

Facebook advertisements for cross-cultural survey recruitment:

Insights from the 46-country World Relationships Study

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I wish to convince you that:

- Facebook ads are great for multi-country survey participant recruitment
 - Including difficult to reach developing-country populations
 - Reasonable data quality
- But there are some important caveats
 - Us Facebook users, we're there to be entertained

The World Relationships Study

- Core purpose: validate **relational mobility**
 - Opportunity and freedom to choose interpersonal relationships based on personal preference (Yuki et al., 2007; Yuki & Schug, 2012)
 - Explains societal differences in behavior and psychology
 - Interpersonal similarity¹, selfdisclosure², selfenhancement³, shame⁴, self-esteem⁵, general trust⁶, desire for uniqueness⁷ etc.
 - Need studies **beyond East -West dichotomy**
 - Validation as aconcept *and*
 - The 12-item relational mobility scale (Yuki et al. 2007) as a measurement tool

Nth. America

HIGH

relational mobility

Open market for interpersonal relationships

East-Asia

LOW

relational mobility

Closed market for interpersonal relationships

¹ Schug et al., 2009

² Schug et al., 2010

³ Falk et al., 2009

⁴ Sznycer et al., 2012

⁵ Sato et al., 2014

⁶ Yuki et al., 2007;
Thomson et al., 2015

⁷ Takemura, 2014

The World Relationships Study

- Let's do a multi-country survey – 40 countries ($n = 300$ per country)
 - Japan-based data solutions company quote: **US\$186,000** ball-park
- What about Facebook?
 - 70 countries with $> 30\%$ penetration (June 2013)
 - Includes Middle East, North Africa, South America, South-east Asia
 - Cost-per-click US\$0.10 (Tunisia) – US\$1.52 (Japan)
 - Response rates 10% to 40% (Ramo et al., 2012; Tan et al, 2012; Kito, 2010)

I've tried Facebook ads before
(and failed)

Before The World Relationships Study


(see Thomson&Ito, 2014 for published paper)

- Masters thesis project (2012)
 - Internet privacy concern survey (18 countries)
 - Recruited via Facebook ads
 - \$50 Amazon voucher draw
 - External motivator
 - Survey design was default Qualtrics layout
 - Spend: US\$2,099 (7 days)

Total valid **N = 399** (90 female)

English

Online Survey - Win \$50
surveylab.imc.hokudai.ac.jp



Do this 20min anonymous survey about privacy and enter draw to win a \$50 Amazon Voucher.

Japanese

SNSプライバシー調査 5000円ギフト券当たる!
surveylab.imc.hokudai.ac.jp



世界のフェイスブック利用者のプライバシー意識を調べる匿名調査。所要時間は20分。参加者は抽選で5,000円のアマゾンギフト券が当たる! 《北海道大学による調査》

French

Enquete: gagnez 50€
surveylab.imc.hokudai.ac.jp



Completez cette enquete de 20min sur la confidentialite sur FB et gagnez un crédit Amazon!

Arabic

أكمل الاستطلاع: اربح 50\$
surveylab.imc.hokudai.ac.jp



20 دقيقة لتكامل استطلاع الخصوصية بالفيسبوك واربح قسيمة هدايا أمازون بقيمة 50\$

Before The World Relationships Study

Background

Internet privacy concerns survey response Rate (%) and
Reward Value (as 1/100% of GDP per capita)



Let's try Facebook ads again
(and not fail)

World Relationships Survey

- 1st wave: 46-countries (21 languages)
- 5-min survey via Facebook ads
- Countries with >30% Facebook penetration
- Two versions
 - Romance and friendship



Variables

- Relational mobility (Yuki et al.'s 2007 12-item scale)
- Self-disclosure (Schug et al., 2010)
- Intimacy (Sternberg, 1986)
- Interpersonal similarity (Schug et al., 2009)
- Others (no. of romantic partners etc)
- Demographics

**No extrinsic incentives!
(gift vouchers etc)**



Advert settings

- Objective: clicks to website
- Targeting: Country of residence
 - Underperforming countries only: Targeted based on interests – romance, friendships, boy/girlfriend, marriage etc (those countries not part of main dataset)
- Placement: Desktop/mobile news feed, desktop right column
 - NOT “Audience Network” – copious clicks, few responses
 - Instagram now available – haven’t tried it yet
- Bidding: Automatic
 - Budget based on mid-market prices
- Schedule: Continuous for approx. one week (x 3 waves)





Search for people, places and things



Robert

Home



1



Robert Thomson
Edit Profile

- News Feed
- Messages
- Events 10
- Photos
- Adverts Manager
- Sapporo Internatio...
- World Relationship... 5

PAGES

- Syrp(日本支所) 8
- Pages feed 20+
- Like Pages 20+
- Create Page
- Create Advert

GROUPS

- Learn japanese 20+
- Language Shower ... 2
- Manage Your Gro...
- Create group
- Find New Groups

APPS

- Games 8
- Kaspersky Antarcti...
- Notes
- Games Feed 20+

FRIENDS

- Close Friends 5
- Family
- Sapporo-shi, Hokk...

- Update Status
- Add Photos/Video
- Create Photo Album

What's on your mind?



World Relationships Study

Sponsored (demo) ·

Find out how your romantic relationship stacks up. 5 minute quiz with instant feedback.



Take the romance quiz!

How does your romantic relationship compare with others? Secrets, intimacy, similarity...find out your score. Share to see how you compare! Survey run by...

LYNX.LET.HOKUDAI.AC.JP

Learn More

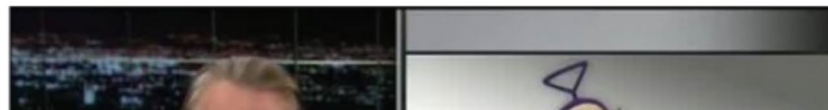
Like · Comment · Share · 33



Bill Maher

Yesterday at 03:47 ·

#NewRules



YOUR ADVERTS

10 event invitations

Akari Toda's birthday is today

People you may know



Vince Iwata

Friend

Add Friend



Ronita Samarangan

Friend

Add Friend



田中 真由美

Friend

Add Friend



Amy Thomas

Friend

Confirm friend



Bravo Abubakarim

Friend

Confirm friend

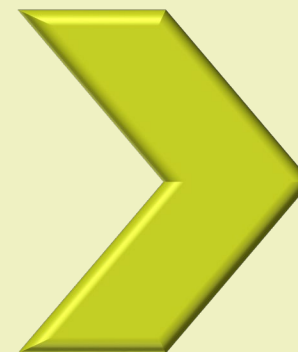


Noriko Kado

Friend

Confirm friend

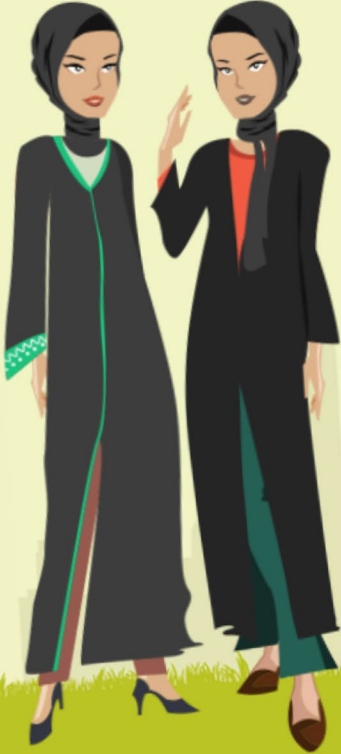
English (UK) · Privacy · Terms · Cookies · More ·
Facebook © 2015



Hindi version

English version

استطلاع على مستوى العالم عن العلاقات



ابدأ الاستطلاع



تولى إعداد الاستطلاع



HOKKAIDO
UNIVERSITY

نشكركم للمشاركة في الاستطلاع!

نحن مجموعة باحثين دوليين، ومقرنا في اليابان: مختبر علوم النفس والبيئة الاجتماعية والثقافات في جامعة هوكايدو. نعمل على إجراء وتنفيذ العديد من الدراسات في عدة بلدان بالتعاون مع جامعات من مختلف أنحاء العالم.

صُمم هذا الاستطلاع خصيصاً للتعرف على طبيعة العلاقات الشخصية من خلال مجموعة



Your RESULTS

Thank you so much for taking part in our survey!

We've crunched some numbers, and this is how your responses compare to other participants:



YOU'VE HAD
6 romantic partners

On average, people taking this survey have had around
4 ROMANTIC PARTNERS IN THEIR LIFE.



YOU'VE STOLEN
2 romantic partners

Our current data suggests around

16% OF PEOPLE HAVE STOLEN SOMEONE ELSE'S PARTNER AT LEAST ONCE.



YOU'VE HAD
4 romantic partners stolen

Our current data suggests around

17% OF PEOPLE HAVE HAD THEIR ROMANTIC PARTNER STOLEN AT LEAST ONCE.

