

facebook

Cross-National Variation in Device Effects Between Smartphone and Computer-based Web Surveys

Curtiss L. Cobb III

Population and Survey Sciences @ Facebook

Why does Facebook care about survey device effects?

We collect over 3 million survey responses every day from respondents living in every country and using the Facebook on every device.

Methods

Fielding

- On-FB survey in 40 countries
- Fielded over 3 days
- Rs had equivalent daily usage of Facebook on desktop/laptop and mobile
- Rs randomly assigned to desktop/laptop or mobile survey invitation
- Targeted 40k responses per condition (1k per country)

Methods

Instrument

- 12 question survey
- Responsive mobile design
- Required responses
- Mix of question types
- 38 languages

Previous Research

Compared to desktop/laptop, smartphones yield...

- Faster reaction, but longer questionnaire completion times (Peterson 2012; Wells et al. 2014; Bruijne & Wijnant 2013)
- Lower participation rates (Mavletova 2013; Mavletova & Couper 2013)
- Higher breakoff rates (Callegaro 2010; Stapleton 2011)
- Shorter length to open-ended questions with little information loss (Peterson 2012)
- Mixed findings on satisficing and social desirability (Buskirk & Andrus 2013; Mavletova & Couper 2013; Wells et al. 2014; Guidry 2012; Toepoel & Lugtig 2014)

All of these studies use participants from developed, western nations.

Why cross-national might matter

- Different experiences and mental models around Internet adoption in other parts of the world
- Surveys are less common
- Device and connectivity differences

Example: Thai

Facebook ทำงานตามที่ควรจะเป็น (กล่าวคือ ไม่มีข้อผิดพลาด จุดบกพร่อง หรือความล่าช้า) ได้อย่างน่าเชื่อถือมากน้อยเพียงใด

- น่าเชื่อถือมากที่สุด
- น่าเชื่อถือมาก
- ค่อนข้างน่าเชื่อถือ
- น่าเชื่อถือเล็กน้อย
- ไม่น่าเชื่อถือเลย

ดำเนินการต่อ

Facebook ทำงานตามที่ควรจะเป็น (กล่าวคือ ไม่มีข้อผิดพลาด จุดบกพร่อง หรือความล่าช้า) ได้อย่างน่าเชื่อถือมากน้อยเพียงใด

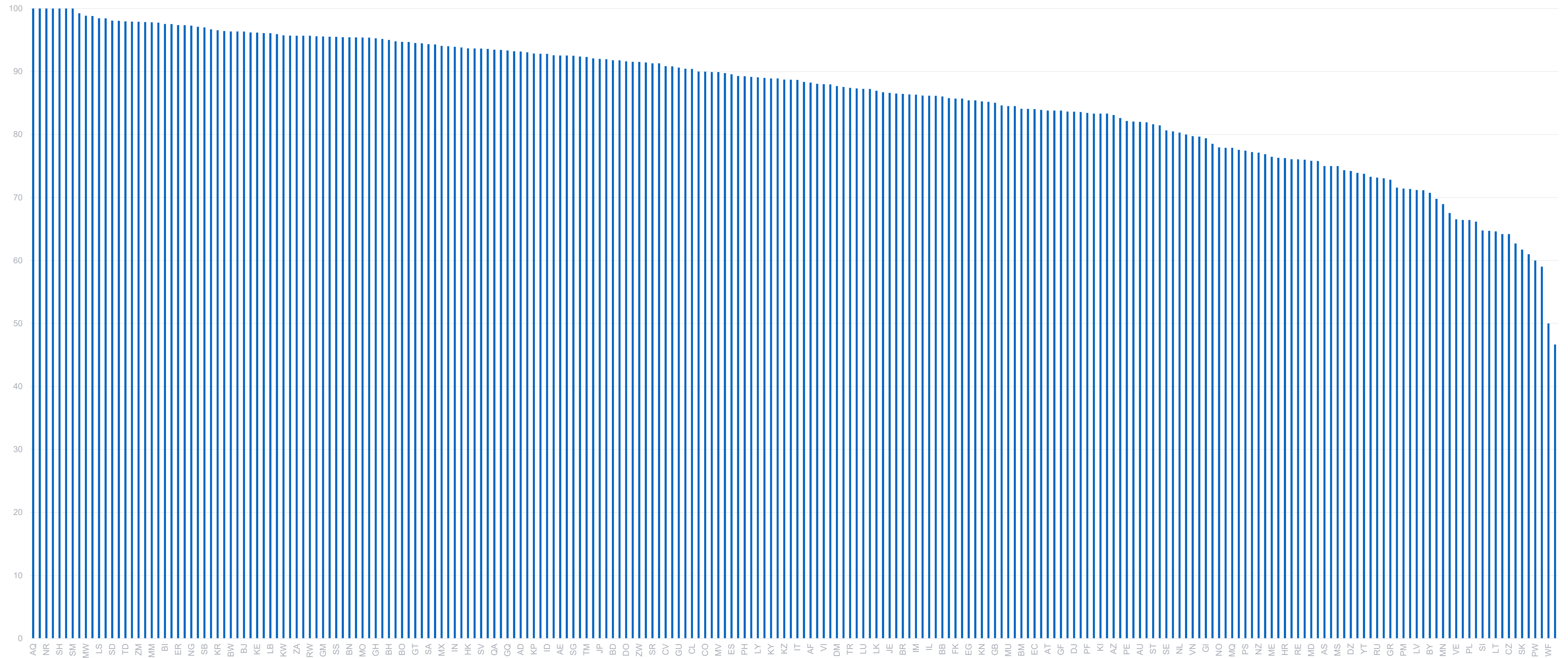
- น่าเชื่อถือมากที่สุด
- น่าเชื่อถือมาก
- ค่อนข้างน่าเชื่อถือ
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ดำเนินการต่อ

