfied with 100% 20 30 40 50 60 70 80 90 100

Q90: Why do you say you are not satisfied with the App Store? (select all that apply)

Note: Categories under 5% are not displayed under 'Other (net)'. Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions. The percentages reported are calculated based on the number of mentions.

APPLE  
CONFIDENTIAL 45

## Reasons not satisfied with the App Store

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Inability to update metadata without binary submission	44%	43%	45%	44%	32%				47%	44%		
Lack of functions which other platforms have	37%	29%	42% ↑	47% ↑	23%				34%	35%		
No way to customize product page	36%	33%	38%	37%	24%				24%	27%		
Unpredictable algorithm updates	32%	29%	35%	35%	28%				31%	26%		
Lack of real-time monitoring for stability	28%	19%	35% ↑	36% ↑	28%				26%	22%		
No personalized recommendations	26%	25%	24%	29%	22%				39%	31%		
Lack of product page testing	24%	20%	28%	25%	13%				29%	29%		
No Introductory pricing	21%	21%	21%	22%	6%				14%	15%		
Behavioral data is opt-in	14%	8%	18% ↑	22% ↑	15%				21%	27%		
Resources and tools are not fully localized	NA	NA	NA	NA	23%				28%	26%		
Other	65%	67%	62%	62%	46%				48%	46%		

n= 423 189 133 101 82 small base small base small base 102 55 small base small base

% 10 20 30 40 50 60 70 80 90 100

Base: Not satisfied with App Store

Q90: Why do you say you are not satisfied with the App Store? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of the App Store

Very or somewhat satisfied

	US	China	Japan
Provides the tools I need to successfully develop apps	68%	75%	61%
Enables profitability of my apps	38%	46%	32%
Enables discovery of my apps	37%	47%	24%
Provides the tools I need to successfully market apps	34%	40%	27%

n=

1903 588 500



Base: All respondents

A10: How satisfied are you with the App Store on the following?

APPLE  
CONFIDENTIAL

x

## Satisfaction with elements of the App Store

Very or somewhat satisfied

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Provides the tools I need to successfully develop apps	68%	66%	68%	71%	75%	72%	79%	77%	61%	64%	59%	56%
Enables profitability of my apps	38%	37%	37%	40%	46%	39%	51% ↑	55% ↑	32%	24%	36% ↑	43% ↑
Enables discovery of my apps	37%	38%	34%	38%	47%	47%	50%	42%	24%	20%	25%	31% ↑
Provides the tools I need to successfully market apps	34%	36%	31% ↓	35%	40%	42%	40%	35%	27%	29%	27%	25%

n= 1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents

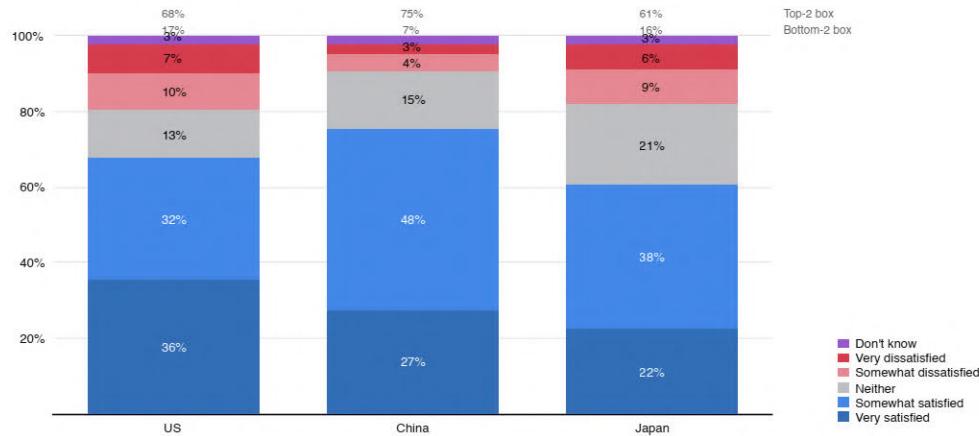
A10: How satisfied are you with the App Store on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of the App Store

Provides the tools I need to successfully develop apps



n= 1903

n= 588

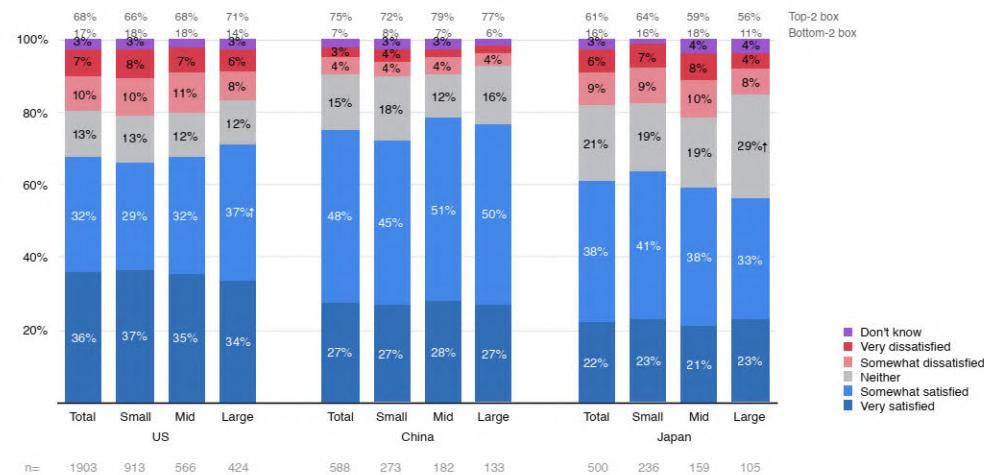
n= 500

Base: All respondents  
A10: How satisfied are you with the App Store on the following?

APPLE  
CONFIDENTIAL 46

# Satisfaction with elements of the App Store

Provides the tools I need to successfully develop apps



Base: All respondents

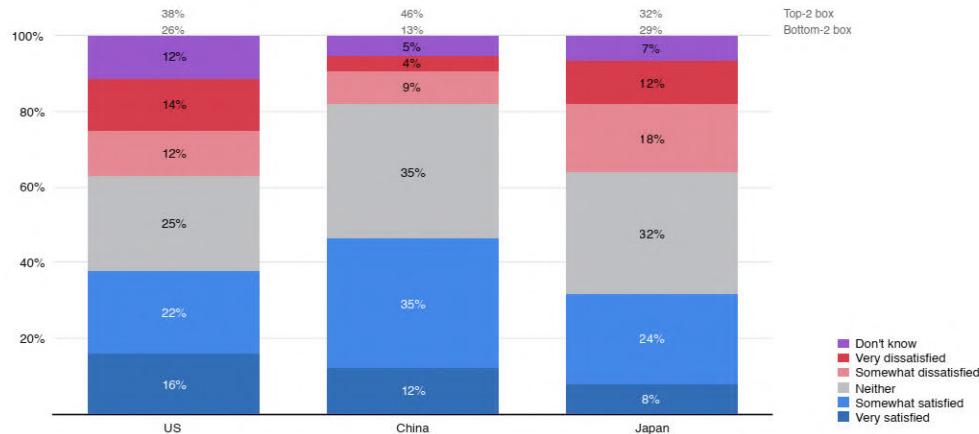
A10: How satisfied are you with the App Store on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of the App Store

### Enables profitability of my apps



n= 1903

n= 588

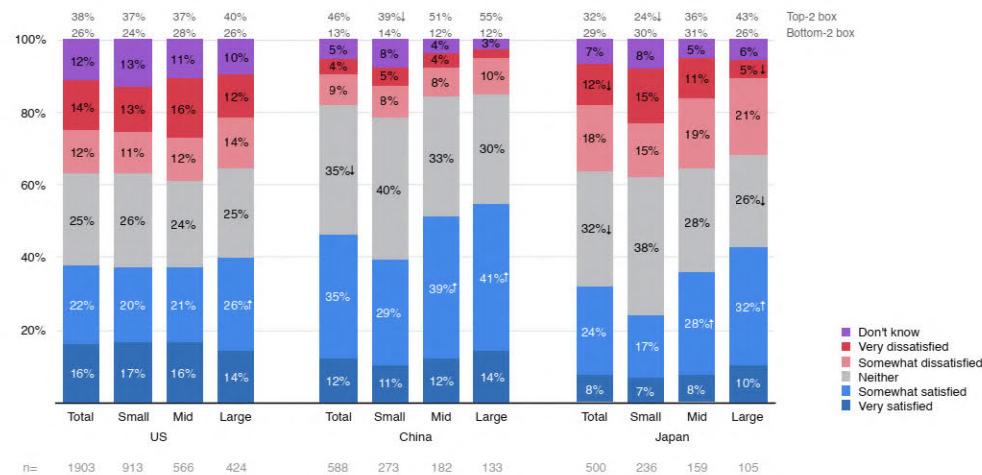
n= 500

Base: All respondents  
A10: How satisfied are you with the App Store on the following?

APPLE  
CONFIDENTIAL 47

## Satisfaction with elements of the App Store

### Enables profitability of my apps



Base: All respondents

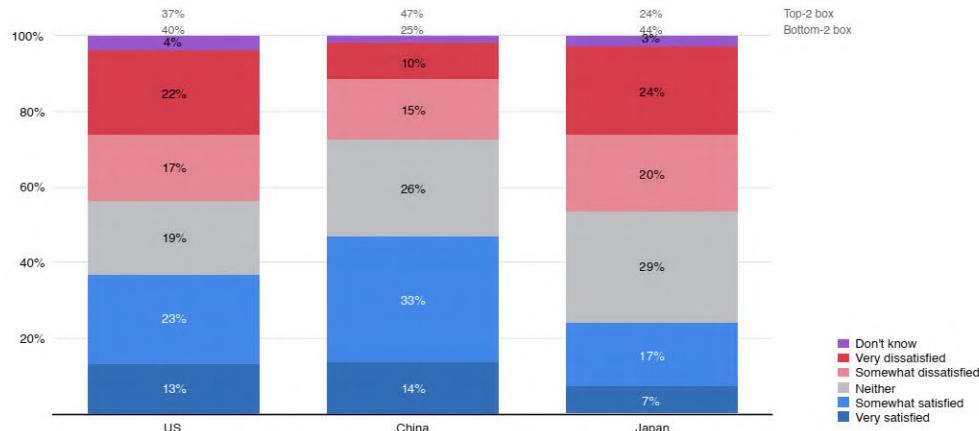
A10: How satisfied are you with the App Store on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of the App Store

### Enables discovery of my apps



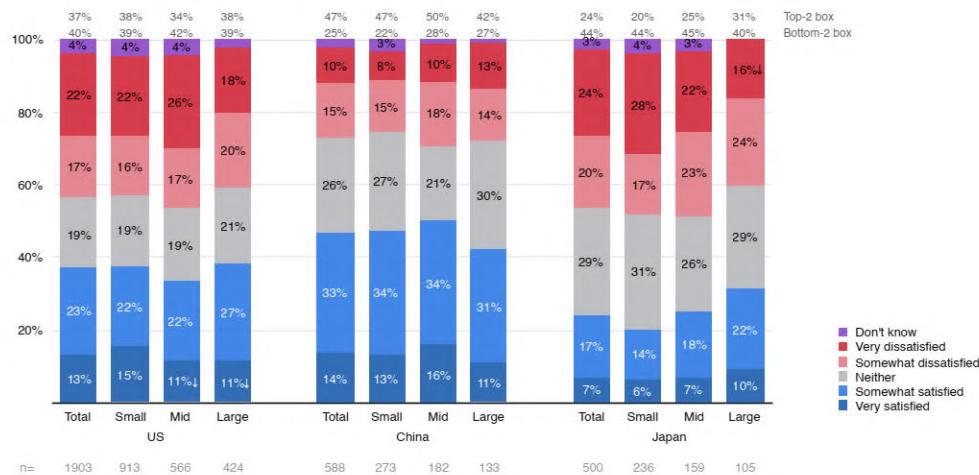
n= 1903 588 500

Base: All respondents  
A10: How satisfied are you with the App Store on the following?

APPLE  
CONFIDENTIAL 48

# Satisfaction with elements of the App Store

## Enables discovery of my apps



Base: All respondents

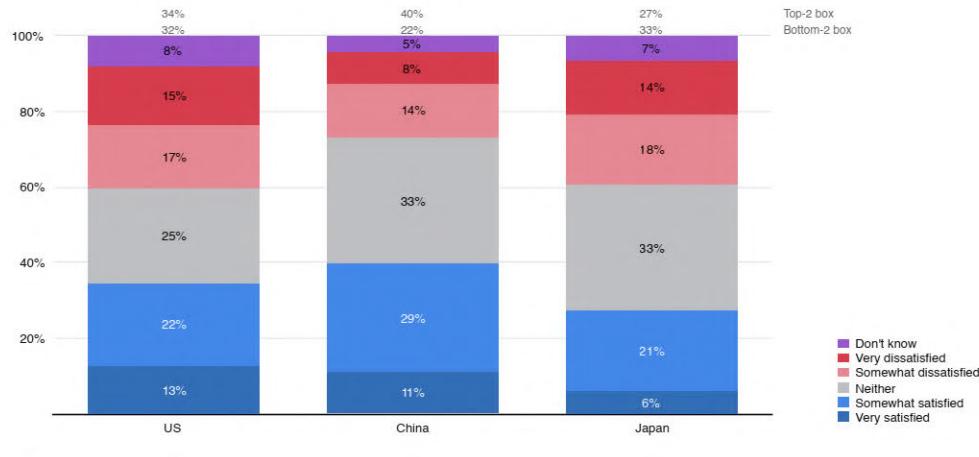
A10: How satisfied are you with the App Store on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of the App Store

Provides the tools I need to successfully market apps



n= 1903

n= 588

n= 500

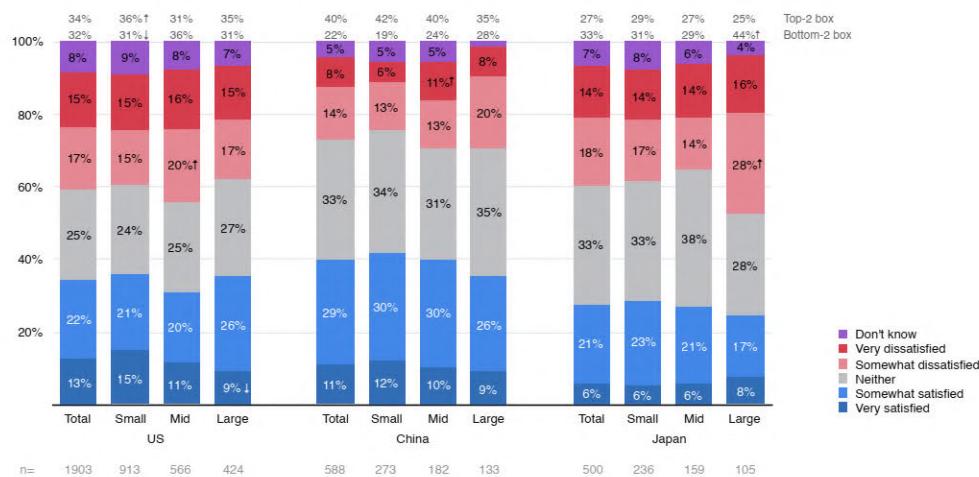
Base: All respondents

A10: How satisfied are you with the App Store on the following?