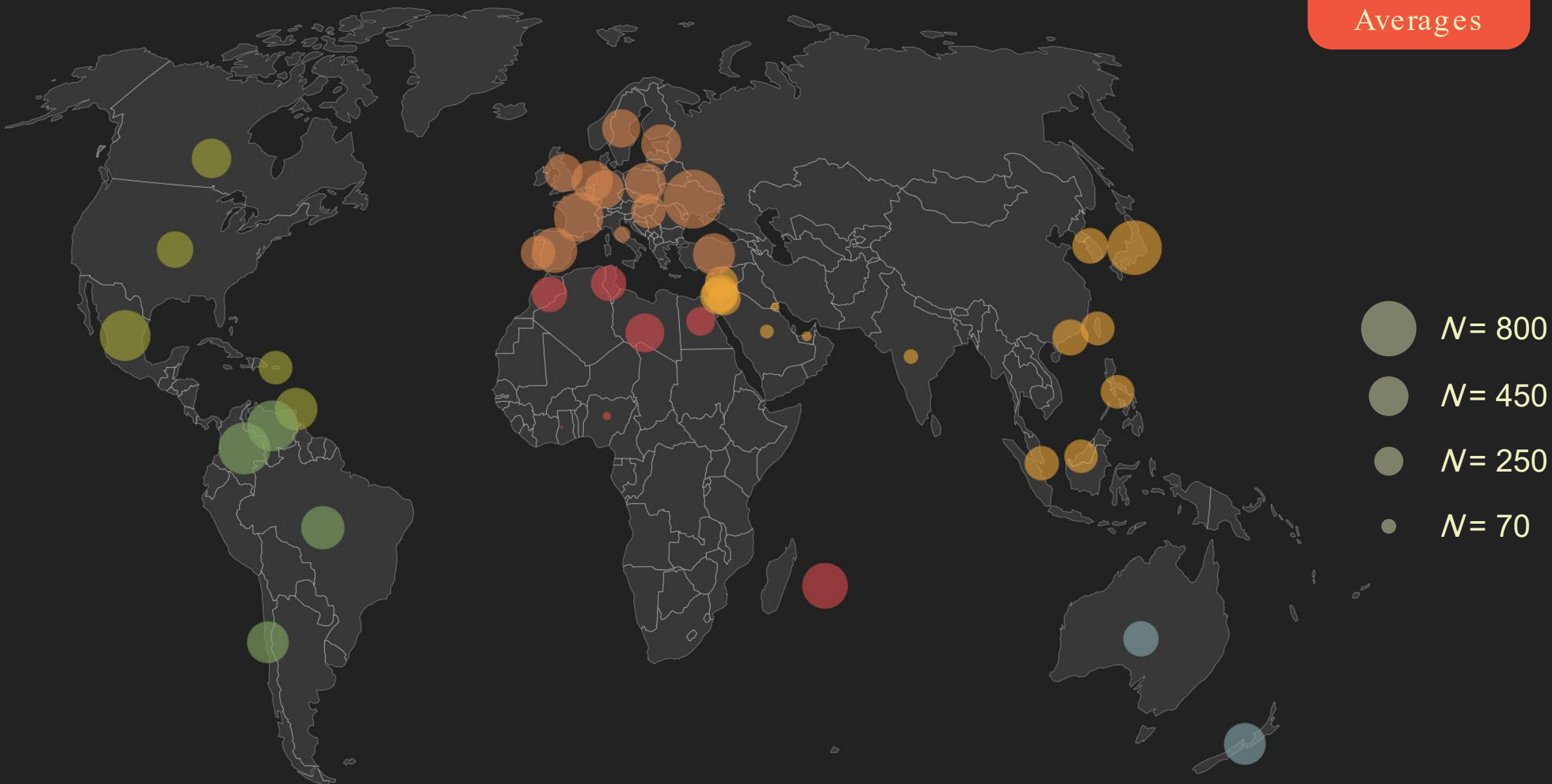
Did the Facebook ads work?

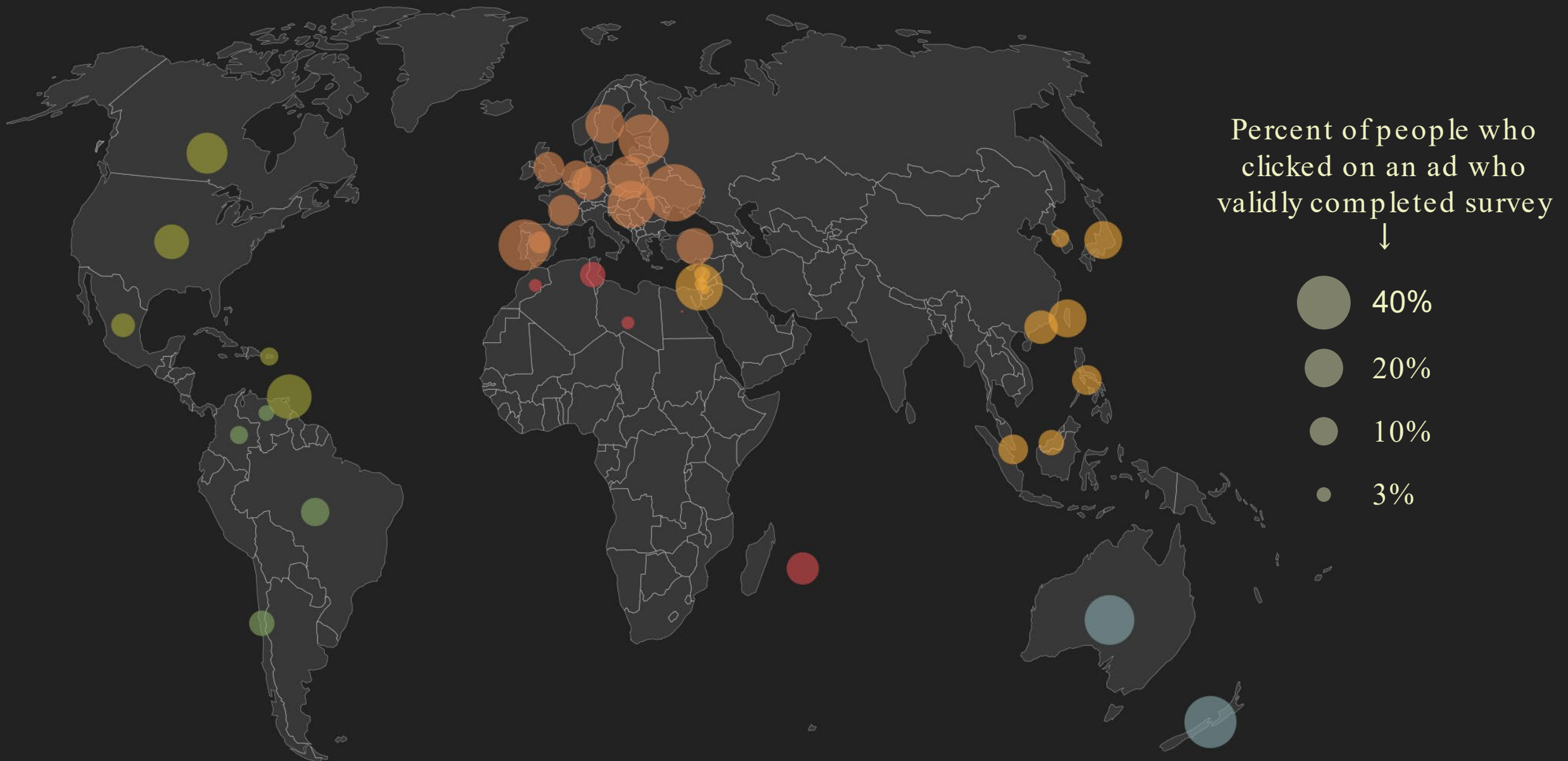
Participants □ N = 18,707, 46 countries □

Female percent: 85% ($SD = 13\%$)

Age (yrs): 29 ($SD = 6$)

Averages



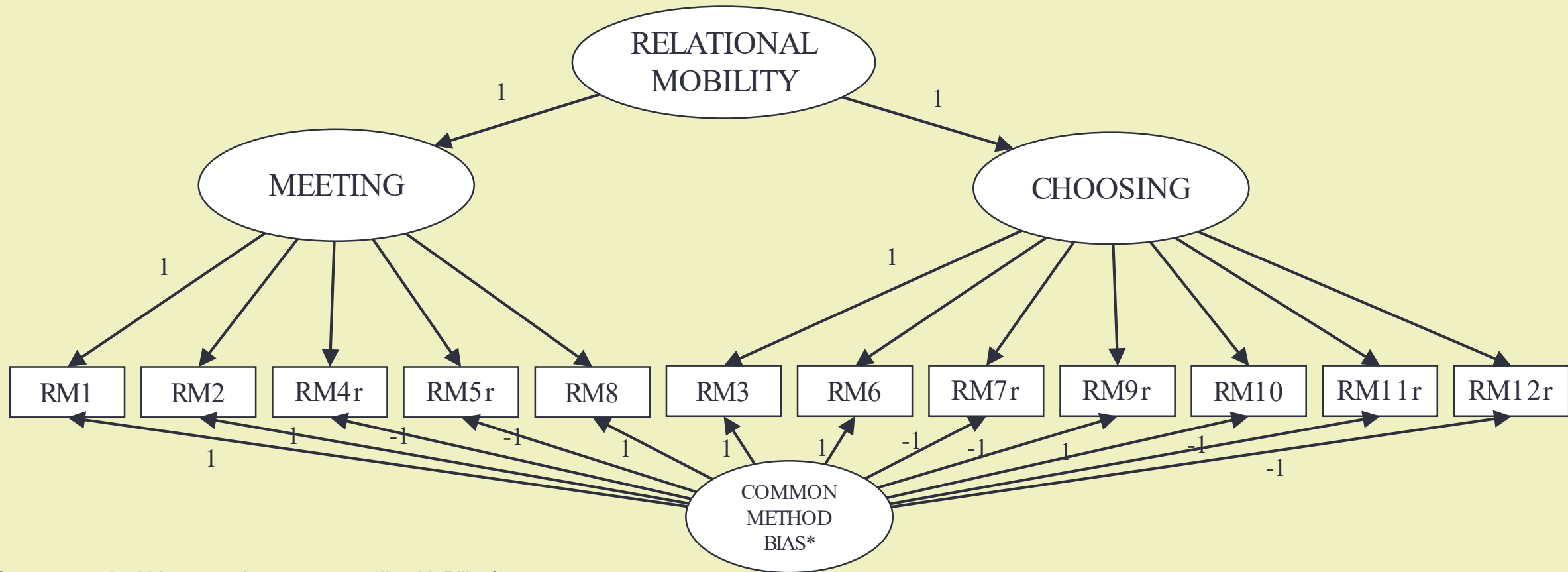


Were the data OK?