Findings

Smartphone responses by country

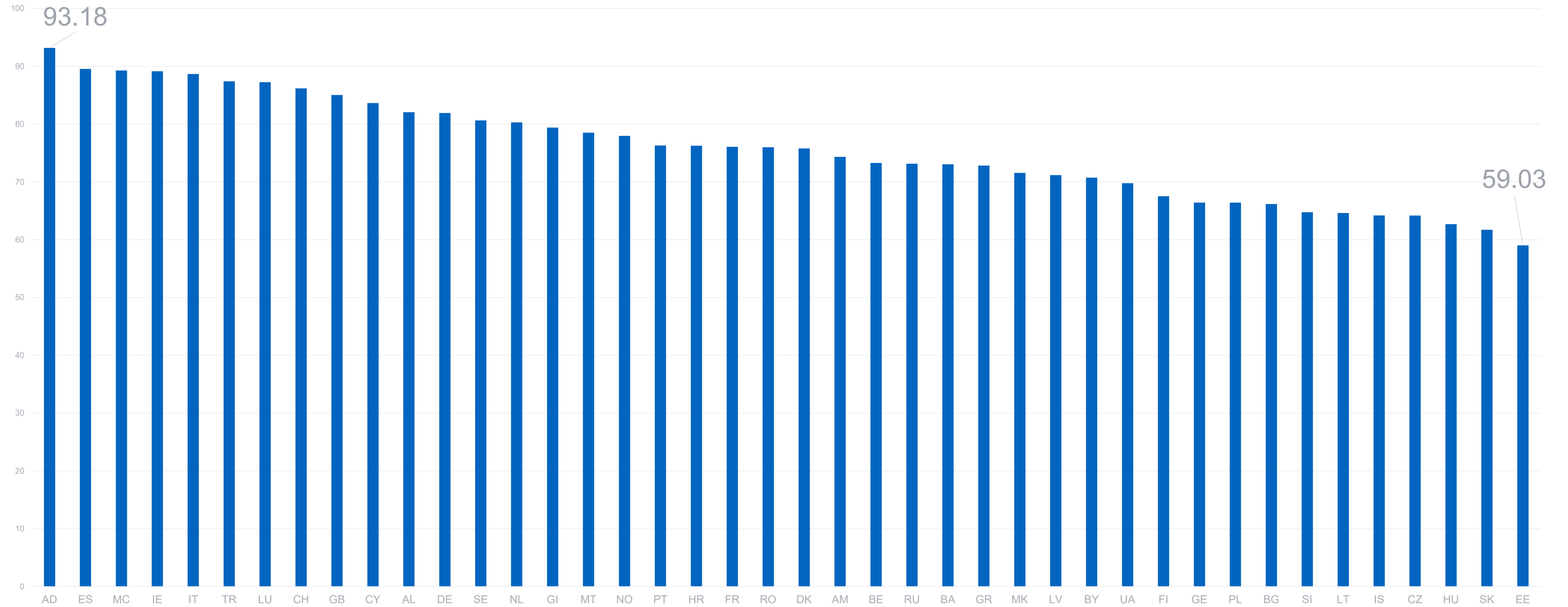
Percent Mobile



Source: FB MTS

Smartphone responses by country

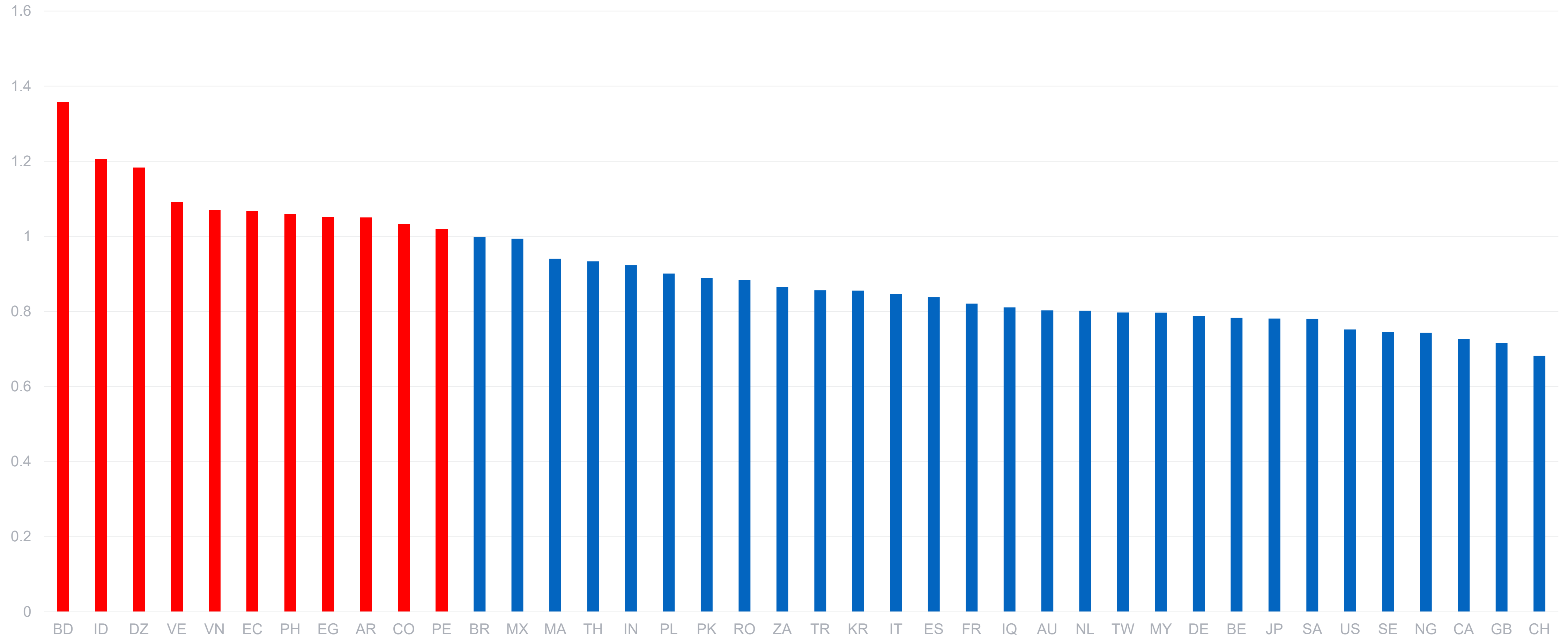
Percent Mobile (Europe Only)