APPLE  
CONFIDENTIAL 49

## Satisfaction with elements of the App Store

Provides the tools I need to successfully market apps



Base: All respondents

A10: How satisfied are you with the App Store on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

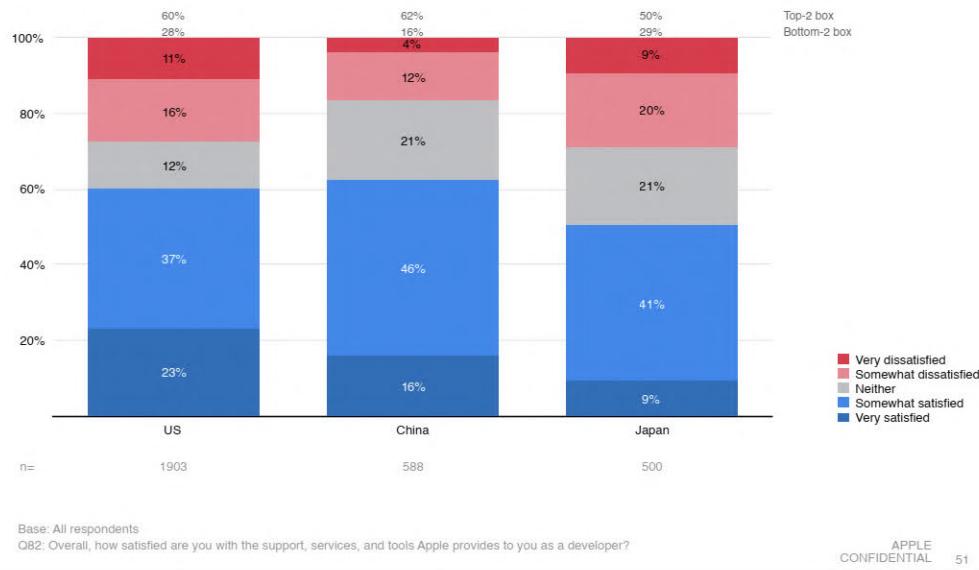
PX-0041.89

APL-APPSTORE\_09637107

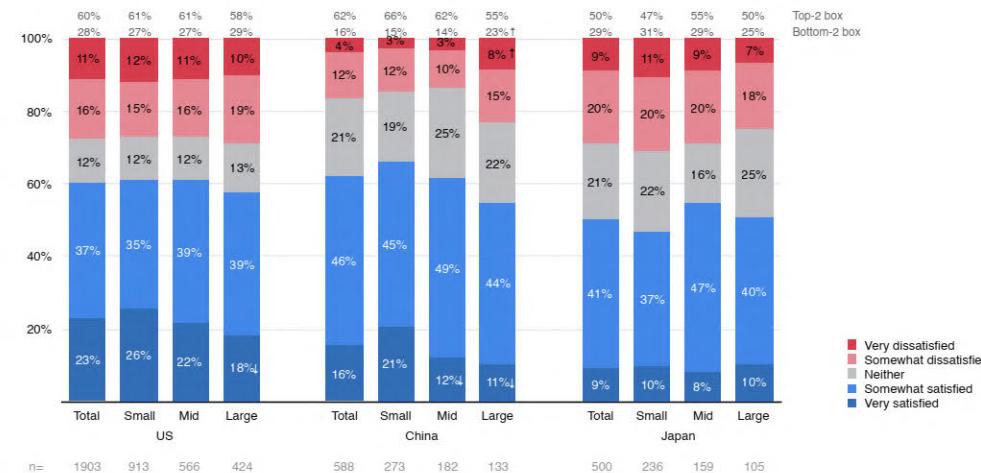
## Guidance, tools, and services

APPLE CONFIDENTIAL -50-

## Satisfaction with support, services, and tools Apple provides



## Satisfaction with support, services, and tools Apple provides



Base: All respondents

Q82: Overall, how satisfied are you with the support, services, and tools Apple provides to you as a developer?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Reasons very and somewhat satisfied with support, services, and tools Apple provides

	US	China	Japan
Great/Complete set of tools, continuous improvement	11%	8%	
Effective communication with support and problem-solving	10%	12%	
Issues with publishing, deployment or review process	9%	6%	
Issues and changes to Xcode	6%	1%	
Want more options for marketing and ads, difficult to be seen	6%	2%	
Like Xcode	6%	3%	
Easy to use, intuitive, convenient (general)	5%	12%	
Customer service issues	5%	2%	
Good publishing, deployment and review process experience	5%	7%	
No response provided	22%	41%	

n=

1146 366 NA

Base: Very % 10 20 30 40 50 60 70 80 90 100 S

Q83AB: Why do you say you are very/somewhat satisfied with the support, services, and tools Apple provides to you as a developer? (open-end)

Note: Categories under 5% are not displayed under 'Other (net)'. Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions.

APPLE  
CONFIDENTIAL X

## Reason very and somewhat dissatisfied with support, services and tools Apple provides

	US	China	Japan
Issues with publishing, deployment or review process	30%	30%	
Issues and changes to Xcode	14%	9%	
Customer service issues	14%	24%	
Want more options for marketing and ads, difficult to be seen	14%	6%	
Not easy to use or intuitive (general)	13%	7%	
Other tools issues	12%	2%	
Signing, certificates and profiles issues	11%	2%	
Issues and changes to iTunes Connect	9%	4%	
Pricing issues	9%	0%	
Issues with OS-iOS	9%	1%	
Issues with distribution, payments and fee	8%	10%	
Compatibility issues (software and hardware)	8%	4%	
Issues and changes to TestFlight and overall testing	7%	1%	
Issues and changes to Swift	6%	3%	
Few opportunities for small developers	6%	0%	
Many updates and unannounced changes in Apple tools and services	6%	2%	
Issues and changes to analytics	5%	4%	
Search and discoverability issues	5%	3%	
Guidelines and policies issues	5%	4%	
Issues to update an app	5%	0%	
Documentation issues	5%	2%	

n=

525 96 NA

Base: Very and somewhat dissatisfied (% is 10 scaled) 20 30 40 50 60 70 80 90 100

Q83DE: Why do you say you are very/somewhat dissatisfied with the support, services, and tools Apple provides to you as a developer? (open-end)

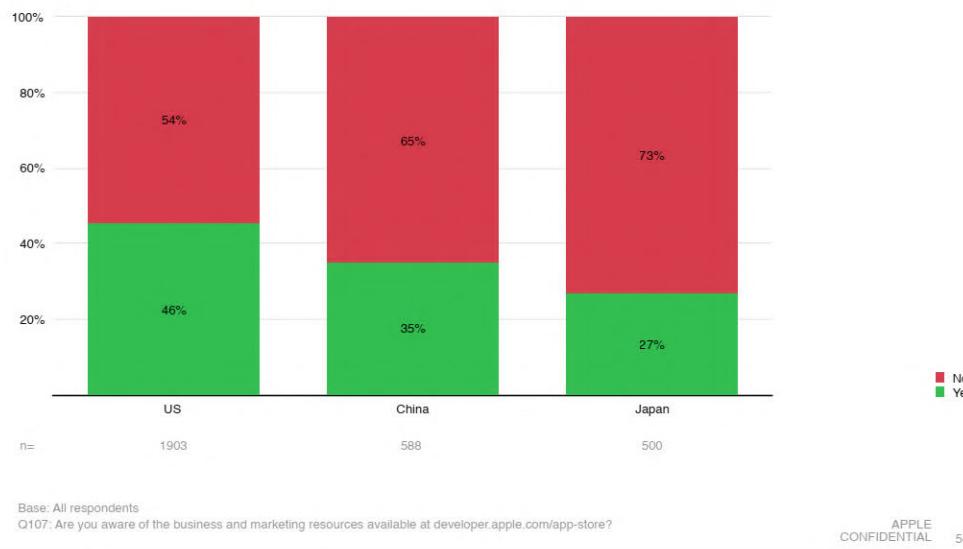
Note: Categories under 5% are not displayed under 'Other (net)'. Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions.

APPLE  
CONFIDENTIAL 52

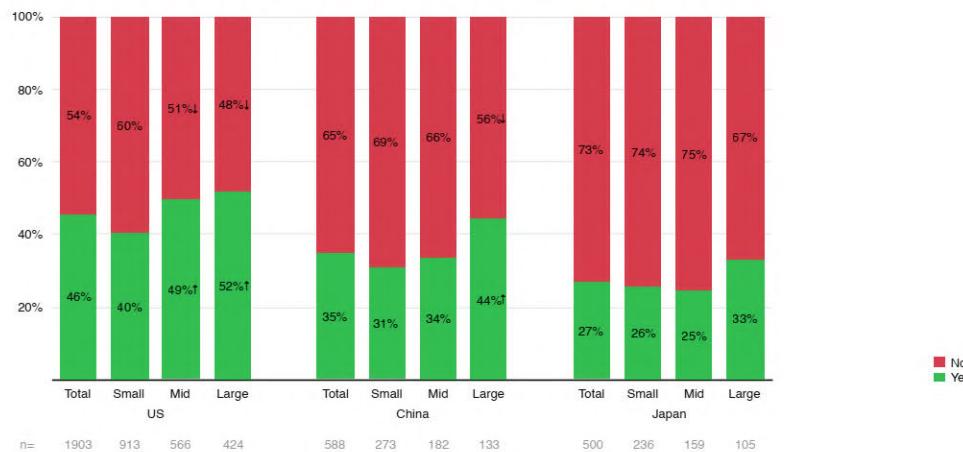
[Developer.apple.com/app-store](https://developer.apple.com/app-store)

APPLE CONFIDENTIAL 53

## Awareness of developer business and marketing resources at developer.apple.com/app-store



## Awareness of developer business and marketing resources at developer.apple.com/app-store



Base: All respondents

Q107: Are you aware of the business and marketing resources available at developer.apple.com/app-store?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Source of awareness of business and marketing resources at developer.apple.com/app-store

	US	China	Japan
Developer.apple.com/app-store	58%	66%	61%
Internet searches	21%	24%	35%
Word of mouth from other developers I know	20%	24%	12%
Tech publications or industry forums	19%	20%	10%
Social media	8%	14%	12%
Other	4%	0%	2%
Don't know	10%	4%	2%

n=

867    205    135



Base: Aware of business and marketing resources

Q108: How did you hear about the business and marketing resources at developer.apple.com/app-store? (select all that apply)

APPLE  
CONFIDENTIAL 55

## Source of awareness of business and marketing resources at developer.apple.com/app-store

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Developer.apple.com/app-store	58%	59%	55%	59%	66%	66%	66%	66%	61%	69%		
Internet searches	21%	22%	20%	18%	24%	28%	16%	25%	35%	34%		
Word of mouth from other developers I know	20%	18%	21%	21%	24%	25%	36%	10% ↓	12%	8%		
Tech publications or industry forums	19%	22%	17%	16%	20%	19%	18%	22%	10%	5%		
Social media	8%	7%	9%	7%	14%	13%	12%	19%	12%	13%		
Other	4%	4%	5%	4%	0%	0%	0%	0%	2%	0%		
Don't know	10%	8%	10%	11%	4%	4%	8%	0%	2%	2%		

n=

867 368 280 219 205 85 61 59 135 61 small base small base



Base: Aware of business and marketing resources

Q108: How did you hear about the business and marketing resources at developer.apple.com/app-store? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## When last visited business and marketing resources at developer.apple.com/app-store

	US	China	Japan
Within the last week	8%	27%	9%
Between one week and up to one month ago	10%	20%	18%
Between 1 month and up to 6 months ago	27%	17%	24%
Between 6 months and up to one year ago	19%	5%	9%
One year or more ago	12%	5%	6%
I don't remember	24%	25%	35%

n=

867 205 135



Base: Aware of business and marketing resources  
Q109: When was the last time you visited the business and marketing resources at developer.apple.com/app-store?