Relational mobility measurement model

Our general relational mobility measurement model (first proposed by Yuki et al., 2007) – 12 items, 1-6 Likert

12 items, 1-6 Likert

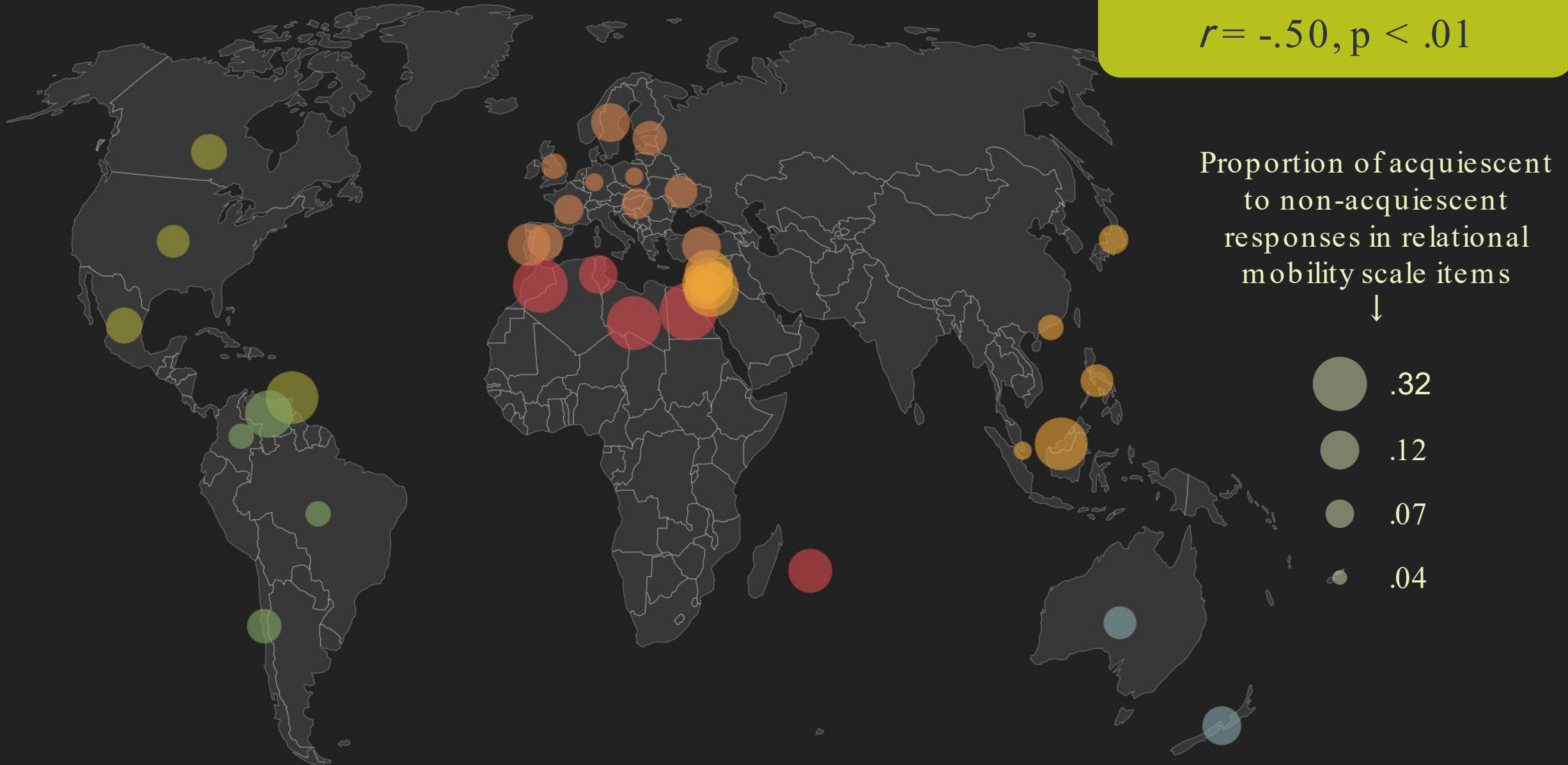


* CFA Common method bias control strategy as outlined in Billet & Cambre (2003), Billet & McClendon (2000) and Weijters et al. (2010)

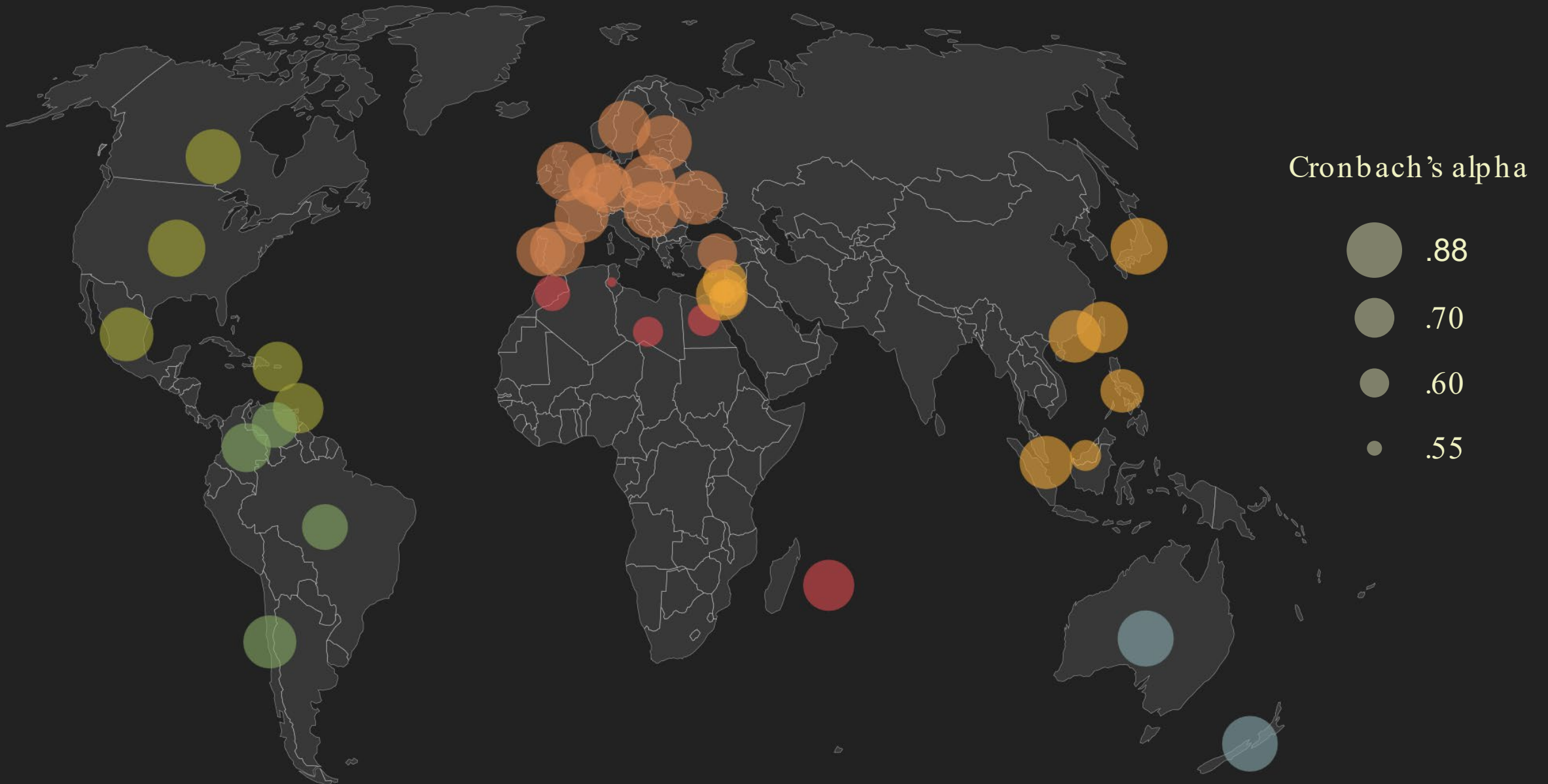
Acquiescent response style (van Dijk et al., 2009)