Source: FB MTS

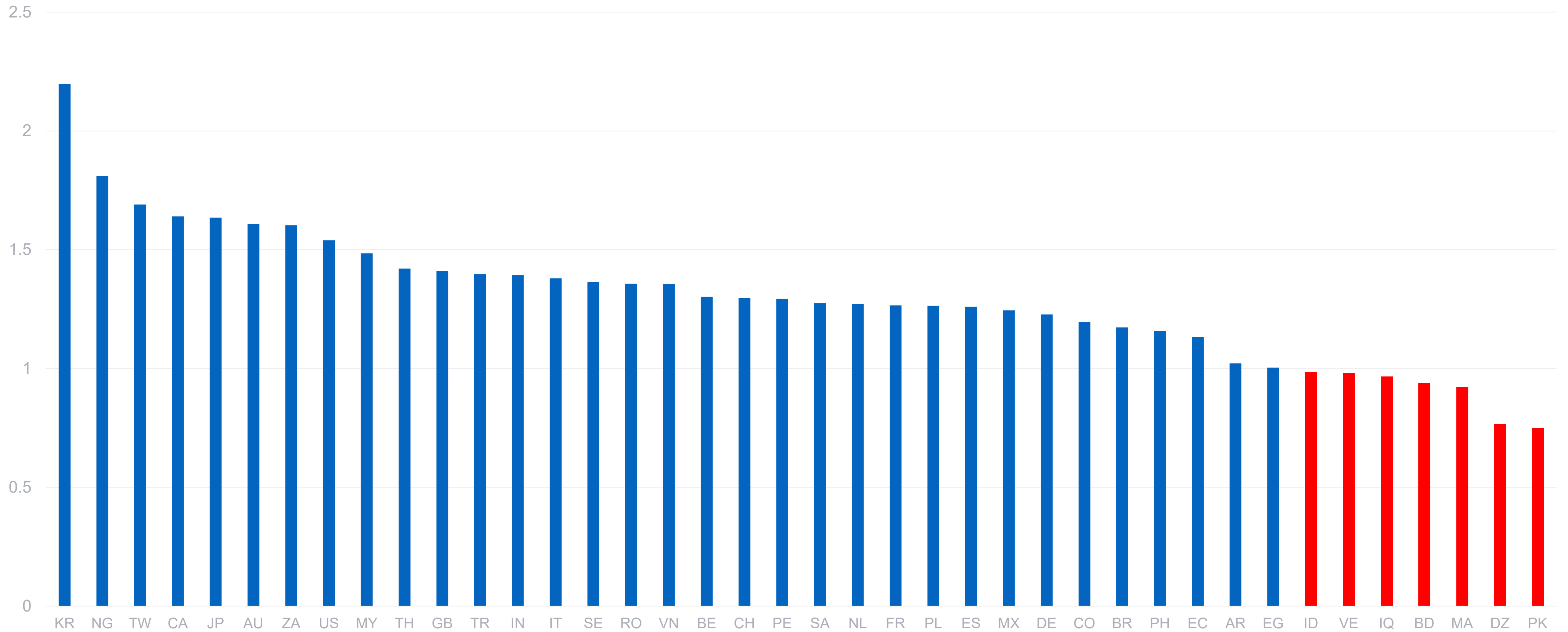
Average Number of Invitations

Ratio Average Invitation Messages (SP/C)