APPLE  
CONFIDENTIAL 56

## When last visited business and marketing resources at developer.apple.com/app-store

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Within the last week	8%	10%	6%	6%	27%	27%	28%	27%	9%	2%		
Between one week and up to one month ago	10%	9%	9%	14%	20%	24%	18%	19%	18%	16%		
Between 1 month and up to 6 months ago	27%	29%	26%	24%	17%	14%	15%	22%	24%	25%		
Between 6 months and up to one year ago	19%	17%	19%	21%	5%	5%	5%	5%	9%	7%		
One year or more ago	12%	14%	10%	12%	5%	6%	2%	8%	6%	10%		
I don't remember	24%	21%	30% ↑	23%	25%	25%	33%	19%	35%	41%		

n=

867 368 280 219 205 85 61 59 135 61 small base small base



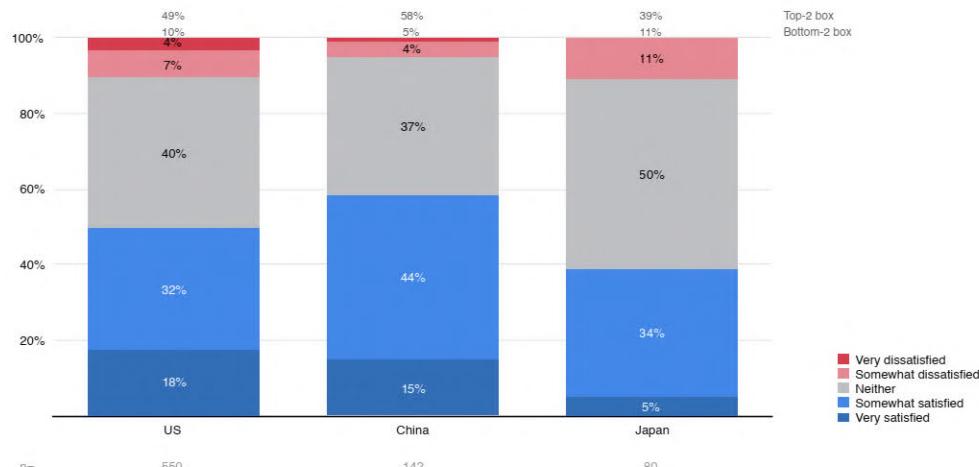
Base: Aware of business and marketing resources

Q109: When was the last time you visited the business and marketing resources at developer.apple.com/app-store?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

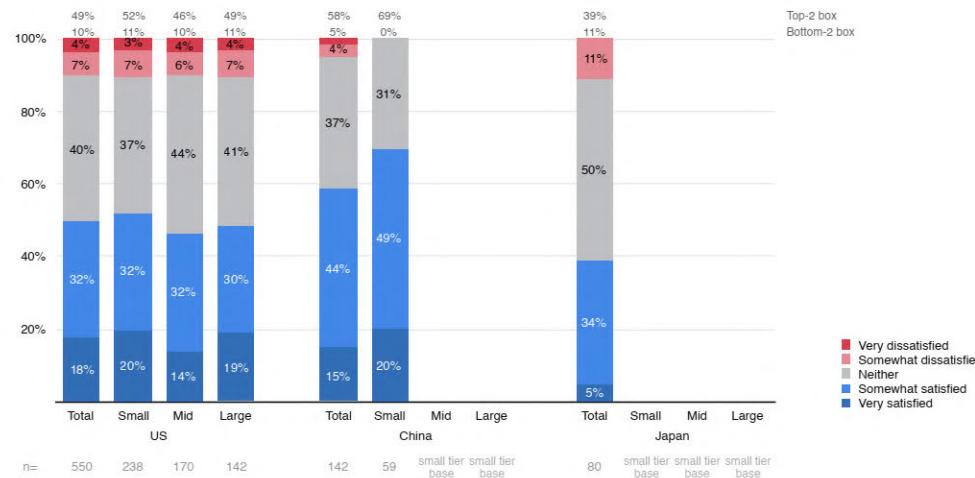
## Satisfaction with business and marketing resources at developer.apple.com/app-store



Base: Aware of business and marketing resources and visited up to one year ago  
Q110: How satisfied are you with the business and marketing resources at developer.apple.com/app-store?

APPLE  
CONFIDENTIAL 57

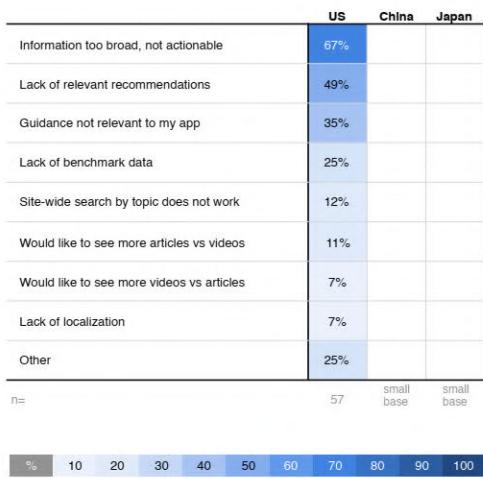
## Satisfaction with business and marketing resources at developer.apple.com/app-store



Base: Aware of business and marketing resources and visited up to one year ago  
Q110: How satisfied are you with the business and marketing resources at developer.apple.com/app-store?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Reasons dissatisfied with business and marketing resources at developer.apple.com/app-store



Base: Somewhat or very dissatisfied with business and marketing resources  
Q111: Why do you say you are not satisfied with the business and marketing resources at developer.apple.com/app-store? (select all that apply)

APPLE  
CONFIDENTIAL 58

PX-0041.104

APL-APPSTORE\_09637122

## Satisfaction with elements of business and marketing

Very or somewhat satisfied

	US	China	Japan
Ease of use	43%	57%	30%
Quality of guidance	39%	59%	33%
Access to related resources	37%	56%	33%
Helps improve my business and marketing decisions	30%	48%	30%

n=

867 205 135



Base: Aware of business and marketing resources  
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

APPLE  
CONFIDENTIAL X

PX-0041.105

APL-APPSTORE\_09637123

## Satisfaction with elements of business/marketing

Very or somewhat satisfied

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Ease of use	43%	43%	43%	42%	57%	60%	59%	51%	30%	30%		
Quality of guidance	39%	40%	37%	37%	59%	61%	56%	58%	33%	26%		
Access to related resources	37%	39%	37%	36%	56%	61%	48%	56%	33%	33%		
Helps improve my business and marketing decisions	30%	33%	29%	28%	48%	54%	41%	47%	30%	25%		

n=

867 368 280 219 205 85 61 59 135 61 small base small base



Base: Aware of business and marketing resources

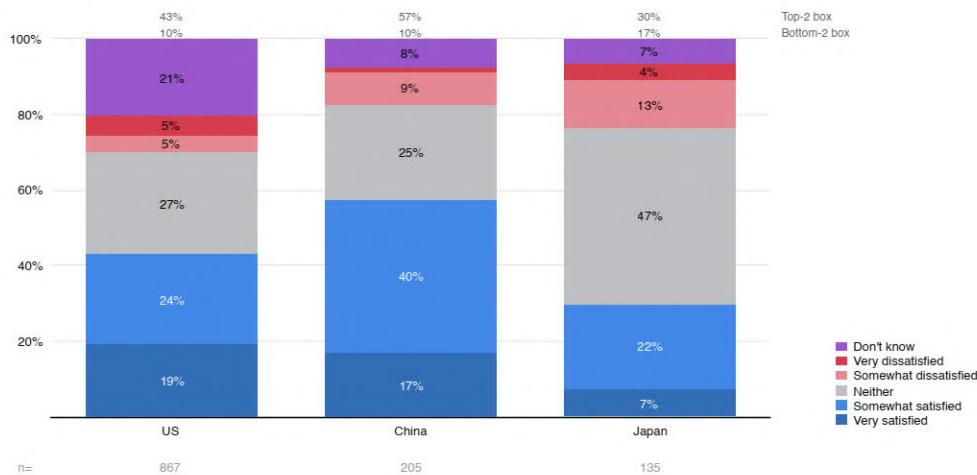
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of business and marketing

### Ease of use



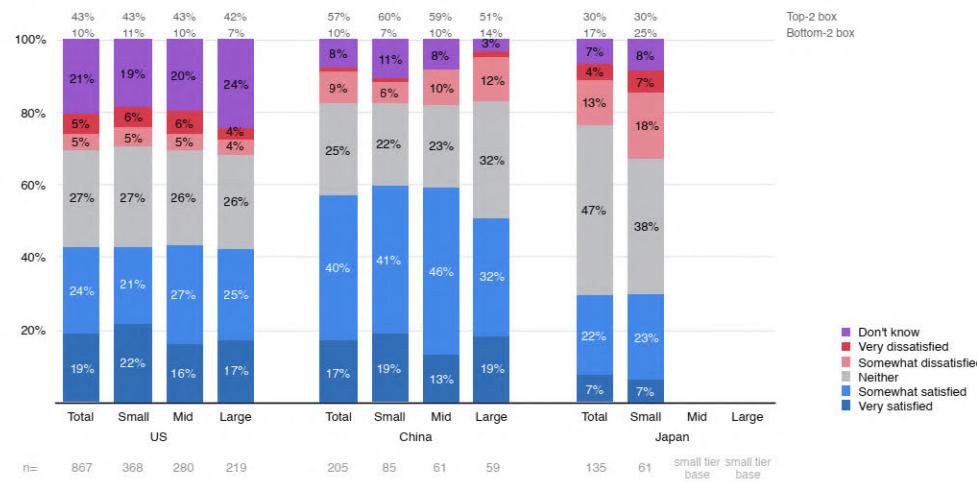
Base: Aware of business and marketing resources

Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

APPLE  
CONFIDENTIAL 59

## Satisfaction with elements of business and marketing

### Ease of use



Base: Aware of business and marketing resources

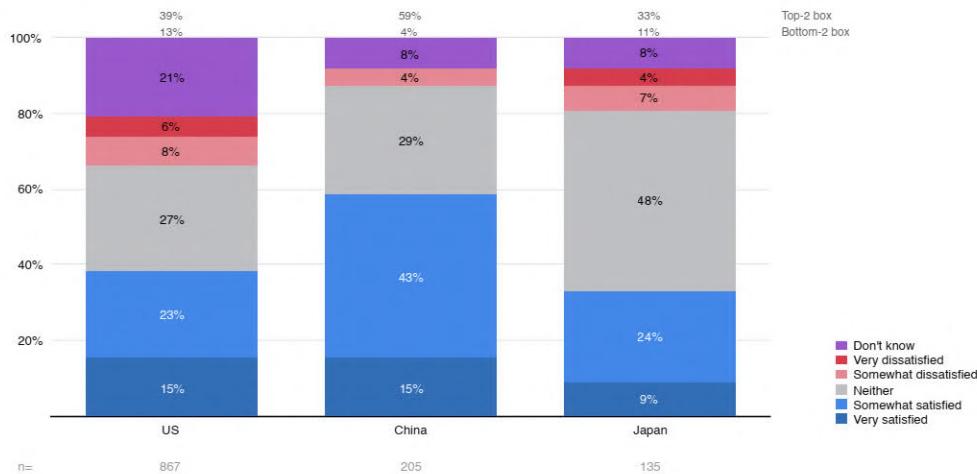
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of business and marketing

### Quality of guidance



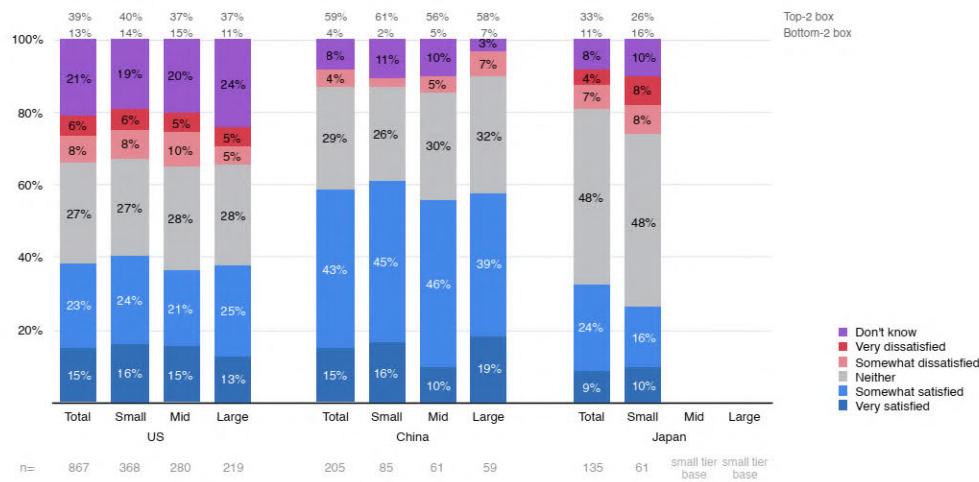
Base: Aware of business and marketing resources

Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

APPLE  
CONFIDENTIAL  
60

# Satisfaction with elements of business and marketing

## Quality of guidance

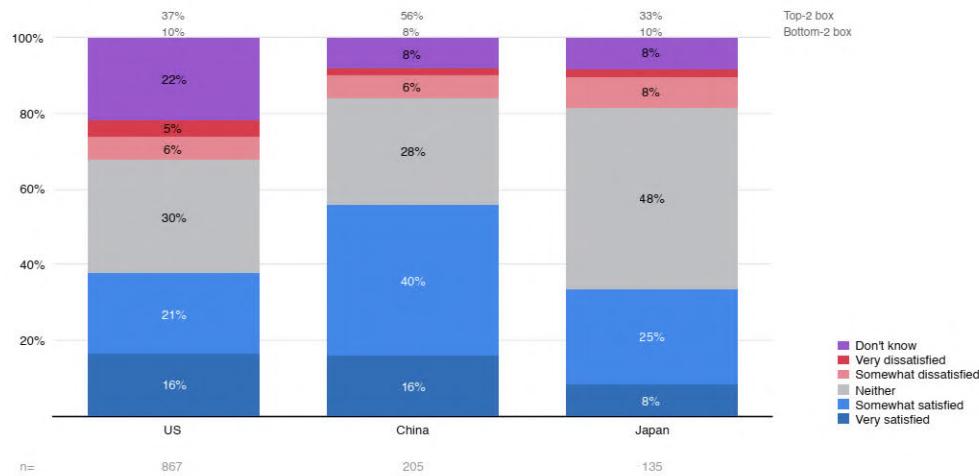


Base: Aware of business and marketing resources  
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of business and marketing