Correlation with UNDP
Education Index

$$r = -.50, p < .01$$



Relational mobility scale reliability



Relational mobility scores by country

Relational mobility
latent means

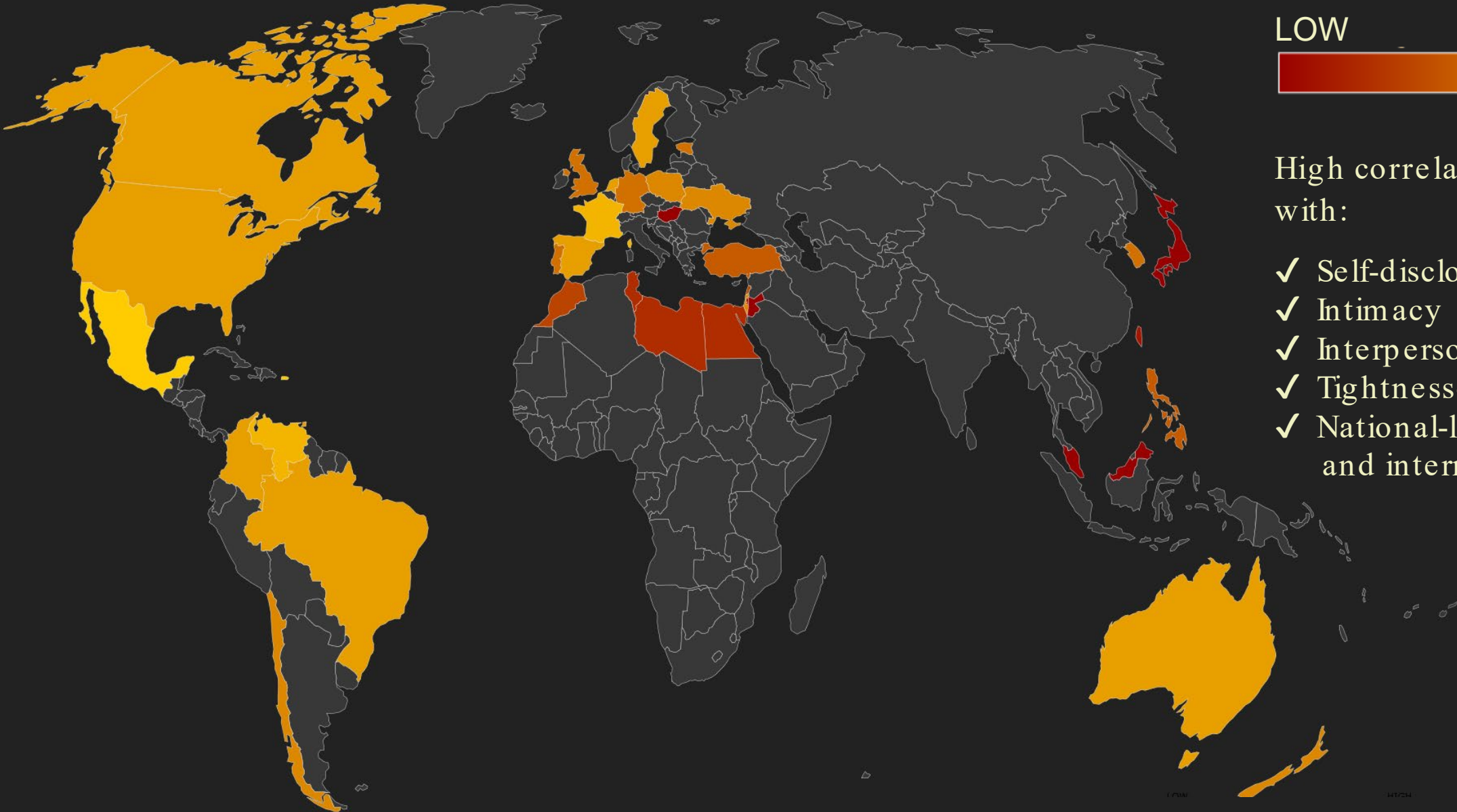
LOW

HIGH



High correlations ($r > .50$)
with:

- ✓ Self-disclosure
- ✓ Intimacy
- ✓ Interpersonal similarity
- ✓ Tightness-looseness
- ✓ National-level external-
and internal-threats etc.



Wrapping up

Key insights

- Facebook ads were very cost effective in most countries
- An engaging survey is essential
 - Intrinsic reward is important (it's only fair)
- Self-selection bias at its finest
 - Courtesy of Facebook's targeting algorithm
- Provided us with extremely strong supportive data
 - Next step: cross-validate with 'traditional' sample

Can you help?



Q & A

Keep in touch: www.robthomo.com

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Relational mobility scale

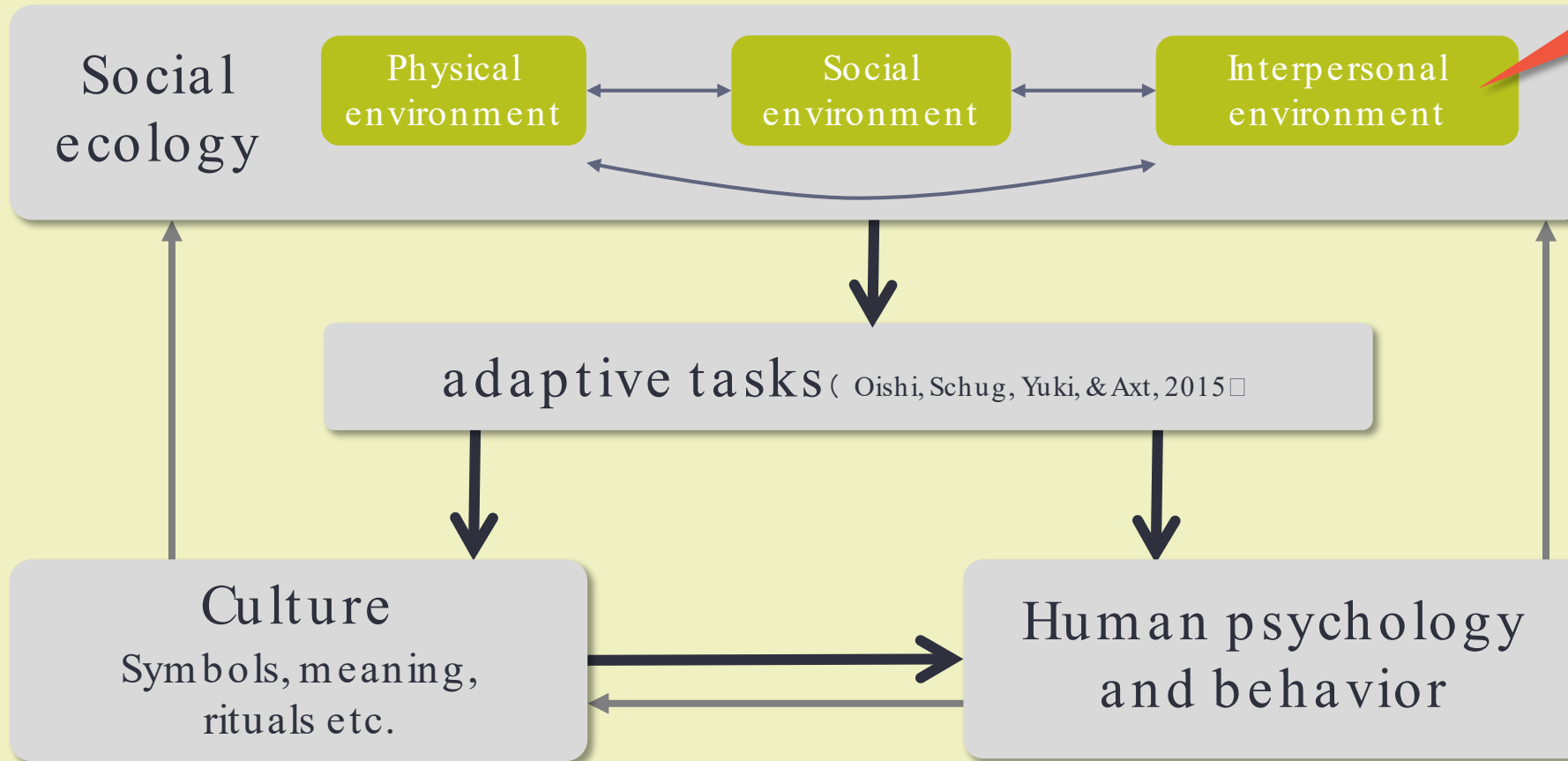
(Yuki et al., 2007; 12 items)

How much do you feel the following statements accurately describe people in the immediate society in which you live (friends and acquaintances in your school, colleagues in your workplace, and residents in your town etc.)?