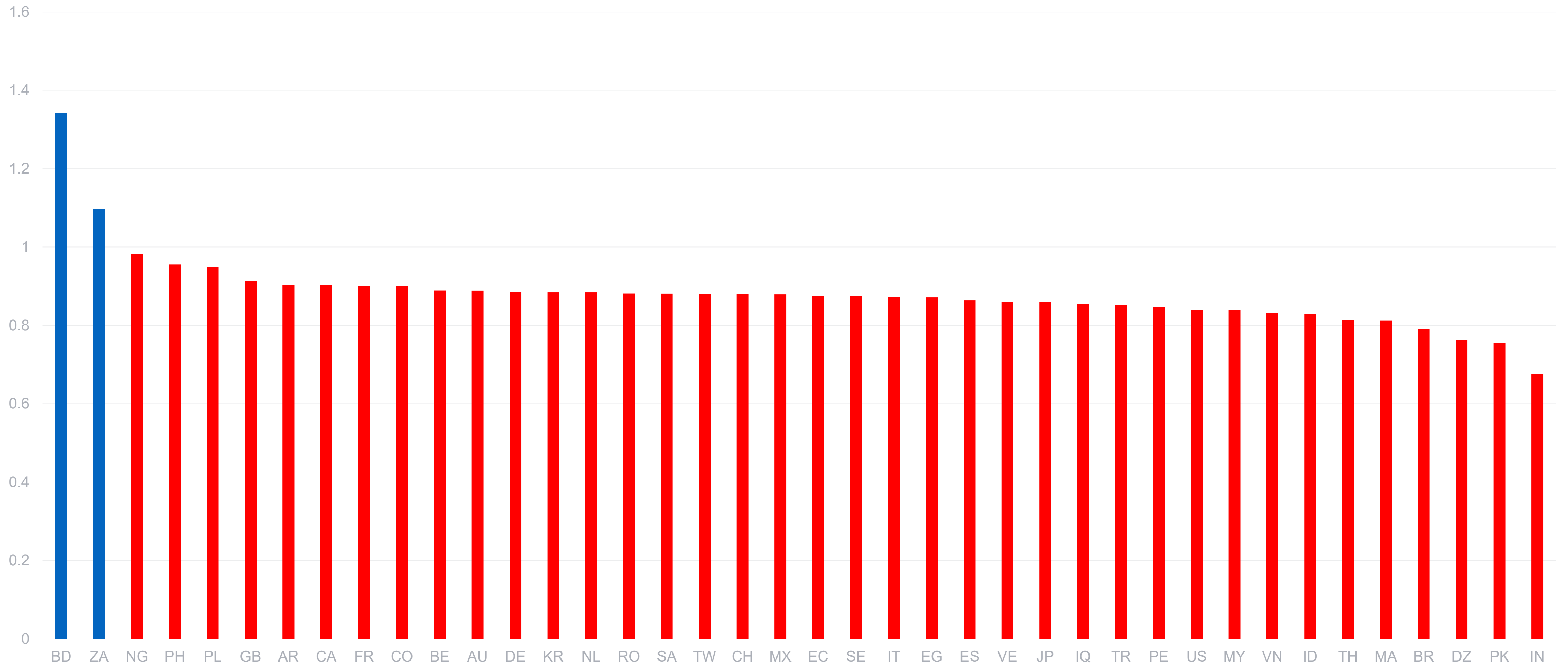
Start Rate

Start Rate Ratio (SP/C)



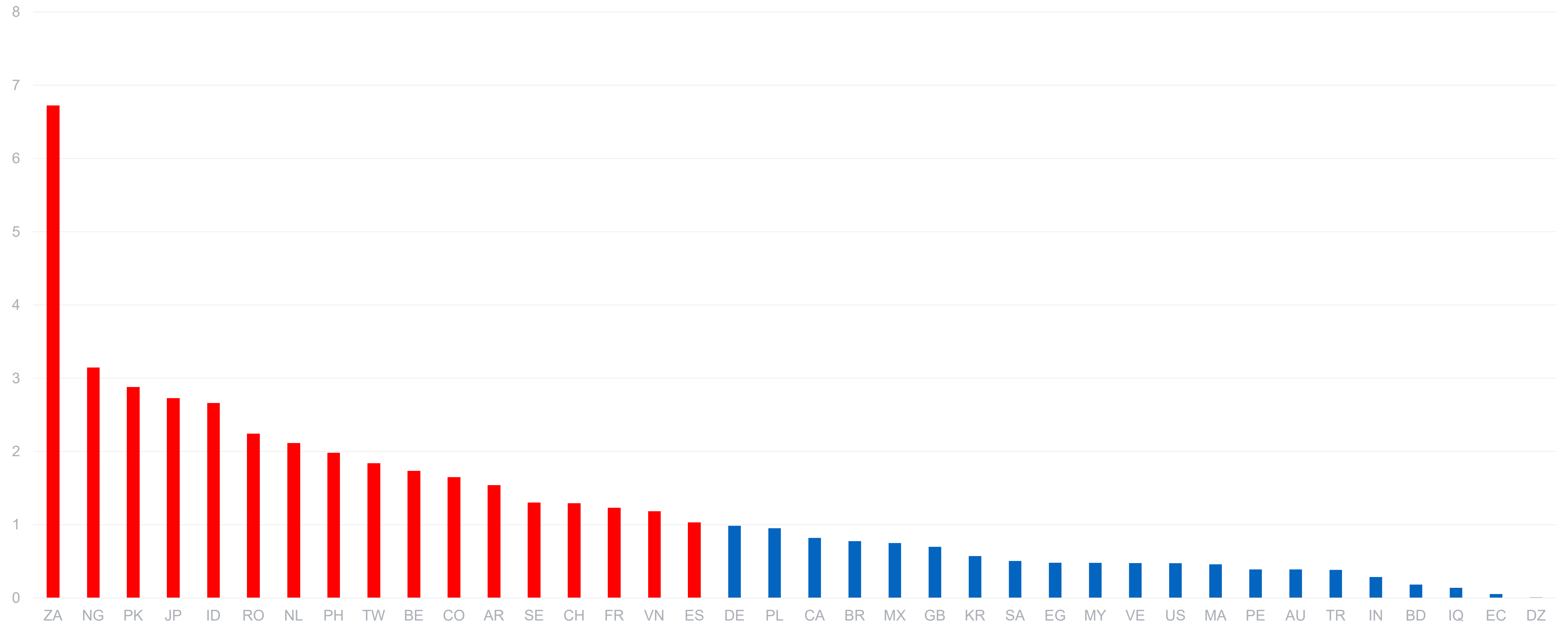
Completion Rate

Completion Rate Ratio (SP/C)