### Access to related resources



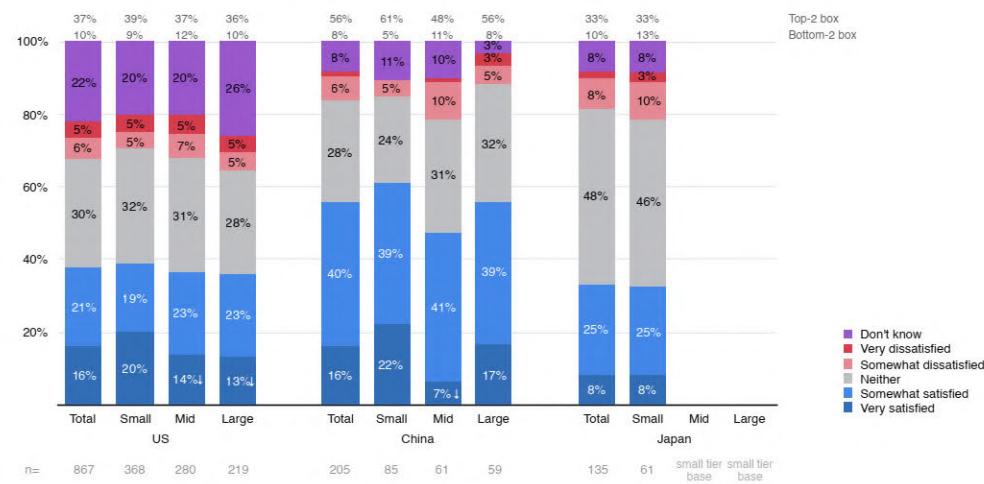
Base: Aware of business and marketing resources

Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

APPLE  
CONFIDENTIAL  
61

# Satisfaction with elements of business and marketing

## Access to related resources

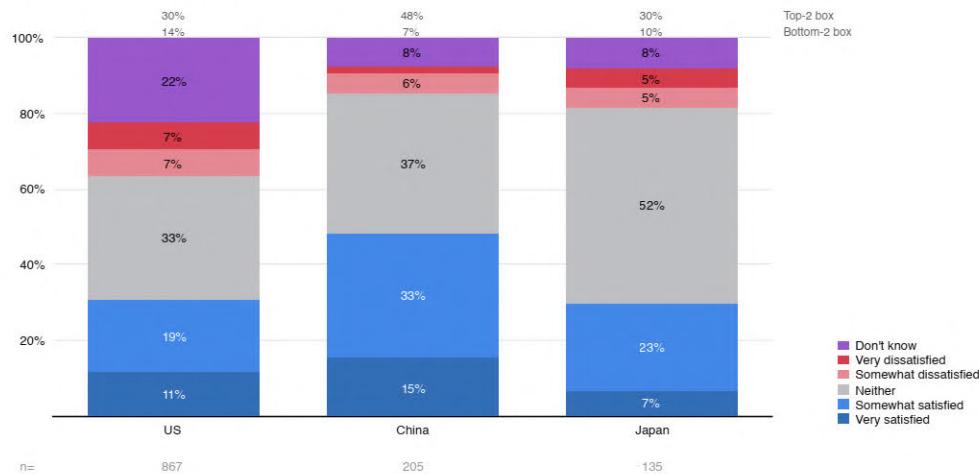


Base: Aware of business and marketing resources  
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of business and marketing

### Helps improve my business



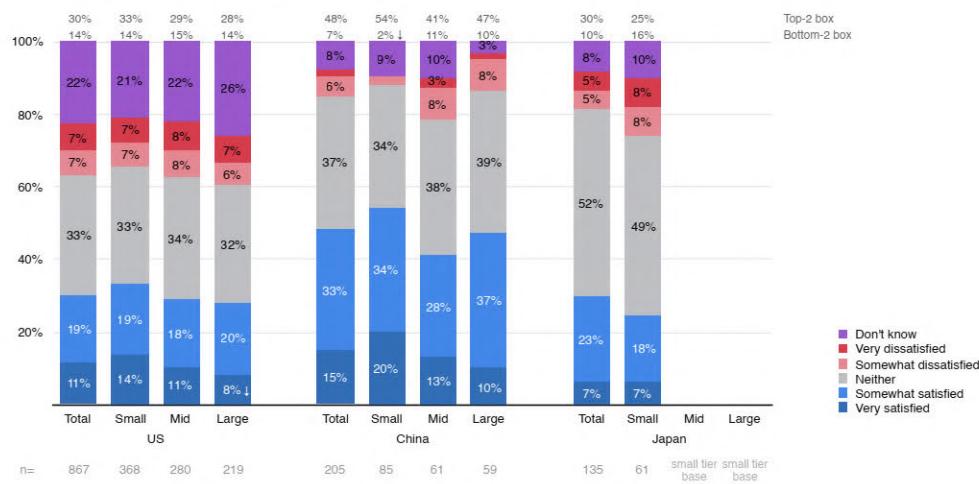
Base: Aware of business and marketing resources

Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following

APPLE  
CONFIDENTIAL  
62

## Satisfaction with elements of business and marketing

### Helps improve my business



Base: Aware of business and marketing resources  
Q112: How satisfied are you with the business and marketing resources at developer.apple.com/app-store on the following  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## App business and marketing resources interested in learning more about from Apple

	US	China	Japan
App Store promotion	52%	61%	45%
App Store optimization	50%	54%	43%
User acquisition	46%	57%	59%
Engagement and retention	40%	53%	40%
Launch strategies	36%	30%	25%
Pricing/monetization strategies	33%	23%	34%
Business models	26%	26%	29%
Identifying user segments	24%	45%	29%
Competitive benchmarking	20%	33%	24%
International expansion strategies	15%	23%	23%
Other	3%	1%	2%
None of the these	19%	8%	6%

n=

1903 588 500



Base: All respondents

D11\_N\_1: What app business and marketing resources are you interested in learning more about from Apple? (select all that apply)

APPLE  
CONFIDENTIAL 63

## App business and marketing resources interested in learning more about from Apple

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
App Store promotion	52%	49%	51%	59% ↑	61%	54%	62%	73% ↑	45%	39%	50% ↑	53% ↑
App Store optimization	50%	46%	50%	59% ↑	54%	41%	59% ↑	74% ↑	43%	30%	50% ↑	61% ↑
User acquisition	46%	44%	46%	50%	57%	53%	60%	59%	59%	55%	62%	63%
Engagement and retention	40%	38%	36%	49% ↑	53%	49%	56%	58%	40%	32%	43% ↑	53% ↑
Launch strategies	36%	34%	37%	40% ↑	30%	30%	29%	32%	25%	23%	22%	32%
Pricing/monetization strategies	33%	33%	30%	38%	23%	22%	26%	20%	34%	31%	37%	35%
Business models	26%	28%	22% ↓	27%	26%	27%	28%	23%	29%	29%	30%	31%
Identifying user segments	24%	22%	24%	27% ↑	45%	42%	44%	53% ↑	29%	24%	29%	39% ↑
Competitive benchmarking	20%	17%	19%	27% ↑	33%	27%	35%	42% ↑	24%	16%	26% ↑	38% ↑
International expansion strategies	15%	14%	13%	18%	23%	19%	28% ↑	25%	23%	18%	25%	33% ↑
Other	3%	3%	3%	2%	1%	0%	1%	1%	2%	2%	1%	1%
None of the these	19%	21%	20%	13% ↓	8%	12%	3% ↓	6%	6%	8%	4%	4%

n= 1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents

D11\_N\_1: What app business and marketing resources are you interested in learning more about from Apple? (select all that apply)

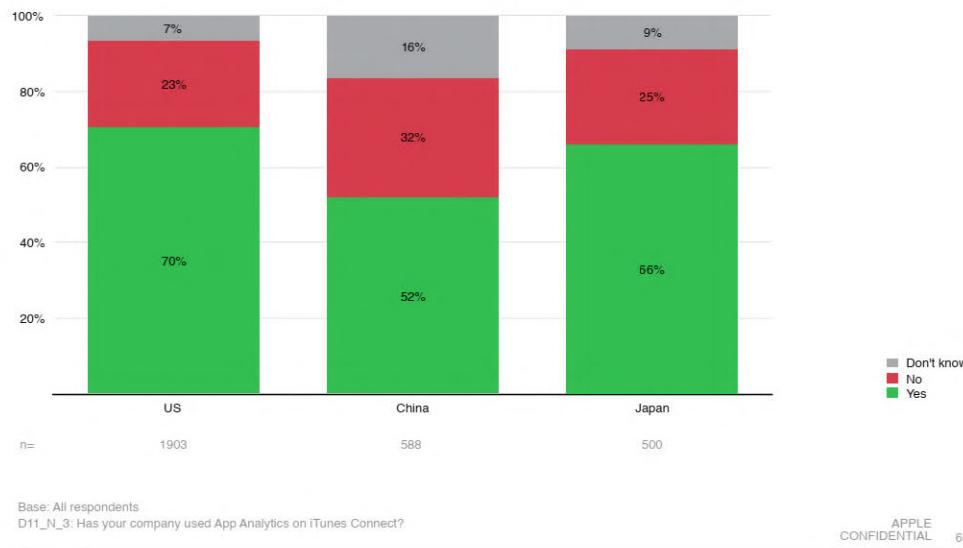
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

# App Analytics

APPLE CONFIDENTIAL 64

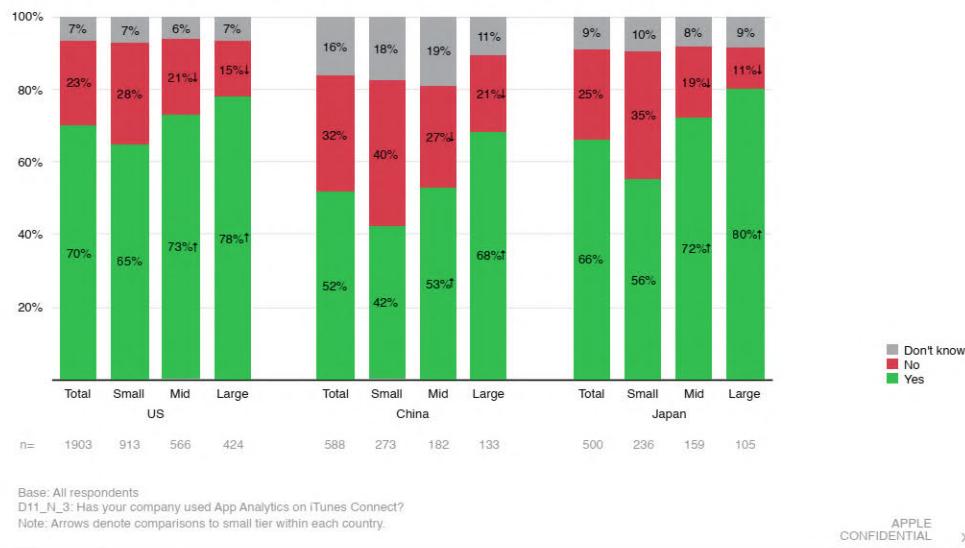
## Use of App Analytics on iTunes Connect



PX-0041.118

APL-APPSTORE\_09637136

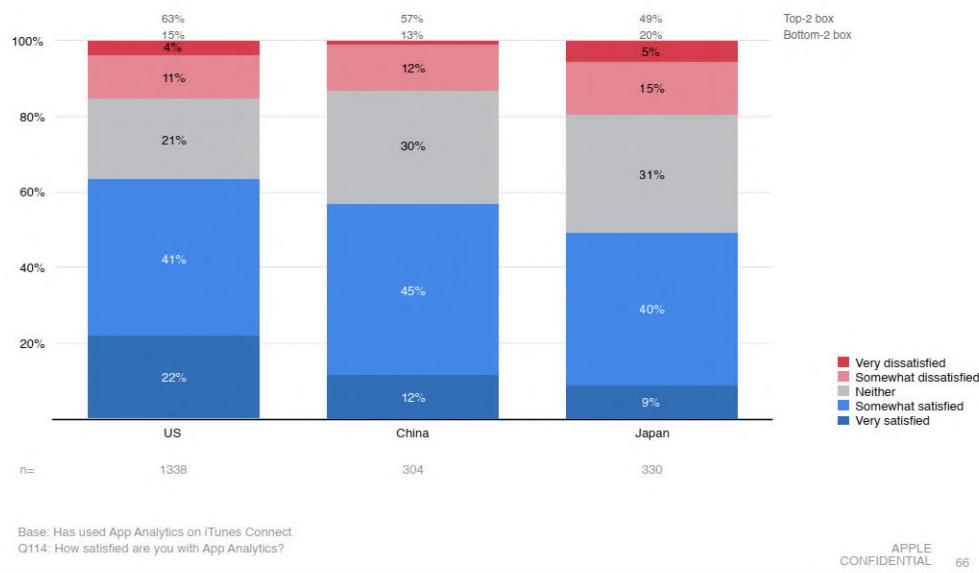
## Use of App Analytics on iTunes Connect



PX-0041.119

APL-APPSTORE\_09637137

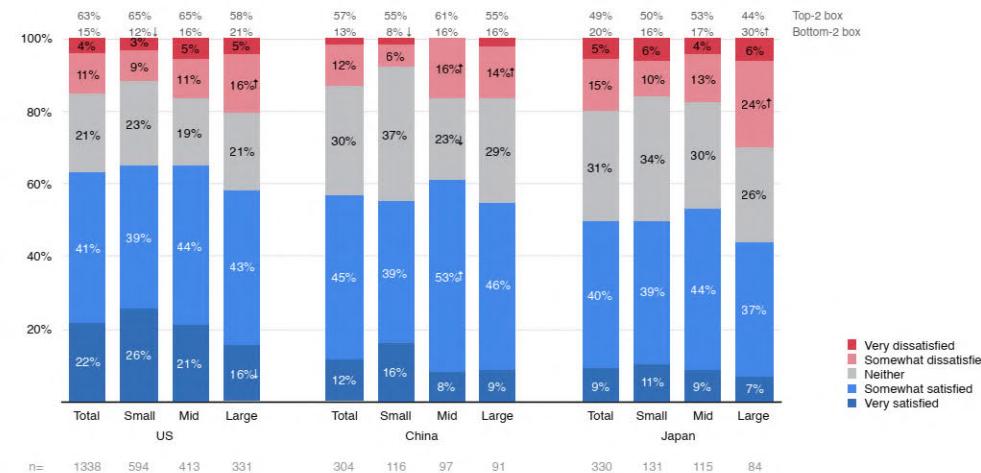
## Satisfaction with App Analytics



PX-0041.120

APL-APPSTORE\_09637138

## Satisfaction with App Analytics



Base: Has used App Analytics on iTunes Connect

Q114: How satisfied are you with App Analytics?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Reasons not satisfied with App Analytics