- They (the people around you) have many chances to get to know other people.
- It is common for these people to have a conversation with someone they have never met before.
- They are able to choose, according to their own preferences, the people whom they interact with in their daily life.
- There are few opportunities for these people to form new friendships. (reversed)
- It is uncommon for these people to have a conversation with people they have never met before. (reversed)
- If they did not like their current groups, they could leave for better ones.
- It is often the case that they cannot freely choose who they associate with. (reversed)
- It is easy for them to meet new people.
- Even if these people were not completely satisfied with the group they belonged to, they would usually stay with it anyway. (reversed)
- They are able to choose the groups and organizations they belong to.
- Even if these people were not satisfied with their current relationships, they would often have no choice but to stay with them. (reversed)
- Even though they might rather leave, these people often have no choice but to stay in groups they don't like. (reversed)

1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Agree, 6 = Strongly agree

Socio-ecological approach



Relational
mobility

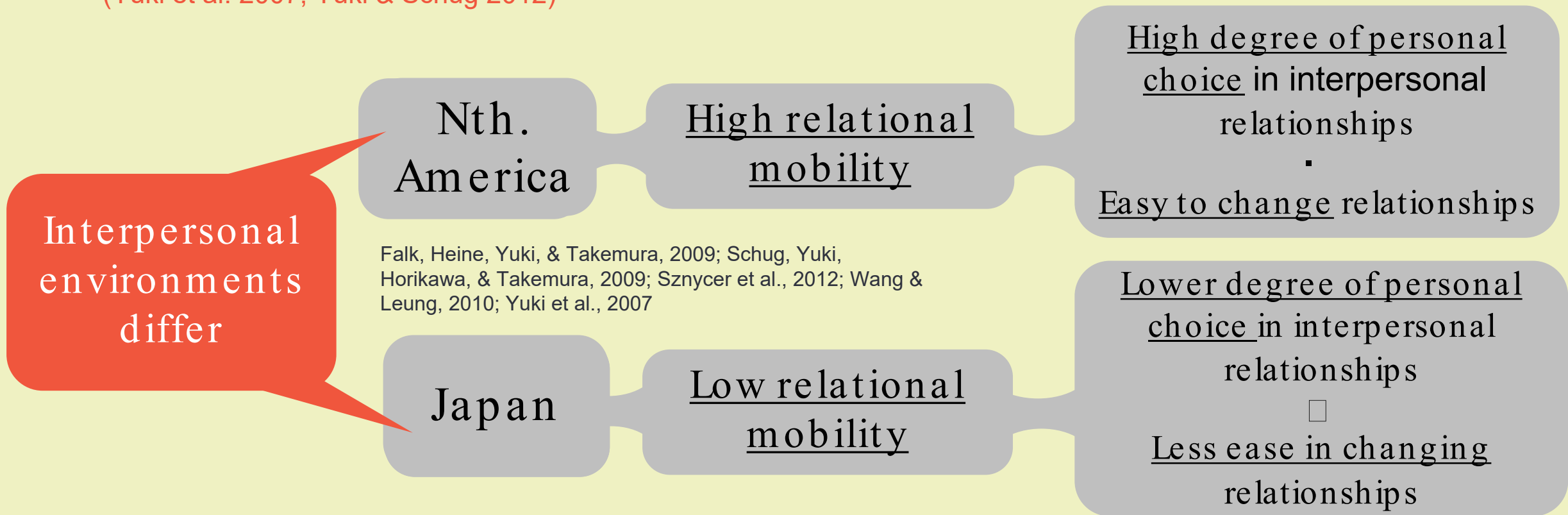
Similar to: Ecological
(Barker, 1968)
environmental (Craig
1973), community (Kelly,
1971) cultural (Kitayama &
Cohen, 2007)
psychologies,
behavioural
ecology (Davies et al.,
2012)

(Oishi 2014)

Oishi & Graham, 2010

What is relational mobility?

The degree to which there is the opportunity and freedom to form and sever – according to one's preferences – relationships and group memberships in a society or social context (Yuki et al. 2007, Yuki & Schug 2012)



Adaptive tasks in high relational mobility social contexts

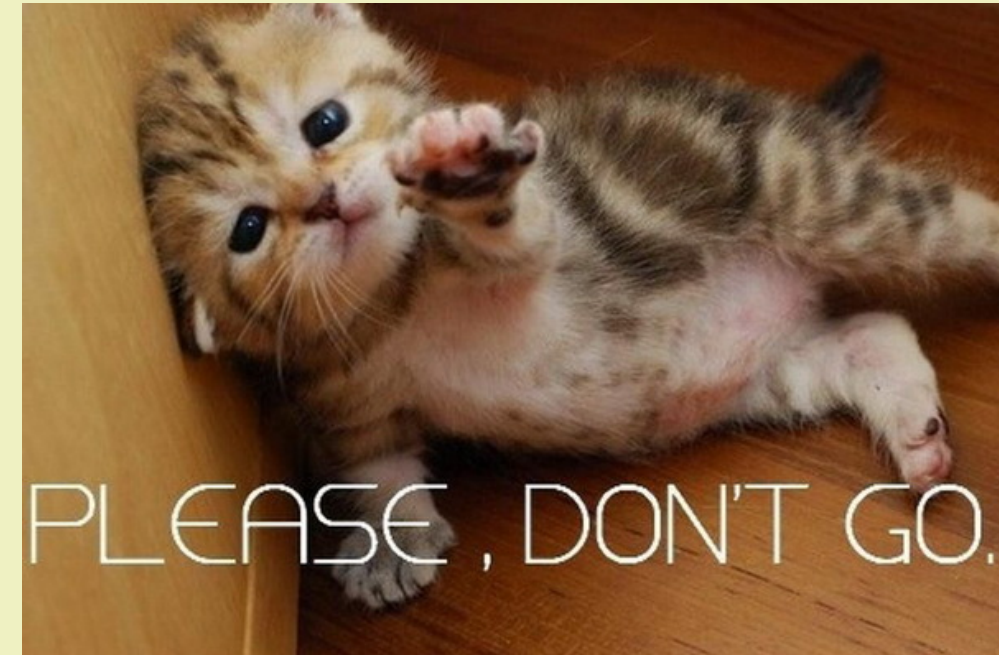
Acquisition of desirable relationships/group memberships

- Positive self-regard (self-enhancement; Falk et al. 2009)
- Self-esteem (Sato & Yuki, 2014)
- General trust (Yamagishi & Yamagishi 1994; Yamagishi, 2011)
- Desire for uniqueness (Takemura, 2014)

Retention of desirable relationships/group memberships

- Self-disclosure (Schug et al. 2010)
- Intimacy (Kito et al., 2015)

Consequence: **Interpersonal similarity** (Schug et al., 2009)



Adaptive task in low relational mobility social contexts

Maintenance of harmony

- Avoiding offence (Yamagishi, Hashimoto, & Schug 2008)
- Rejection sensitivity (Sato, Yuki, & Norasakkunkit, 2014)
- Shame proneness (Sznycer et al. 2012)
- Caution about friends (Li et al., 2014)



Relational mobility limitations/future directions

- What about the rest of the world?
 - Measurement of relational mobility (society-level construct)
 - Yuki et al.'s (2007) 12-item relational mobility scale (1 -6 Likert)
 - How much do you feel the following statements accurately describe people in the immediate society in which you live (friends and acquaintances in your school, colleagues in your workplace, and residents in your town etc.)?
 - They (the people around you) have many chances to get to know other people.
 - It is uncommon for these people to have a conversation with people they have never met before. (reversed)
 - They are able to choose the groups and organizations they belong to.
 - Even though they might rather leave, these people often have no choice but to stay in groups they don't like. (reversed)
- } Opportunities for meeting new people factor
- } Freedom of relational choice factor