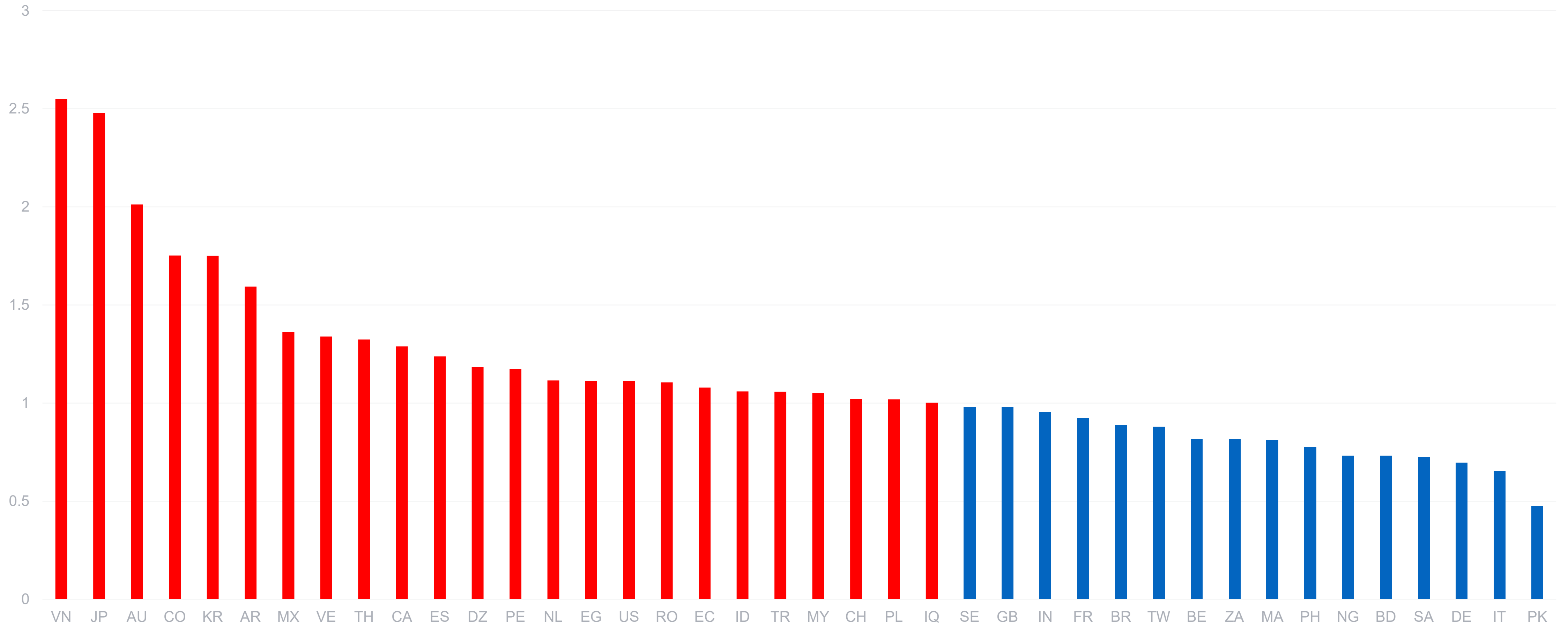
Sample Composition (Gender)