	US	China	Japan
Data not granular enough	61%		73%
Lack of uninstalls/deletions	55%		58%
Data is not real-time	53%		55%
No way to look at user flow funnel data	48%		44%
Usage data is opt-in	46%		56%
No way to look at data by unique user	44%		52%
No API to export data	37%		30%
Inability to calculate LTV	23%		38%
No subscriptions metrics	19%		20%
IAP metrics are not by SKU	16%		20%
Other	24%		18%

n=

207 small base

66



Base: Somewhat or very dissatisfied with App Analytics  
Q115: Why do you say you are not satisfied with App Analytics? (select all that apply)

APPLE  
CONFIDENTIAL 67

## Reasons not satisfied with App Analytics

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Data not granular enough	61%	58%	59%	66%					73%			
Lack of uninstalls/deletions	55%	45%	54%	66% ↑					58%			
Data is not real-time	53%	44%	63% ↑	53%					55%			
No way to look at user flow funnel data	48%	47%	43%	56%					44%			
Usage data is opt-in	46%	37%	41%	62% ↑					56%			
No way to look at data by unique user	44%	42%	44%	44%					52%			
No API to export data	37%	25%	40%	46% ↑					30%			
Inability to calculate LTV	23%	17%	32% ↑	21%					38%			
No subscriptions metrics	19%	16%	24%	19%					20%			
IAP metrics are not by SKU	16%	16%	15%	18%					20%			
Other	24%	24%	31%	18%					18%			

n= 207 71 68 68 small base small base small base small base 66 small base small base small base

% 10 20 30 40 50 60 70 80 90 100

Base: Somewhat or very dissatisfied with App Analytics  
Q115: Why do you say you are not satisfied with App Analytics? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of App Analytics

Very or somewhat satisfied

	US	China	Japan
User interface	59%	62%	45%
Quality of data	57%	58%	47%
Helps improve my business decisions	47%	47%	46%
Ability to export data at scale	35%	52%	21%

n=

1338 304 330



Base: Has used App Analytics on iTunes Connect  
D11\_N\_4: How would you rate App Analytics on the following?

APPLE  
CONFIDENTIAL

X

PX-0041.124

APL-APPSTORE\_09637142

## Satisfaction with elements of App Analytics

Very or somewhat satisfied

	US				China			Japan				
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
User interface	59%	59%	59%	58%	62%	70%	60%	55% ↓	45%	52%	42%	39%
Quality of data	57%	60%	54%	54%	58%	65%	55%	53%	47%	51%	50%	37% ↓
Helps improve my business decisions	47%	48%	46%	47%	47%	44%	51%	48%	46%	44%	46%	48%
Ability to export data at scale	35%	37%	35%	31%	52%	57%	47%	52%	21%	22%	17%	23%

n=

1338 594 413 331 304 116 97 91 330 131 115 84



Base: Has used App Analytics on iTunes Connect

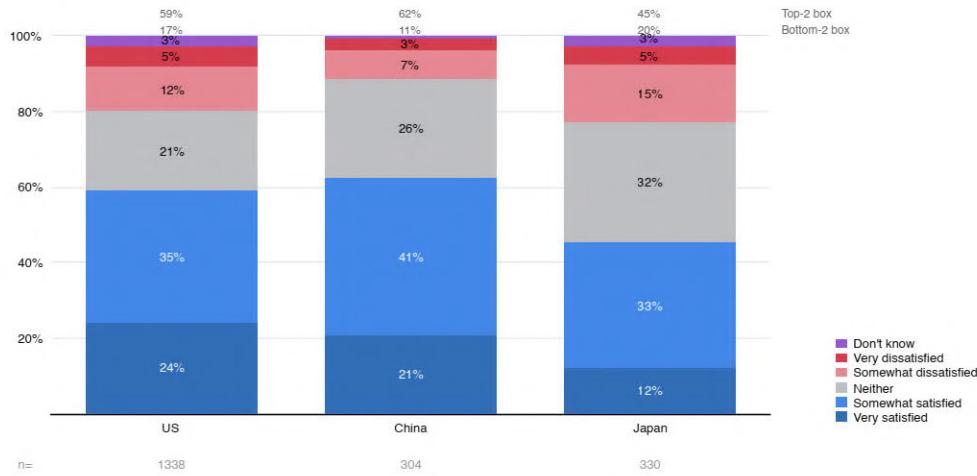
D11\_N\_4: How would you rate App Analytics on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of App Analytics

### User interface

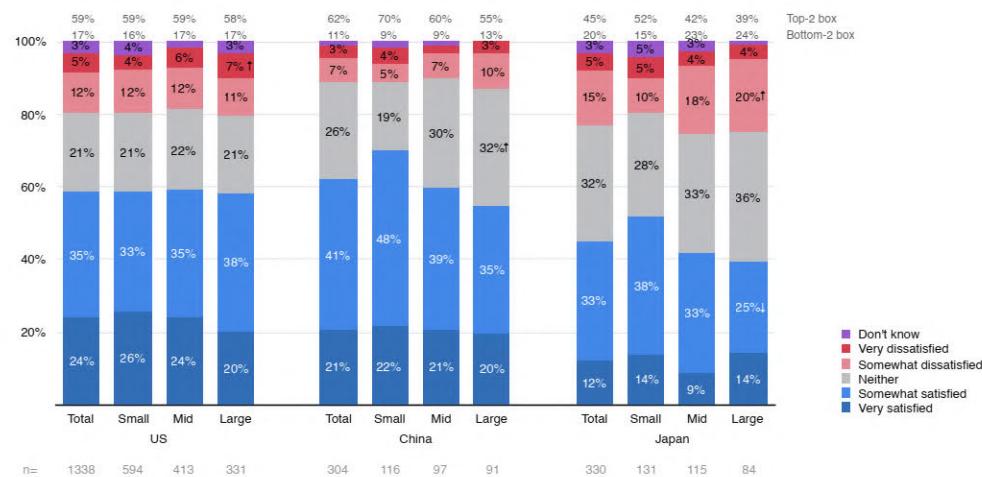


Base: Has used App Analytics on iTunes Connect  
D11\_N\_4: How would you rate App Analytics on the following?

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## Satisfaction with elements of App Analytics

### User interface



Base: Has used App Analytics on iTunes Connect

D11\_N\_4: How would you rate App Analytics on the following?

Note: Arrows denote comparisons to small tier within each country.

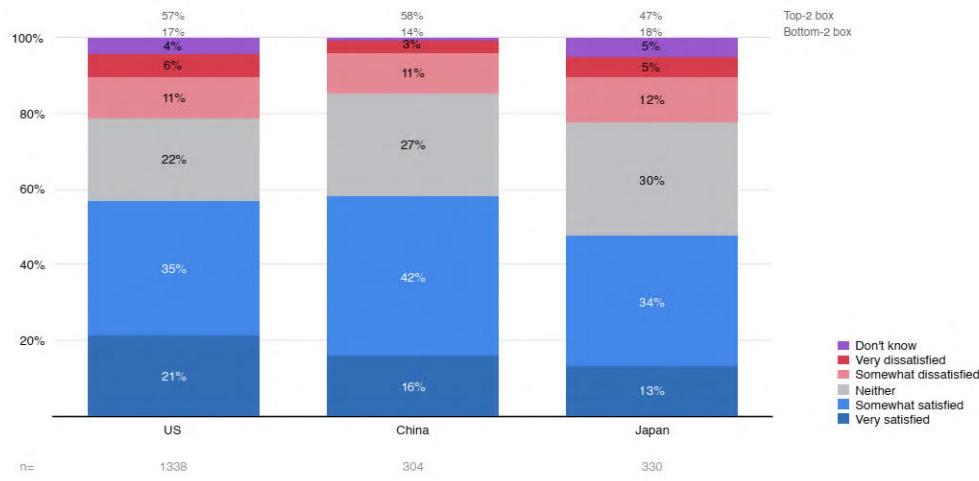
APPLE  
CONFIDENTIAL X

PX-0041.127

APL-APPSTORE\_09637145

## Satisfaction with elements of App Analytics

### Quality of data

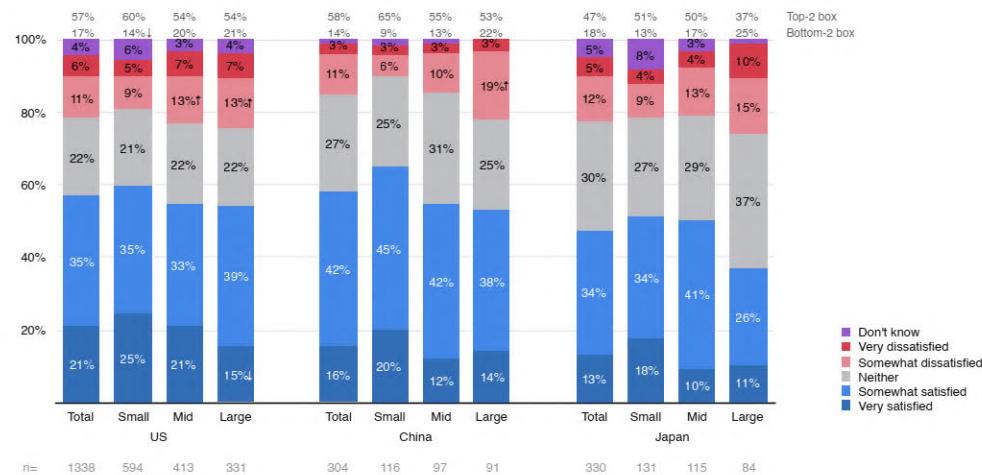


Base: Has used App Analytics on iTunes Connect  
D11\_N\_4: How would you rate App Analytics on the following?

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# Satisfaction with elements of App Analytics

## Quality of data



Base: Has used App Analytics on iTunes Connect

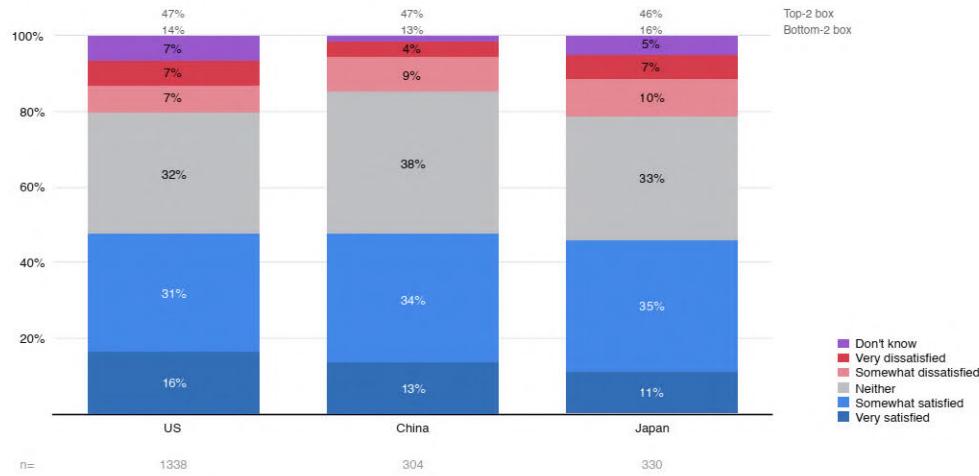
D11\_N\_4: How would you rate App Analytics on the following?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Satisfaction with elements of App Analytics

### Helps improve my business decisions

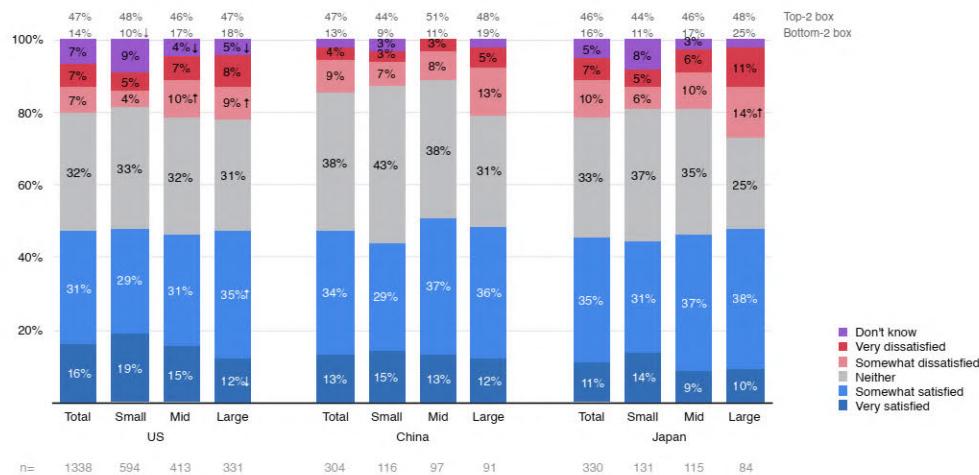


Base: Has used App Analytics on iTunes Connect  
D11\_N\_4: How would you rate App Analytics on the following?

APPLE  
CONFIDENTIAL 70

# Satisfaction with elements of App Analytics

## Helps improve my business decisions



Base: Has used App Analytics on iTunes Connect  
D11\_N\_4: How would you rate App Analytics on the following?  
Note: Arrows denote comparisons to small tier within each country.