Participants □ N = 18,939, 39 countries □

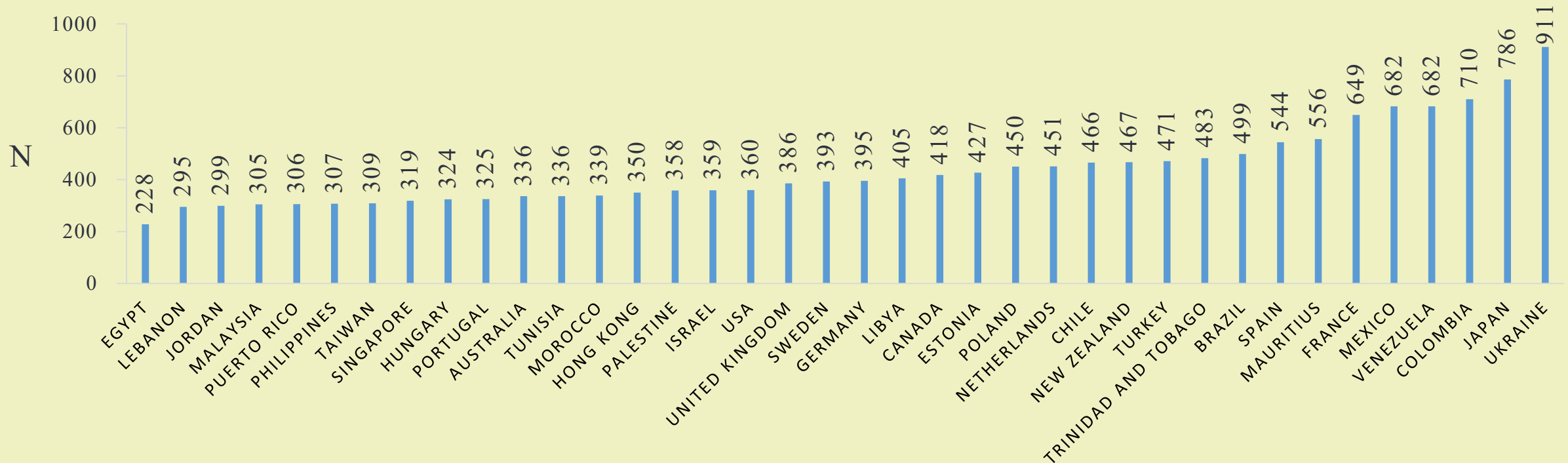
Ave. Facebook penetration rate: 46%

Mean click-through rate: 3%

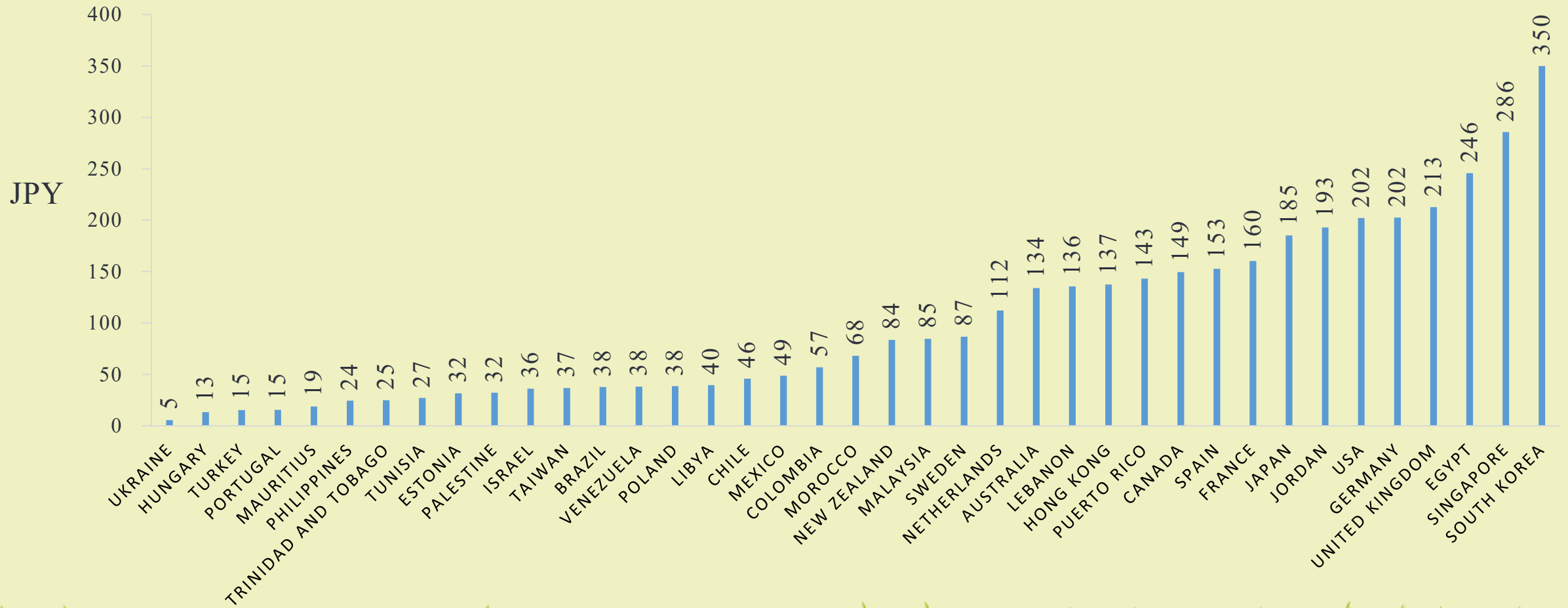
Mean response rate: 16%

Mean age: 28 years old

Mean female percentage: 87%



Facebook ad cost per valid response (JPY, over all waves)



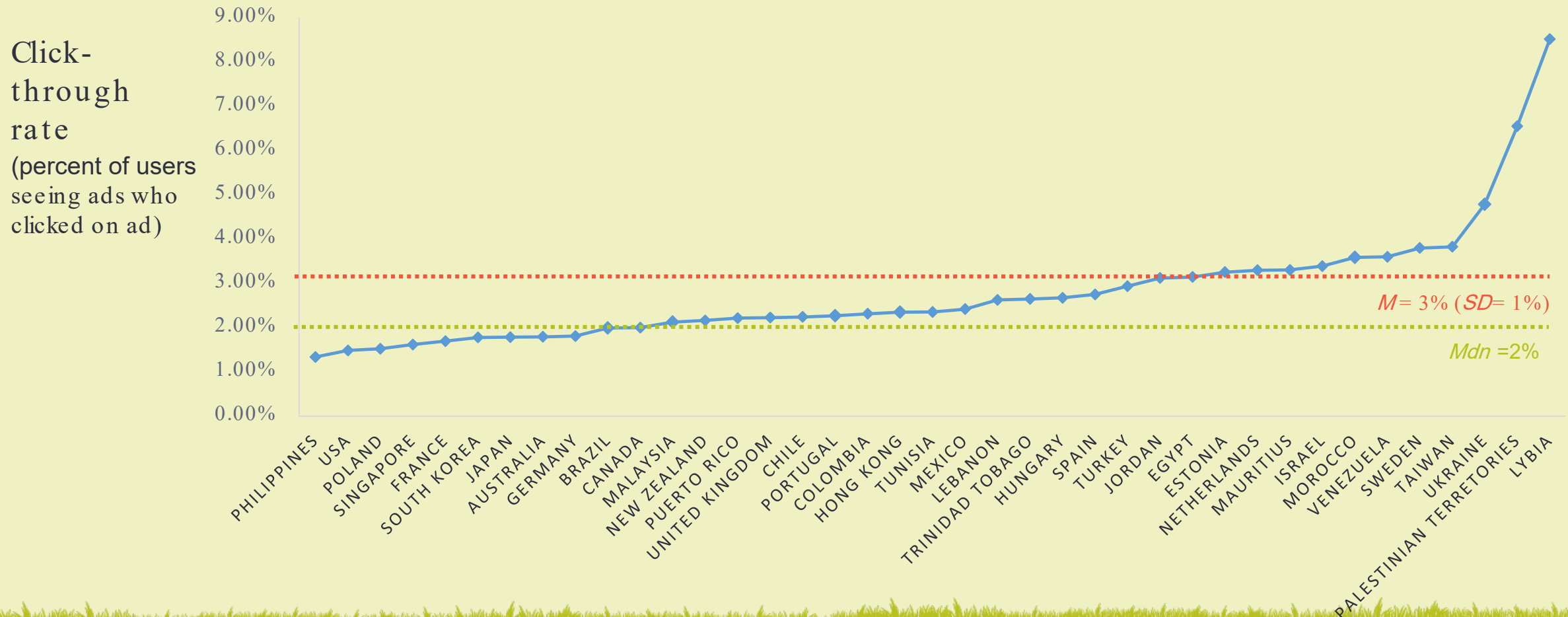
Facebook penetration rate (2015)

Can we expect representative exposure to ads?



Click-through rate

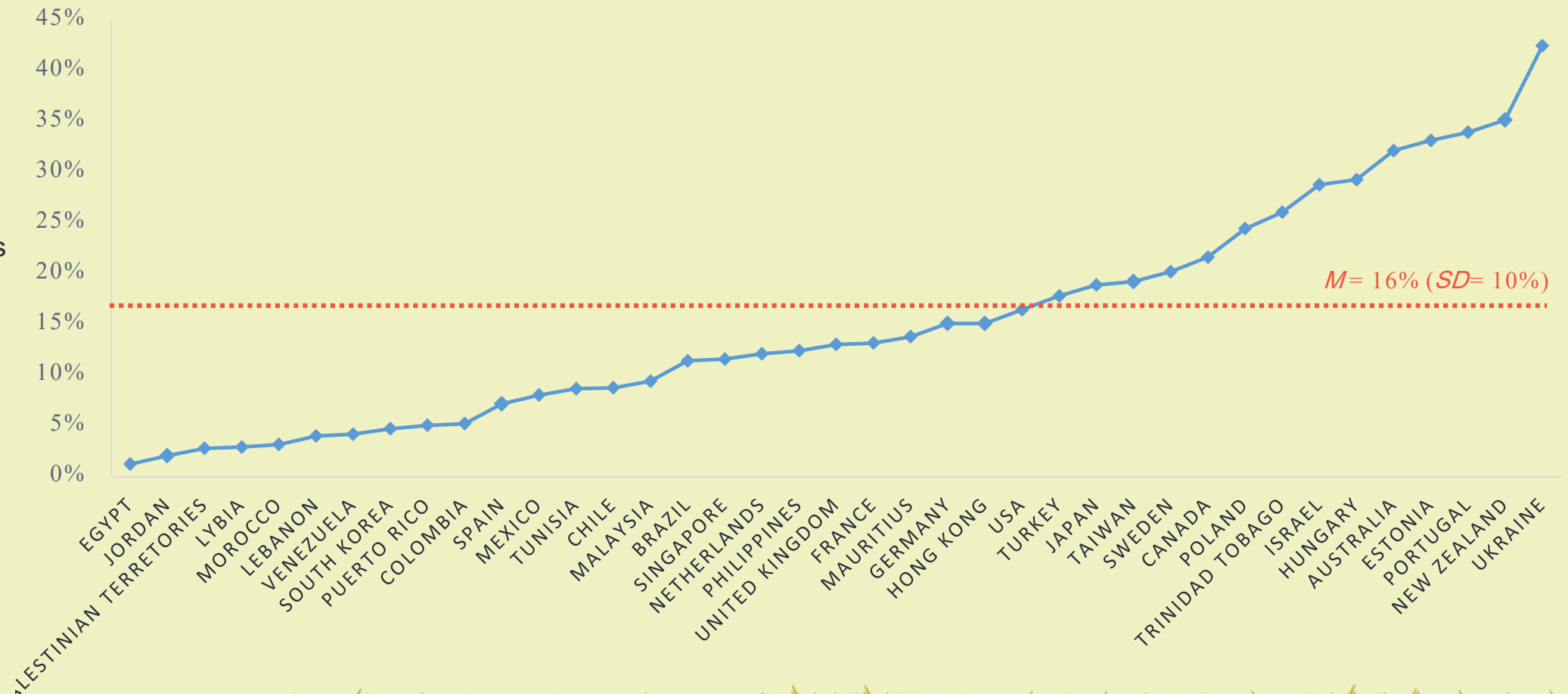
What percent of users who were displayed ads clicked on the ads?