Gender Imbalance Ratio



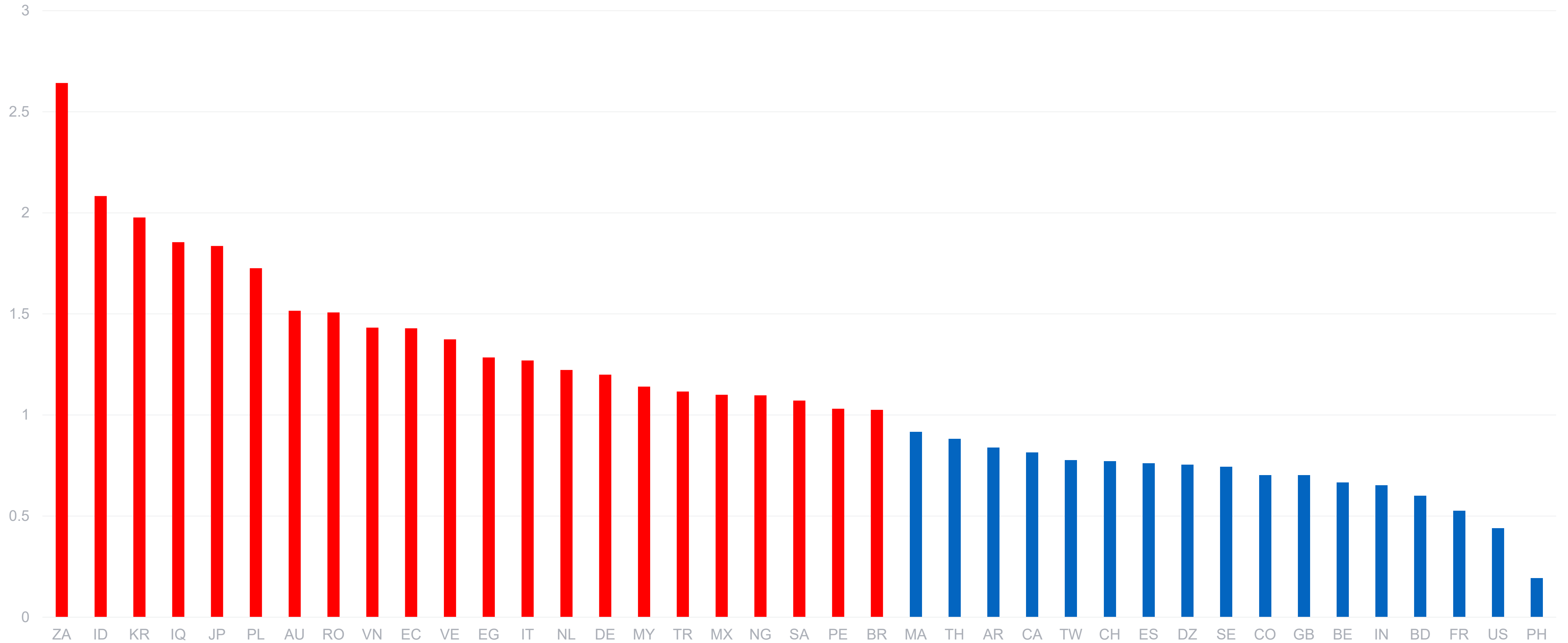
Completion Time

Average Time Ratio (SP/C)



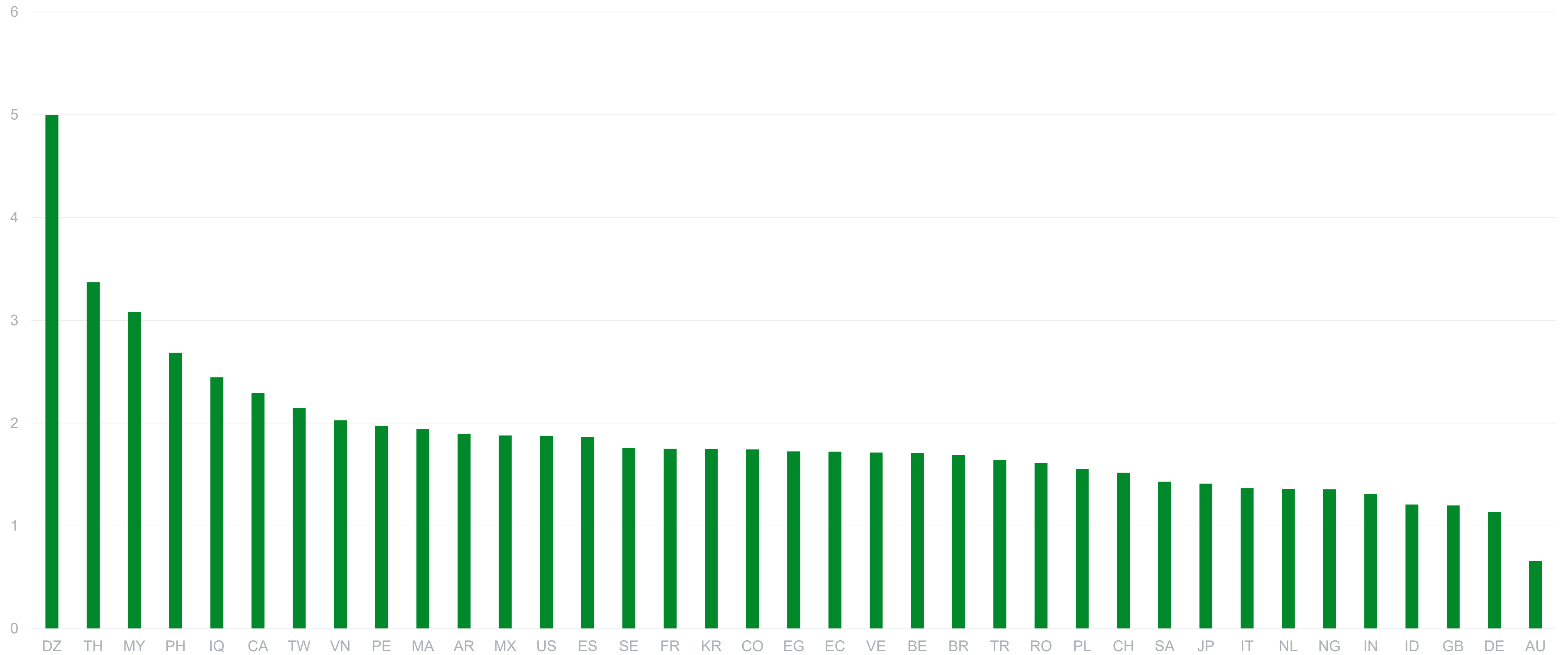
Primacy

Primacy Effect Ratio (SP/C)