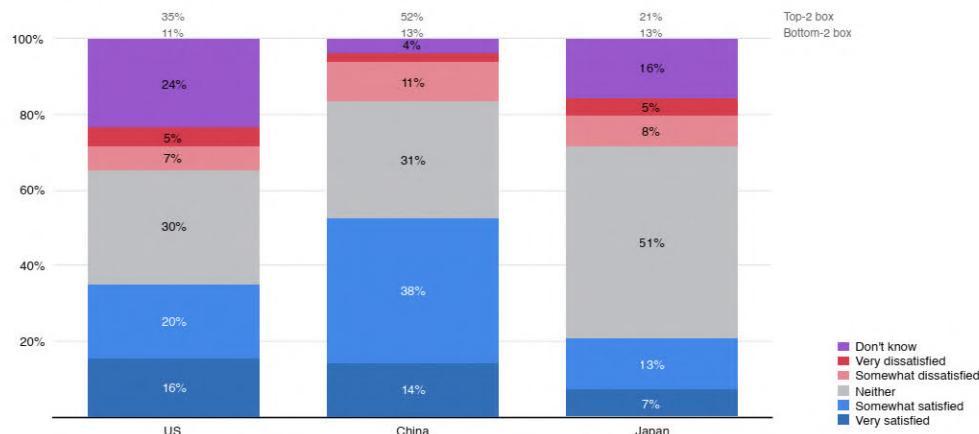
APPLE  
CONFIDENTIAL X

PX-0041.131

APL-APPSTORE\_09637149

## Satisfaction with elements of App Analytics

### Ability to export data at scale



n= 1338

n= 304

n= 330

Base: Has used App Analytics on iTunes Connect

D11\_N\_4: How would you rate App Analytics on the following?

APPLE  
CONFIDENTIAL

71

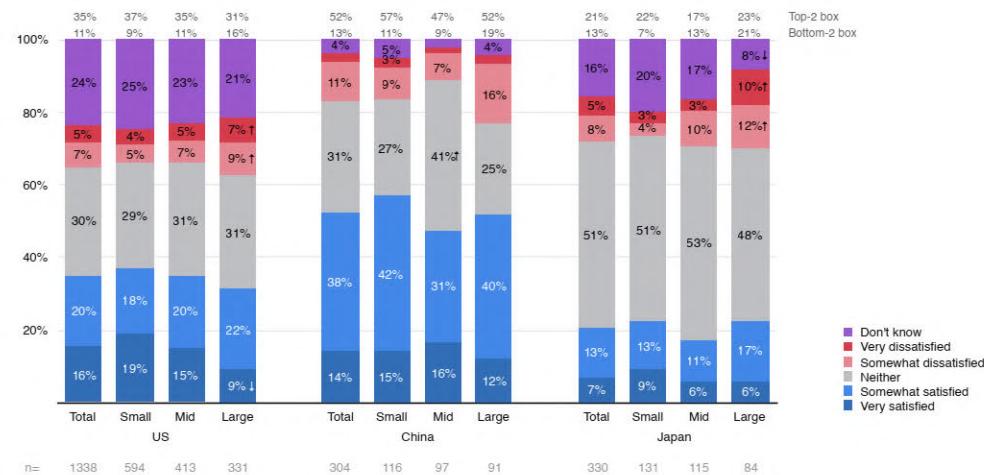
PX-0041.132

APL-APPSTORE\_09637150

# Satisfaction with elements of App Analytics

## Ability to export data at scale

### Ability to export data at scale



Base: Has used App Analytics on iTunes Connect

D11\_N\_4: How would you rate App Analytics on the following?

Note: Arrows denote comparisons to small tier within each country.

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## Requested features for App Analytics

	US	China	Japan
App Store search keyword insights	58%	72%	61%
Demographic data for app users	54%	50%	53%
Faster access to data (less than 24 hours)	46%	57%	49%
Benchmarks against similar apps	43%	45%	48%
Diagnostic data	42%	33%	36%
Custom in-app events	40%	46%	28%
Organic app referrer data as a source	37%	39%	46%
API access to App Analytics data	31%	44%	33%
More detailed information on in-app purchase (IAP) behavior	27%	34%	27%
More options for filter campaigns, such as ad network, site ID and creative variations	19%	30%	22%
More parameters in campaign links	15%	35%	12%
Other	6%	1%	4%
Don't know	11%	3%	6%

n=

1338 304 330



Base: Has used App Analytics on iTunes Connect

D11\_N\_5: What features would you like to see in App Analytics? (select all that apply)

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APL-APPSTORE\_09637152

## Requested features for App Analytics

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
App Store search keyword insights	58%	55%	58%	64% ↑	72%	63%	73%	81% ↑	61%	55%	64%	68%
Demographic data for app users	54%	52%	56%	53%	50%	44%	55%	52%	53%	46%	51%	68% ↑
Faster access to data (less than 24 hours)	46%	45%	46%	49%	57%	54%	59%	59%	49%	46%	51%	51%
Benchmarks against similar apps	43%	38%	43%	51% ↑	45%	40%	46%	51%	49%	41%	51%	55% ↑
Diagnostic data	42%	41%	40%	45%	33%	36%	30%	32%	36%	31%	39%	42%
Custom in-app events	40%	31%	45% ↑	50% ↑	46%	43%	45%	50%	28%	21%	33% ↑	32%
Organic app referrer data as a source	37%	33%	36%	44% ↑	39%	31%	44% ↑	44%	46%	41%	46%	52%
API access to App Analytics data	31%	29%	32%	36% ↑	44%	46%	40%	46%	33%	21%	40% ↑	44% ↑
More detailed information on in-app purchase (IAP) behavior	27%	25%	27%	31% ↑	34%	30%	39%	34%	27%	21%	29%	35% ↑
More options for filter campaigns, such as ad network, site ID and creative	19%	19%	18%	21%	30%	22%	30%	41% ↑	22%	15%	21%	32% ↑
More parameters in campaign links	15%	15%	15%	15%	35%	29%	33%	43% ↑	12%	6%	10%	25% ↑
Other	6%	6%	7%	5%	1%	1%	3%	0%	4%	5%	4%	1%
Don't know	11%	12%	12%	9%	3%	2%	2%	7%	6%	6%	7%	5%

n=

1338 594 413 331 304 116 97 91 330 131 115 84

% 10 20 30 40 50 60 70 80 90 100

Base: Has used App Analytics on iTunes Connect  
D11\_N\_5: What features would you like to see in App Analytics? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

PX-0041.135

APL-APPSTORE\_09637153

## Third-party analytics tools or services use

	US	China	Japan
In-app analytics services	36%	33%	28%
Push notification services	22%	27%	24%
User acquisition analytics tools	16%	33%	22%
User feedback services	16%	25%	7%
In-app monetization services	6%	7%	9%
App Store optimization services	5%	17%	6%
Other	7%	3%	4%
Don't know	10%	12%	20%
We don't use third-party analytics tools or services	35%	21%	29%

n= 1903 588 500

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents  
D11\_N\_7: Which third-party analytics tools or services does your company use? (select all that apply)

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## Third-party analytics tools or services use

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
In-app analytics services	36%	26%	38% ↑	54% ↑	33%	25%	31%	53% ↑	28%	20%	29% ↑	47% ↑
Push notification services	22%	15%	22% ↑	34% ↑	27%	24%	28%	31%	24%	16%	21%	45% ↑
User acquisition analytics tools	16%	12%	17% ↑	22% ↑	33%	28%	35%	40% ↑	22%	13%	23% ↑	42% ↑
User feedback services	16%	11%	16% ↑	25% ↑	25%	21%	28%	27%	7%	4%	8%	12% ↑
In-app monetization services	6%	6%	5%	5%	7%	6%	6%	10%	9%	6%	10%	15% ↑
App Store optimization services	5%	3%	7% ↑	8% ↑	17%	14%	17%	23% ↑	6%	4%	6%	11% ↑
Other	7%	5%	9% ↑	7%	3%	3%	3%	2%	4%	4%	5%	4%
Don't know	10%	12%	8% ↓	9%	12%	14%	9%	12%	20%	25%	18%	10% ↓
We don't use third-party analytics tools or services	35%	46%	32% ↓	17% ↓	21%	26%	21%	12% ↓	29%	36%	28%	14% ↓

n= 1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents

D11\_N\_7: Which third-party analytics tools or services does your company use? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

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## Other tools and resources

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## Other tools would like the App Store to provide to help with app business and marketing

	US	China	Japan
More and better analytics-data (e.g. demographics, user tracking)	6%	10%	
Improvements to discoverability, search and keywords	5%	5%	
Nothing, don't know	4%	9%	
Changes to featured apps/Help to be featured	4%	3%	
More options for testing and TestFlight	2%	2%	
Improvements to publishing, deployment and reviewing process	2%	1%	
More options for ads	2%	2%	
Opportunities for small developers	2%	1%	
Improvements to customer service	1%	0%	
No response provided	60%	58%	

n=

1903 588 NA



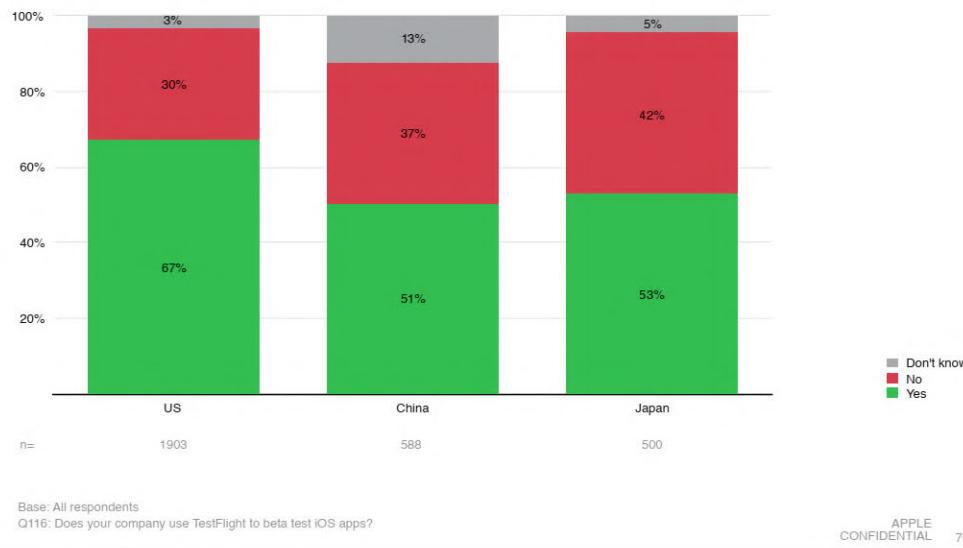
Base: All respondents

D28: What other tools would you like the App Store to provide to help your company with app business and marketing?

Note: Respondents' comments to open ended questions were manually coded into categories. Some of these categories are predetermined, others are added as new themes receive a sufficient number of mentions. The percentages reported are calculated based on the number of mentions.

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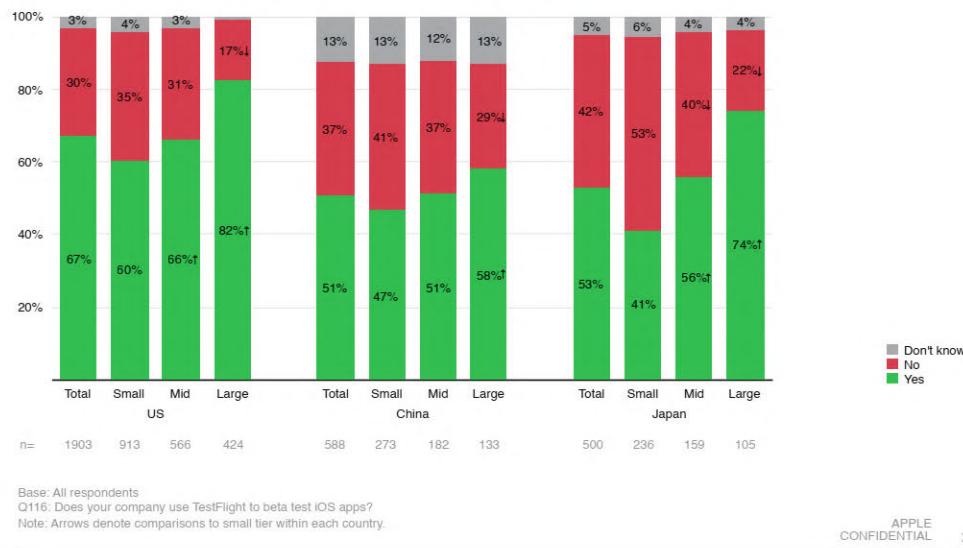
## Use TestFlight



PX-0041.140

APL-APPSTORE\_09637158

## Use TestFlight



PX-0041.141

APL-APPSTORE\_09637159

## Reasons for not using TestFlight

	US	China	Japan
I use another service	20%	28%	18%
I didn't know about it	14%	28%	24%
It's not cross-platform	14%	12%	14%
Test group size limitations	8%	21%	15%
Other	33%	7%	25%
Don't know	21%	12%	16%

n=

565      217      212



Base: Does not use TestFlight to beta test iOS apps  
Q117: Why doesn't your company use TestFlight? (select all that apply)

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## Reasons for not using TestFlight

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
I use another service	20%	17%	22%	26%	28%	23%	25%		18%	14%	25%	
I didn't know about it	14%	17%	9% ↓	11%	28%	38%	19% ↓		24%	23%	29%	
It's not cross-platform	14%	12%	17%	17%	12%	9%	15%		14%	11%	24% ↑	
Test group size limitations	8%	8%	5%	14%	21%	20%	27%		15%	11%	14%	
Other	33%	29%	38% ↑	34%	7%	6%	5%		25%	24%	19%	
Don't know	21%	22%	19%	21%	12%	11%	13%		16%	19%	11%	

n= 565 322 173 70 217 111 67 small base 212 126 63 small base



Base: Does not use TestFlight to beta test iOS apps  
Q117: Why doesn't your company use TestFlight? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Other services used to beta test iOS apps

	US	China	Japan
Hockey	29%	0%	
An in-house service	26%	62%	
Crashlytics	26%	7%	
Fabric	24%	5%	
Diawi	13%	0%	
TestFairy	8%	0%	
Other	13%	17%	
Don't know	6%	17%	

n=

110    60    small  
base



Base: Does not use TestFlight, instead another service, to beta test iOS apps

Q118: What other services does your company use to beta test iOS apps? (select all that apply)