Response rate

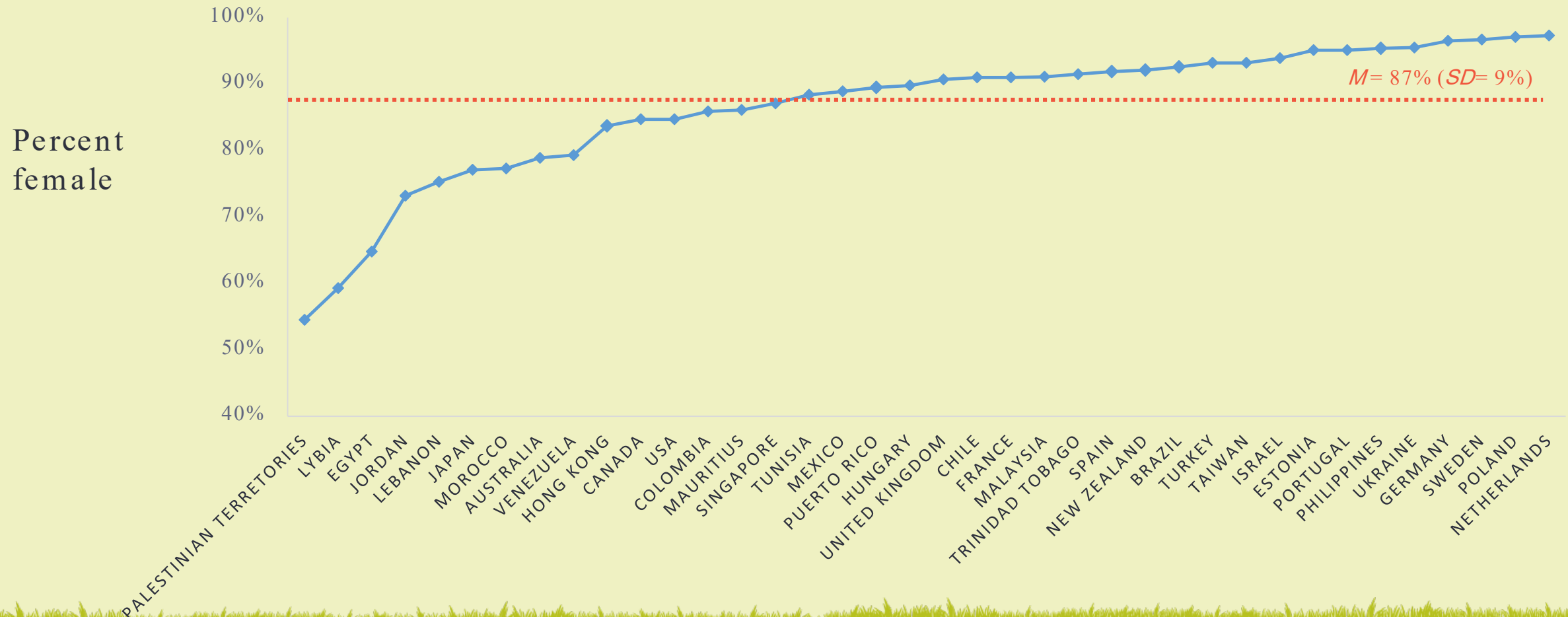
What percent of users who clicked on ads actually completed the survey?

Response
rate
(percent of users
who clicked on
ad *and* validly
completed
survey)



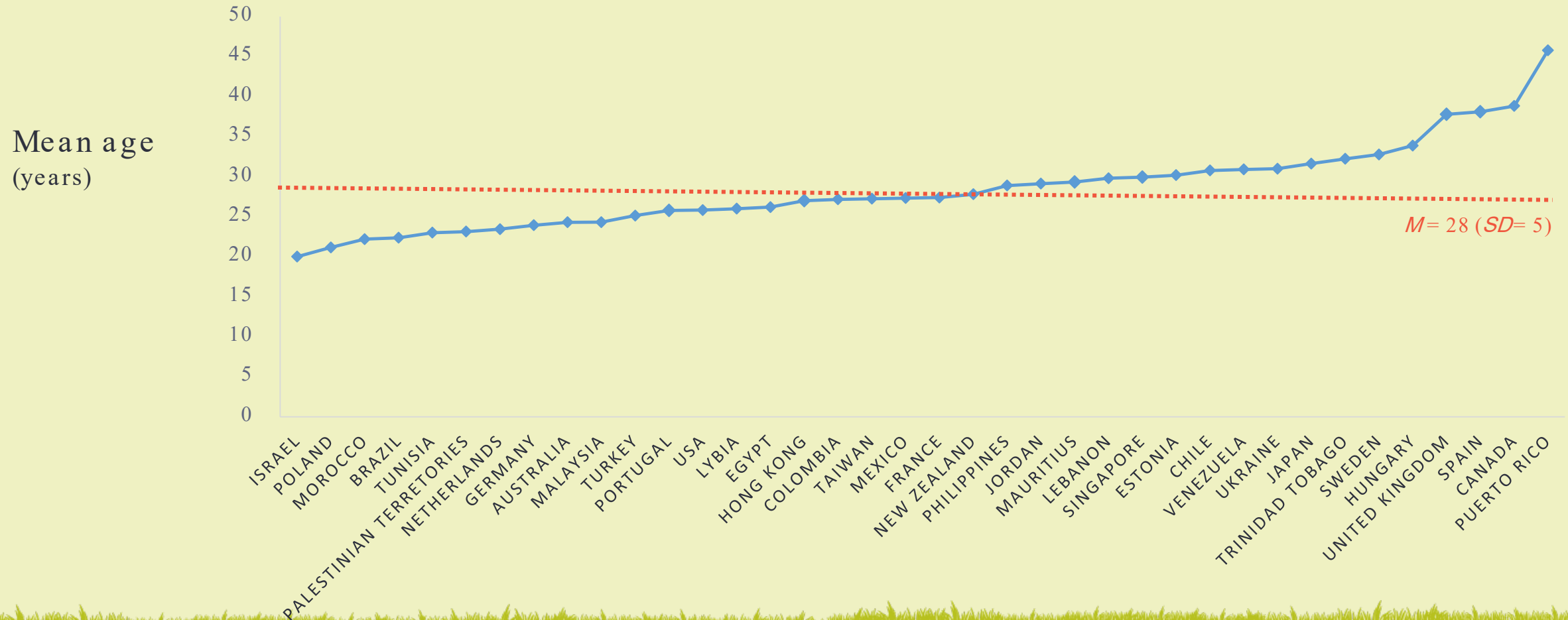
Female percentage

What percent of respondents indicated female as gender?