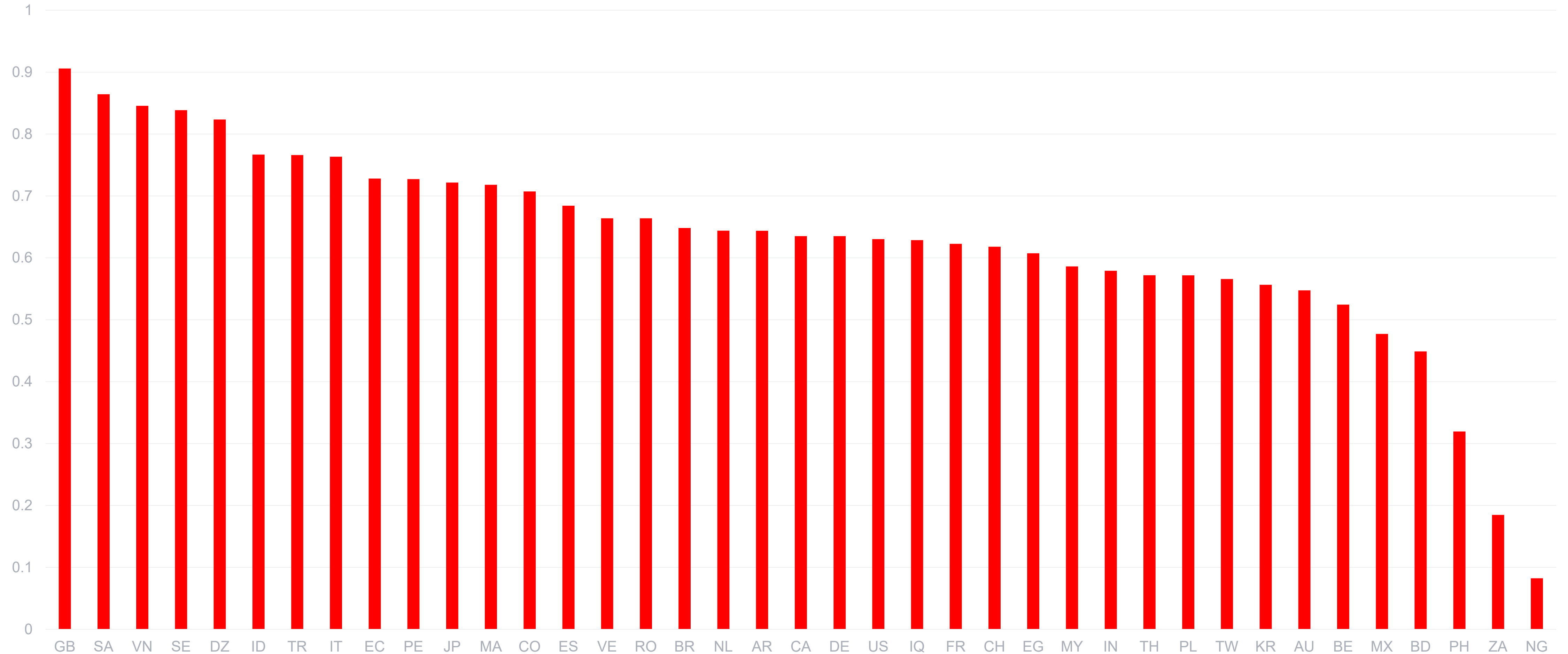
Use of “other”

Use of Other Ration (SP/C)