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CONFIDENTIAL  
78

PX-0041.144

APL-APPSTORE\_09637162

## Other services used to beta test iOS apps

	US			China			Japan					
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Hockey	29%	28%			0%							
An in-house service	26%	30%			62%							
Crashlytics	26%	22%			7%							
Fabric	24%	20%			5%							
Diawi	13%	7%			0%							
TestFairy	8%	4%			0%							
Other	13%	17%			17%							
Don't know	6%	7%			17%							

n= 110 54 small base small base 60 small base small base small base small base small base small base small base

% 10 20 30 40 50 60 70 80 90 100

Base: Does not use TestFlight, instead another service, to beta test iOS apps  
Q118: What other services does your company use to beta test iOS apps? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

PX-0041.145

APL-APPSTORE\_09637163

## Frequency of using non-Apple developer support resources

	US	China	Japan
Every time we have a question	72%	57%	57%
Only after we've reviewed Apple documentation and forums	22%	17%	20%
We do not use any non-Apple developer support resources	6%	12%	13%
Don't know	9%	19%	17%

n=

1903 588 500



Base: All respondents  
Q119: How often does your company use non-Apple developer support resources? (select all that apply)

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## Frequency of using non-Apple developer support resources

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Every time we have a question	72%	68%	73% ↑	76% ↑	57%	54%	59%	57%	57%	59%	55%	54%
Only after we've reviewed Apple documentation and forums	22%	22%	20%	22%	17%	19%	13%	20%	20%	18%	20%	24%
We do not use any non-Apple developer support resources	6%	9%	4% ↓	3% ↓	12%	12%	12%	14%	13%	13%	11%	14%
Don't know	9%	8%	9%	8%	19%	19%	21%	17%	17%	16%	20%	14%

n=

1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents

Q119: How often does your company use non-Apple developer support resources? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Reasons for using non-Apple developer support resources

	US	China	Japan
I can't find what I need from Apple	54%	43%	49%
Non-Apple developer resources are better	49%	32%	29%
Apple does not offer the contact method I prefer	9%	19%	15%
Non-Apple resources are localized	NA	29%	24%
Other	21%	5%	11%
Don't know	9%	17%	20%

n=

1790 516 437



Base: Respondents who use non-Apple developer support resources  
Q120: What is the main reason your company uses non-Apple developer support resources? (select all that apply)

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## Reasons for using non-Apple developer support resources

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
I can't find what I need from Apple	54%	53%	54%	58%	43%	39%	46%	46%	49%	49%	48%	50%
Non-Apple developer resources are better	49%	46%	50%	55% ↑	32%	33%	34%	29%	29%	31%	26%	29%
Apple does not offer the contact method I prefer	9%	7%	10%	10%	19%	15%	23% ↑	20%	15%	13%	21% ↑	12%
Non-Apple resources are localized	4%	5%	4%	3%	29%	30%	24%	32%	24%	24%	25%	24%
Other	21%	21%	23%	19%	5%	5%	4%	9%	11%	12%	11%	11%
Don't know	9%	10%	10%	8%	17%	18%	17%	16%	20%	19%	18%	24%

n= 1790 835 544 411 516 241 160 115 437 206 141 90



Base: Respondents who use non-Apple developer support resources  
Q120: What is the main reason your company uses non-Apple developer support resources? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Reasons for using non-Apple developer support resources

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
I can't find what I need from Apple	54%	53%	54%	58%	43%	39%	46%	46%	49%	49%	48%	50%
Non-Apple developer resources are better	49%	46%	50%	55%	32%	33%	34%	29%	29%	31%	26%	29%
Apple does not offer the contact method I prefer	9%	7%	10%	10%	19%	15%	23%	20%	15%	13%	21%	12%
Non-Apple resources are localized	NA	NA	NA	NA	29%	30%	24%	32%	24%	24%	25%	24%
Other	21%	21%	23%	19%	5%	5%	4%	9%	11%	12%	11%	11%
Don't know	9%	10%	10%	8%	17%	18%	17%	16%	20%	19%	18%	24%

n= 1790 835 544 411 516 241 160 115 437 206 141 90



Base: Respondents who use non-Apple developer support resources

Q120: What is the main reason your company uses non-Apple developer support resources? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Best way for Apple to inform about updates to developer tools

	US	China	Japan
Email	81%	69%	71%
Messaging on the iTunes Connect home page	26%	29%	27%
Add notes contextually within the iTunes Connect UI where the new features exist	25%	18%	22%
Push notification from iTunes Connect for iOS	23%	35%	23%
Post news updates on developer.apple.com	22%	23%	14%
SMS	6%	17%	6%
Other	3%	0%	3%
Don't know	7%	7%	6%

n=

1903 588 500



Base: All respondents

Q121: How can Apple best inform your company of updates to developer tools like iTunes Connect and TestFlight? (select all that apply)

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## Best way for Apple to inform about updates to developer tools

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Email	81%	78%	81%	86% ↑	69%	68%	69%	72%	71%	69%	72%	75%
Messaging on the iTunes Connect home page	26%	23%	26%	31% ↑	29%	24%	32%	34% ↑	27%	25%	25%	35%
Add notes contextually within the iTunes Connect UI where the new features exist	25%	24%	24%	27%	18%	15%	19%	23%	22%	19%	22%	28%
Push notification from iTunes Connect for iOS	23%	23%	21%	25%	35%	33%	38%	37%	23%	23%	25%	22%
Post news updates on developer.apple.com	22%	22%	22%	24%	23%	22%	18%	32% ↑	14%	15%	11%	17%
SMS	6%	6%	6%	5%	17%	17%	18%	14%	6%	7%	4%	8%
Other	3%	3%	3%	3%	0%	0%	1%	0%	3%	2%	4%	5%
Don't know	7%	9%	7%	5% ↓	7%	8%	6%	6%	6%	6%	7%	4%

n=

1903 913 566 424 588 273 182 133 500 236 159 105



Base: All respondents

Q121: How can Apple best inform your company of updates to developer tools like iTunes Connect and TestFlight? (select all that apply)

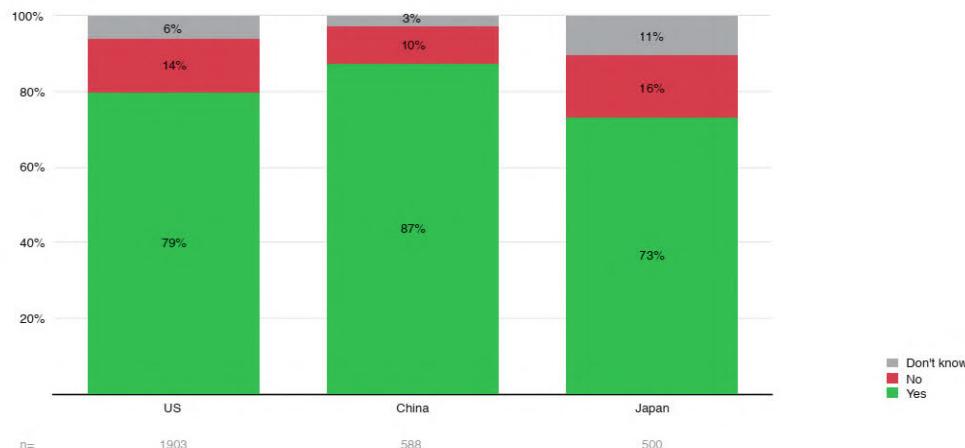
Note: Arrows denote comparisons to small tier within each country.

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CONFIDENTIAL X

## International expansion

APPLE CONFIDENTIAL 02

## Does majority of company's Apple app business come from customers in local country

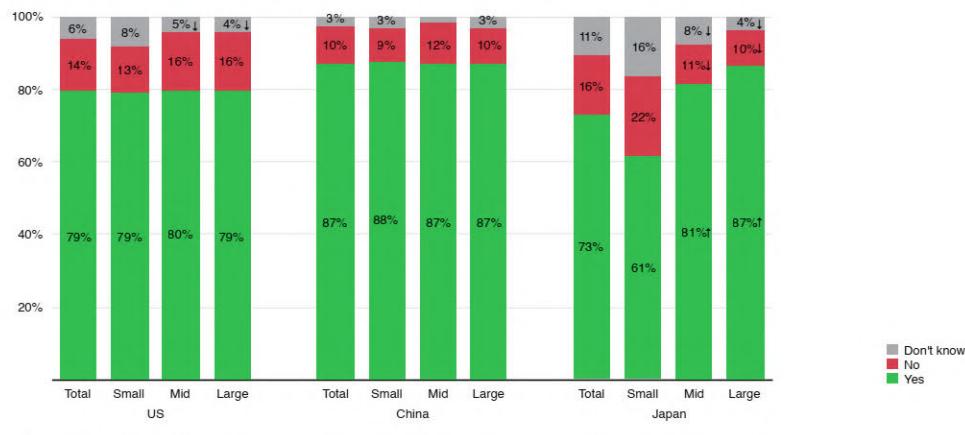


Base: All respondents

E1: Does the majority of your company's Apple app business come from customers in your local country?

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CONFIDENTIAL 83

## Does majority of company's Apple app business come from customers in local country



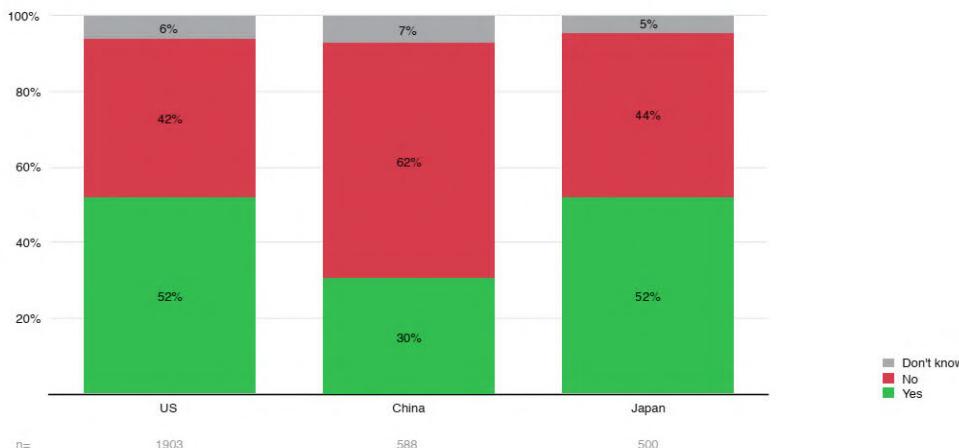
Base: All respondents

E1: Does the majority of your company's Apple app business come from customers in your local country?

Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Has company expanded Apple app business internationally

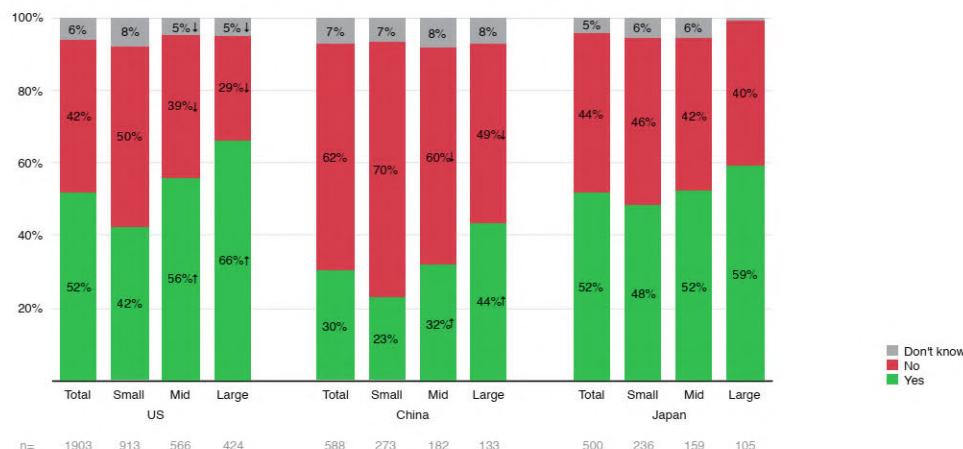


Base: All respondents

E2: Has your company expanded its Apple app business internationally?

APPLE  
CONFIDENTIAL 84

## Has company expanded Apple app business internationally



Base: All respondents  
E2: Has your company expanded its Apple app business internationally?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Resources use to determine which international markets to enter

	US	China	Japan
Guidance from app platforms (net)	31%	68%	55%
Apple	28%	67%	51%
Google Play	12%	37%	27%
Amazon	5%	6%	5%
Microsoft	3%	6%	4%
International sales reports	22%	27%	25%
Third-party research reports and services	20%	34%	17%
Other	21%	3%	7%
Don't know	28%	12%	24%

n= 985 179 259



Base: Has expanded Apple app business internationally  
E2: Has your company expanded its Apple app business internationally?

APPLE  
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PX-0041.158

APL-APPSTORE\_09637176

## Resources use to determine which international markets to enter

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Guidance from app platforms (net)	31%	34%	29%	30%	68%	64%	69%	71%	55%	50%	59%	58%
Apple	28%	31%	26%	27%	67%	62%	67%	71%	51%	47%	54%	53%
Google Play	12%	13%	9%	14%	37%	22%	36%	55% ↑	27%	18%	27%	44% ↑
Amazon	5%	7%	4%	6%	6%	5%	9%	5%	5%	4%	5%	8%
Microsoft	3%	3%	3%	2%	6%	8%	3%	7%	4%	3%	4%	5%
International sales reports	22%	17%	22%	30% ↑	27%	30%	24%	26%	25%	23%	19%	37% ↑
Third-party research reports and services	20%	16%	19%	26% ↑	34%	25%	33%	43% ↑	17%	11%	13%	36% ↑
Other	21%	20%	21%	22%	3%	5%	2%	3%	7%	7%	7%	5%
Don't know	28%	30%	29%	25%	12%	16%	12%	9%	24%	31%	22%	13% ↓

n=

985 387 317 281 179 63 58 58 259 114 83 62

% 10 20 30 40 50 60 70 80 90 100

Base: Has expanded Apple app business internationally  
E2: Has your company expanded its Apple app business internationally?  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
CONFIDENTIAL X

## Services use to market internationally

	US	China	Japan
Market research	15%	25%	20%
Local user acquisition channels	14%	39%	12%
Creative localization service	8%	23%	7%
Third-party publisher	7%	26%	9%
Local App Store teams	6%	15%	6%
Local PR agency	5%	13%	5%
Local ATL marketing agency	1%	8%	2%
Other	21%	3%	9%
Don't know	43%	22%	50%

n=

985 179 259



Base: Has expanded app business internationally

E4: What services do you use to market internationally? (select all that apply)

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APL-APPSTORE\_09637178

## Services use to market internationally

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Market research	15%	12%	16%	17%	25%	25%	26%	24%	20%	18%	17%	27%
Local user acquisition channels	14%	14%	11%	16%	39%	32%	36%	50% ↑	12%	7%	13%	18% ↑
Creative localization service	8%	5%	6%	14% ↑	23%	18%	21%	31%	7%	4%	6%	15% ↑
Third-party publisher	7%	8%	6%	8%	26%	19%	22%	38% ↑	9%	4%	8%	18% ↑
Local App Store teams	6%	5%	4%	8%	15%	18%	7%	21%	6%	4%	7%	8%
Local PR agency	5%	6%	5%	5%	13%	14%	10%	14%	5%	4%	2%	11% ↑
Local ATL marketing agency	1%	1%	1%	1%	8%	6%	7%	10%	2%	1%	0%	8% ↑
Other	21%	25%	21%	16% ↓	3%	3%	0%	5%	9%	11%	11%	2% ↓
Don't know	43%	40%	45%	46%	22%	24%	22%	19%	50%	56%	49%	40% ↓

n=

985      387      317      281      179      63      58      58      259      114      83      62



Base: Has expanded app business internationally  
E4: What services do you use to market internationally? (select all that apply)  
Note: Arrows denote comparisons to small tier within each country.

APPLE  
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PX-0041.161

APL-APPSTORE\_09637179

## Barriers to entering new markets

	US	China	Japan
Capacity to translate apps	33%	30%	41%
No expertise of market	26%	36%	44%
High cost of localization	25%	20%	46%
High cost of marketing	18%	25%	31%
Capacity to provide customer support	18%	21%	29%
Capacity to market locally	18%	35%	33%
Tax and legal considerations	15%	20%	28%
Mobile adoption rates	10%	11%	8%
No presence of publishing platform	5%	11%	6%
Local billing options are limited	4%	16%	9%
Local currency not accepted by storefront	3%	5%	4%
Other	9%	1%	3%
Don't know	27%	17%	12%

n= 1903 588 500

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

E5: What barriers does your company face when entering new markets? (select all that apply)

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APL-APPSTORE\_09637180

## Barriers to entering new markets

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Capacity to translate apps	33%	33%	33%	34%	30%	26%	35% ↑	34%	41%	37%	41%	49% ↑
No expertise of market	26%	25%	26%	30%	36%	30%	41% ↑	40%	44%	39%	47%	51% ↑
High cost of localization	25%	23%	24%	32% ↑	20%	18%	20%	24%	46%	45%	46%	50%
High cost of marketing	18%	20%	16%	18%	25%	25%	25%	27%	31%	28%	33%	35%
Capacity to provide customer support	18%	16%	18%	23% ↑	21%	23%	17%	22%	29%	29%	24%	36%
Capacity to market locally	18%	17%	18%	19%	35%	33%	31%	44% ↑	33%	28%	35%	44% ↑
Tax and legal considerations	15%	17%	13%	15%	20%	20%	20%	20%	28%	28%	26%	33%
Mobile adoption rates	10%	8%	10%	13% ↑	11%	10%	9%	14%	8%	6%	8%	11%
No presence of publishing platform	5%	5%	4%	7%	11%	11%	11%	9%	6%	8%	5%	5%
Local billing options are limited	4%	4%	4%	4%	16%	14%	20%	12%	9%	10%	7%	10%
Local currency not accepted by storefront	3%	3%	2%	4%	5%	6%	7%	3%	4%	6%	3%	2%
Other	9%	9%	9%	9%	1%	1%	2%	2%	3%	4%	3%	2%
Don't know	27%	27%	30%	23%	17%	19%	15%	14%	12%	13%	11%	12%

n=

1903 913 566 424 588 273 182 133 500 236 159 105

% 10 20 30 40 50 60 70 80 90 100

Base: All respondents

E5: What barriers does your company face when entering new markets? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

APPLE  
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## Requested tools or guidance from App Store to expand internationally

	US	China	Japan
Localization service	41%	52%	57%
Guidance on cultural and market differences	30%	43%	50%
Guidance on user acquisition channels for each market	26%	49%	39%
Third-party localization service recommendations	26%	43%	28%
Other	6%	1%	4%
Don't know	37%	19%	15%

n=

1903 588 500



Base: All respondents

E6: What tools or guidance would your company like the App Store to provide to help it expand internationally? (select all that apply)

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APL-APPSTORE\_09637182

## Requested tools or guidance from App Store to expand internationally

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
Localization service	41%	40%	40%	47% ↑	52%	50%	54%	53%	57%	58%	57%	56%
Guidance on cultural and market differences	30%	30%	28%	32%	43%	39%	45%	51% ↑	50%	43%	51%	66% ↑
Guidance on user acquisition channels for each market	26%	26%	23%	32% ↑	49%	43%	53% ↑	57% ↑	39%	34%	38%	51% ↑
Third-party localization service recommendations	26%	25%	25%	30% ↑	43%	41%	44%	44%	28%	24%	30%	35% ↑
Other	6%	7%	6%	3% ↓	1%	2%	1%	1%	4%	2%	6%	4%
Don't know	37%	38%	39%	31% ↓	19%	22%	18%	17%	15%	20%	15%	8% ↓

n=

1903 913 566 424 588 273 182 133 500 236 159 105



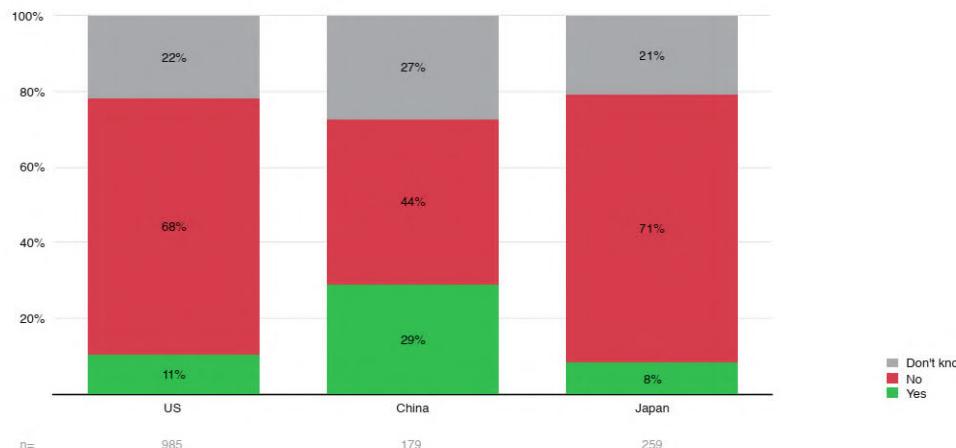
Base: All respondents

E6: What tools or guidance would your company like the App Store to provide to help it expand internationally? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

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## Does company use App Store's lower price tiers (where available)

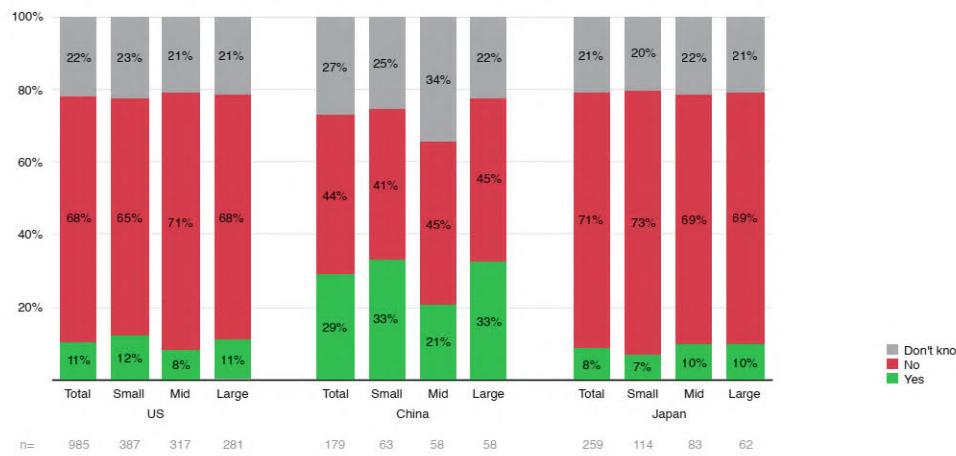


Base: Has expanded app business internationally

E6\_N\_1: Does your company use the App Store's lower price tiers (Alternate Tier A and Alternate Tier B) where available internationally?

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## Does company use App Store's lower price tiers (where available)



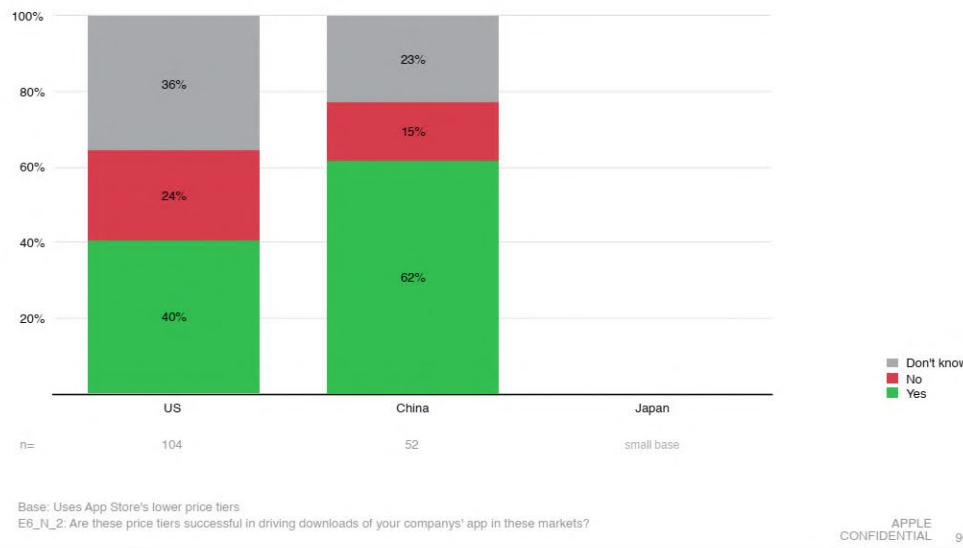
Base: Has expanded app business internationally

E6\_N\_1: Does your company use the App Store's lower price tiers (Alternate Tier A and Alternate Tier B) where available internationally?

Note: Arrows denote comparisons to small tier within each country.

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## Are price tiers successful in driving app downloads



PX-0041.168

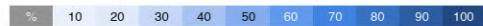
APL-APPSTORE\_09637186

## Top countries in which company would like to expand business

	US	China	Japan
United Kingdom	46%	32%	42%
Canada	38%	22%	27%
China	34%	35%	50%
Australia	32%	26%	27%
Germany	30%	19%	25%
Japan	27%	36%	56%
France	26%	18%	23%
United States	23%	58%	71%
Mexico	20%	8%	13%
India	19%	18%	24%
Brazil	17%	13%	17%
Spain	16%	11%	17%
Italy	15%	10%	18%
Hong Kong	15%	33%	29%
Korea	15%	23%	32%
Taiwan	11%	32%	40%
Other	16%	9%	10%

n=

1903 588 500



Base: All respondents

E7: What are the top countries in which your company would like to expand business internationally? (select all that apply)

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## Top countries in which company would like to expand business

	US				China				Japan			
	Total	Small	Mid	Large	Total	Small	Mid	Large	Total	Small	Mid	Large
United Kingdom	46%	47%	45%	43%	32%	29%	34%	37%	42%	42%	41%	43%
Canada	38%	40%	36%	36%	22%	22%	20%	25%	27%	29%	23%	28%
China	34%	30%	32%	42% ↑	35%	46%	25% ↓	27% ↓	50%	45%	52%	59% ↑
Australia	32%	33%	32%	31%	26%	24%	27%	26%	27%	30%	23%	30%
Germany	30%	29%	29%	32%	19%	20%	19%	18%	25%	23%	24%	30%
Japan	27%	27%	26%	30%	36%	32%	41% ↑	39%	56%	62%	52% ↓	47% ↓
France	26%	26%	24%	28%	18%	21%	17%	15%	23%	20%	23%	31% ↑
United States	23%	25%	22%	22%	58%	54%	58%	68% ↑	71%	68%	75%	73%
Mexico	20%	21%	20%	20%	8%	8%	9%	6%	13%	11%	13%	18%
India	19%	19%	18%	23%	18%	16%	22%	16%	24%	22%	25%	27%
Brazil	17%	15%	15%	22% ↑	13%	12%	15%	15%	17%	15%	16%	22%
Spain	16%	15%	16%	18%	11%	12%	12%	8%	17%	14%	16%	23%
Italy	15%	16%	14%	15%	10%	12%	10%	8%	18%	18%	16%	21%
Hong Kong	15%	15%	15%	15%	33%	33%	36%	31%	29%	27%	24%	44% ↑
Korea	15%	13%	16%	17% ↑	23%	22%	25%	23%	32%	31%	25%	48% ↑
Taiwan	11%	11%	11%	13%	32%	29%	35%	32%	40%	38%	36%	50% ↑
Other	16%	17%	16%	15%	9%	8%	10%	11%	10%	11%	11%	10%

n= 1903 913 566 424 588 273 182 133 500 236 159 105  
 % 10 20 30 40 50 60 70 80 90 100

Base: All respondents

E7: What are the top countries in which your company would like to expand business internationally? (select all that apply)

Note: Arrows denote comparisons to small tier within each country.

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APL-APPSTORE\_09637188



# App Store Developer Study

US, China, Japan

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Apple Market Research and Analysis  
Fielded May 2017

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