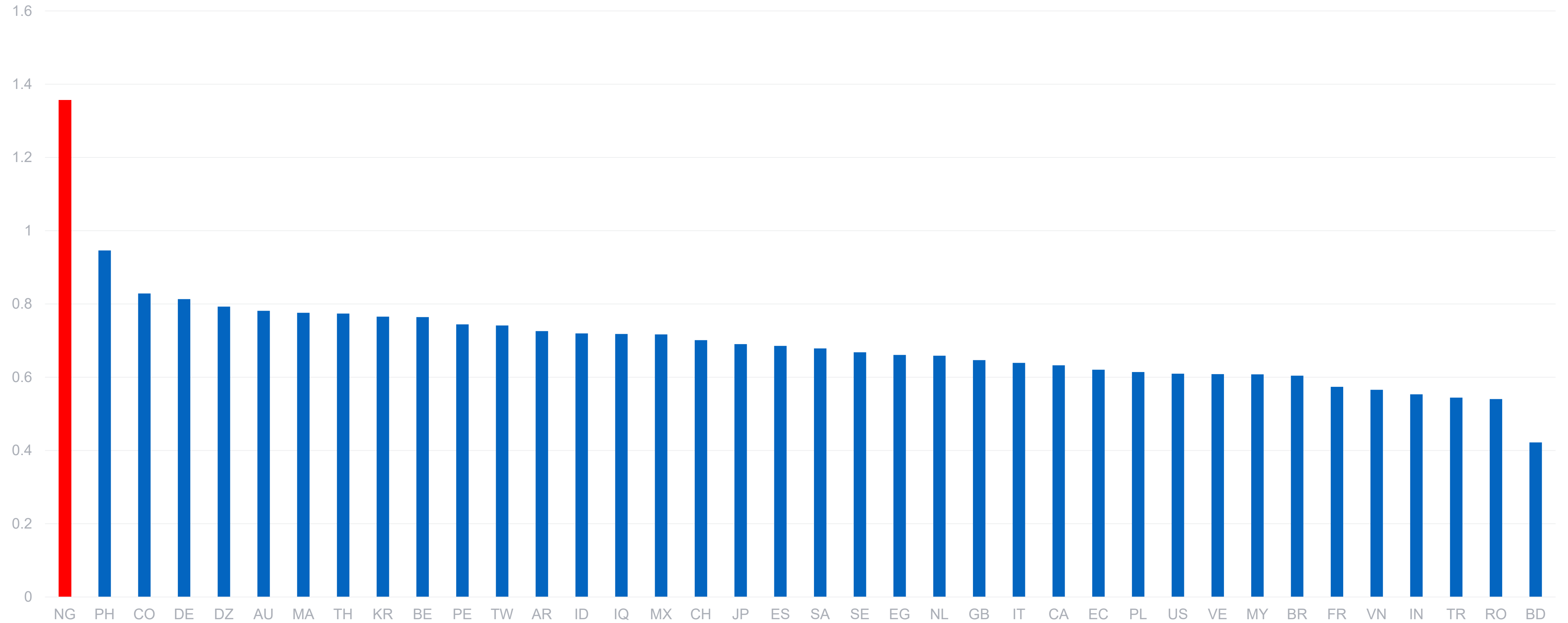
Free Text Character Count

Free Text Character Count Ratio (SP/C)



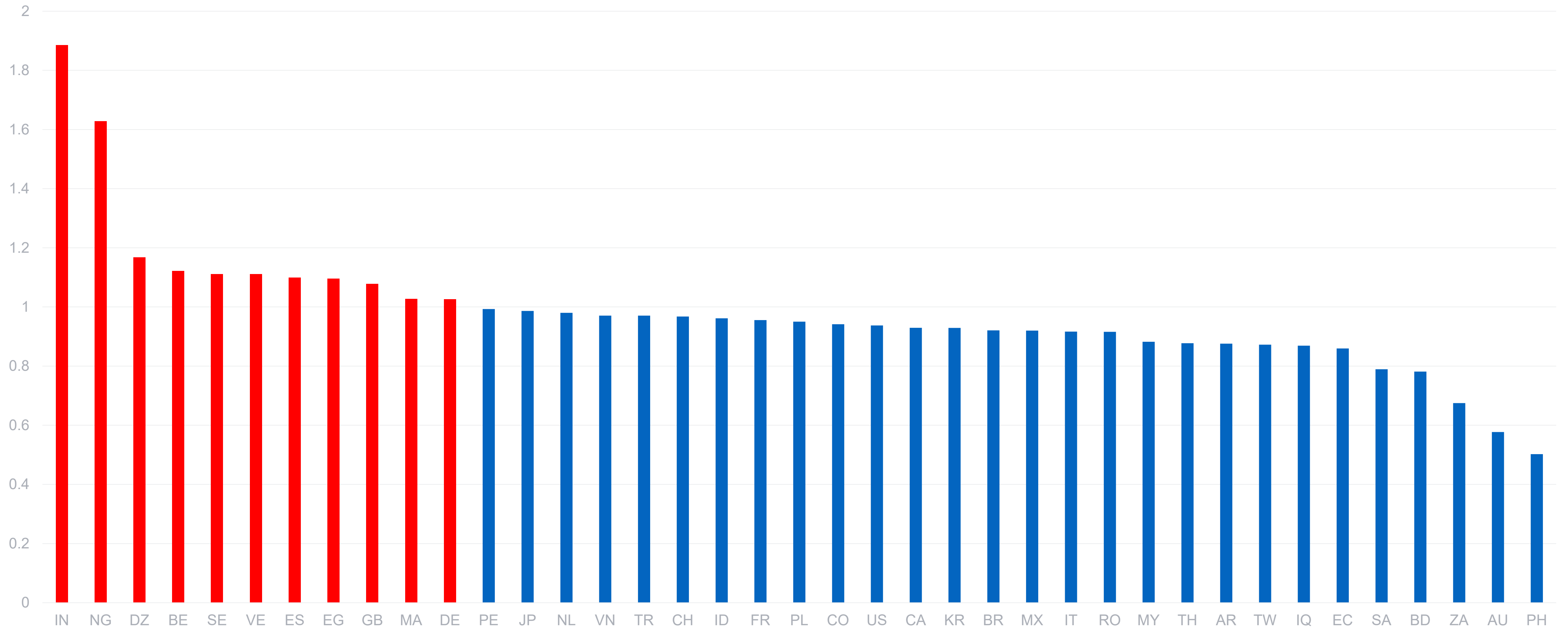
Non-Differentiation

Non Differentiation Ratio (SP/C)



Neutral Responses

Neutral Responses Ratio (SP/C)



Summary

- There is a lot of heterogeneity in mode effects across country with inconsistent patterns.
 - The developed world tends to require fewer invites and has higher start rates than the developing world
 - Little variation between countries by mode once you get people into the survey.
 - Sample composition and completion times have no discernable pattern.
 - Primacy effects are likely to occur in more countries on smartphones than mobile
 - The use of “other” and lower character count for free text are pervasive across the board
 - None differentiation is a bigger problem on desktop/laptops than mobile*
 - Choosing a neutral response appears to be more likely on desktop/laptop than mobile*

Next Steps

- Are the item-specific device effects a result of sample errors or measurement error?

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