Mean age

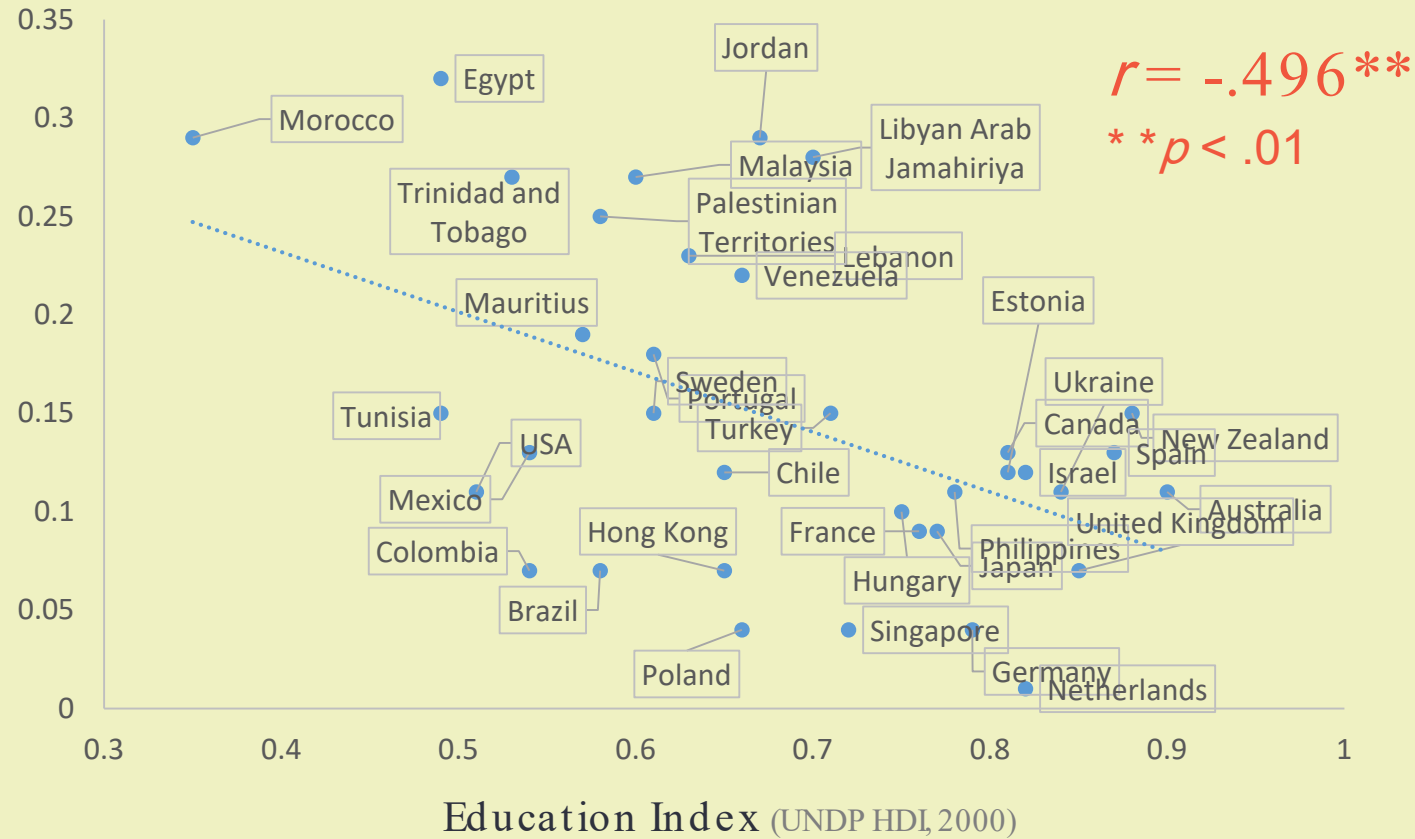
How old are the respondents in each country?



Assumptions

Responses are unbiased by response styles?

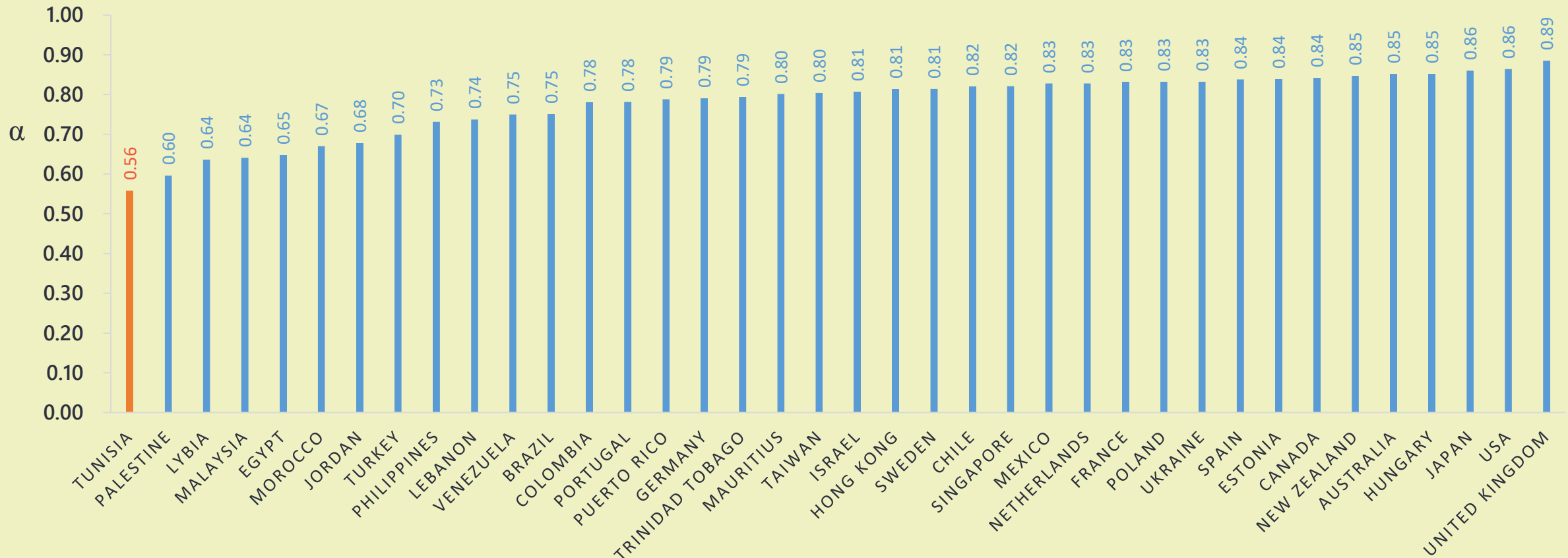
Acquiescent
response
style \square (Van Dijk
et al., 2009; Fischer et
al., 2009; Rammstedt
et al., 2010)
Greater than 0
means
acquiescence



All subsequent
analyses use within -
subject means -only
standardization
(Fischer, 2004)

Relational mobility scale reliability α

Are people responding in a roughly consistent manner?



N = 39 countries
 Rho = .58 ~ .88

Relational mobility scale measurement invariance

(Multi-group CFA; Cheung & Rensvold, 1999)

Does the tool work (measure relational mobility) well in every country?

Model	S-B χ^2	df	*CFI	*TLI	*RMSEA	Compare	Δ *CFI	Δ *TLI	Δ *RMSEA	
Configural (1)	4423.3	1950	.928	.905	.054	-	-	-	-	✓
Partial Metric (2)	5085.4	2292	.919	.909	.053	2 vs 1	.009	-.004	-.001	✓
Partial Scalar (3)	5506.3	2368	.909	.901	.055	3 vs 2	.010	.008	.002	✓

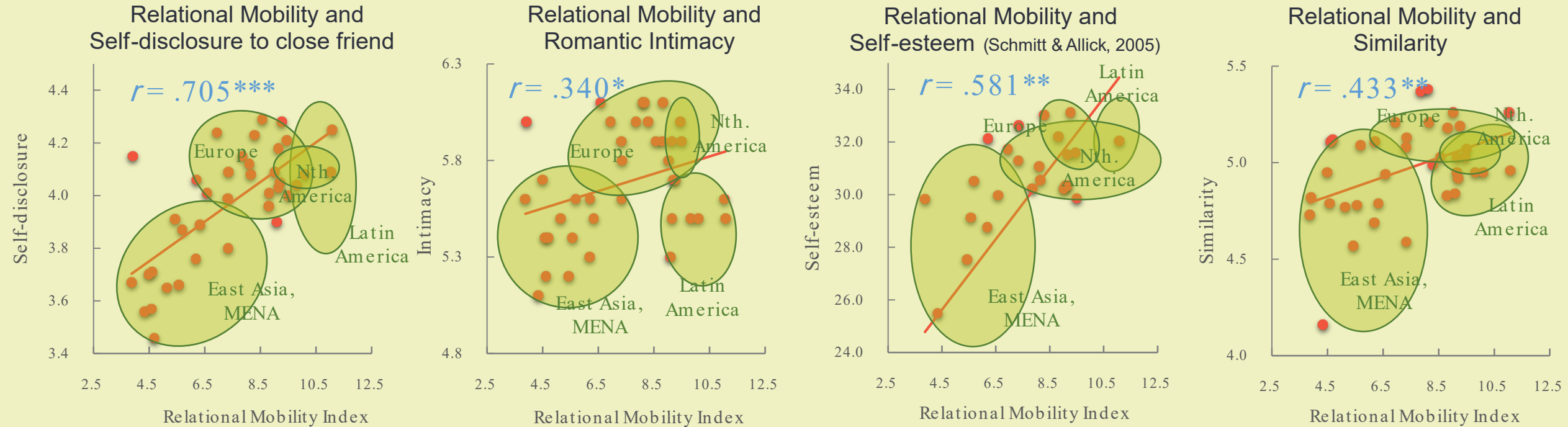
- **Configural model:** Same structure as pooled sample across groups
- **Metric invariance:** Same factor loadings as pooled sample across groups
- **Scalar invariance:** Same item and 1st order factor intercepts as pooled sample across groups

Means can be meaningfully compared across countries

Cutoff points used: Metric vs. configural, Δ *CFI & Δ *TLI < .010, Δ *RMSEA < .015; Scalar vs. metric, Δ *CFI & Δ *TLI < .010, Δ *RMSEA < .015 (Chen, 2007)

Predictive validity

Do previous EastWest findings replicate across societies?

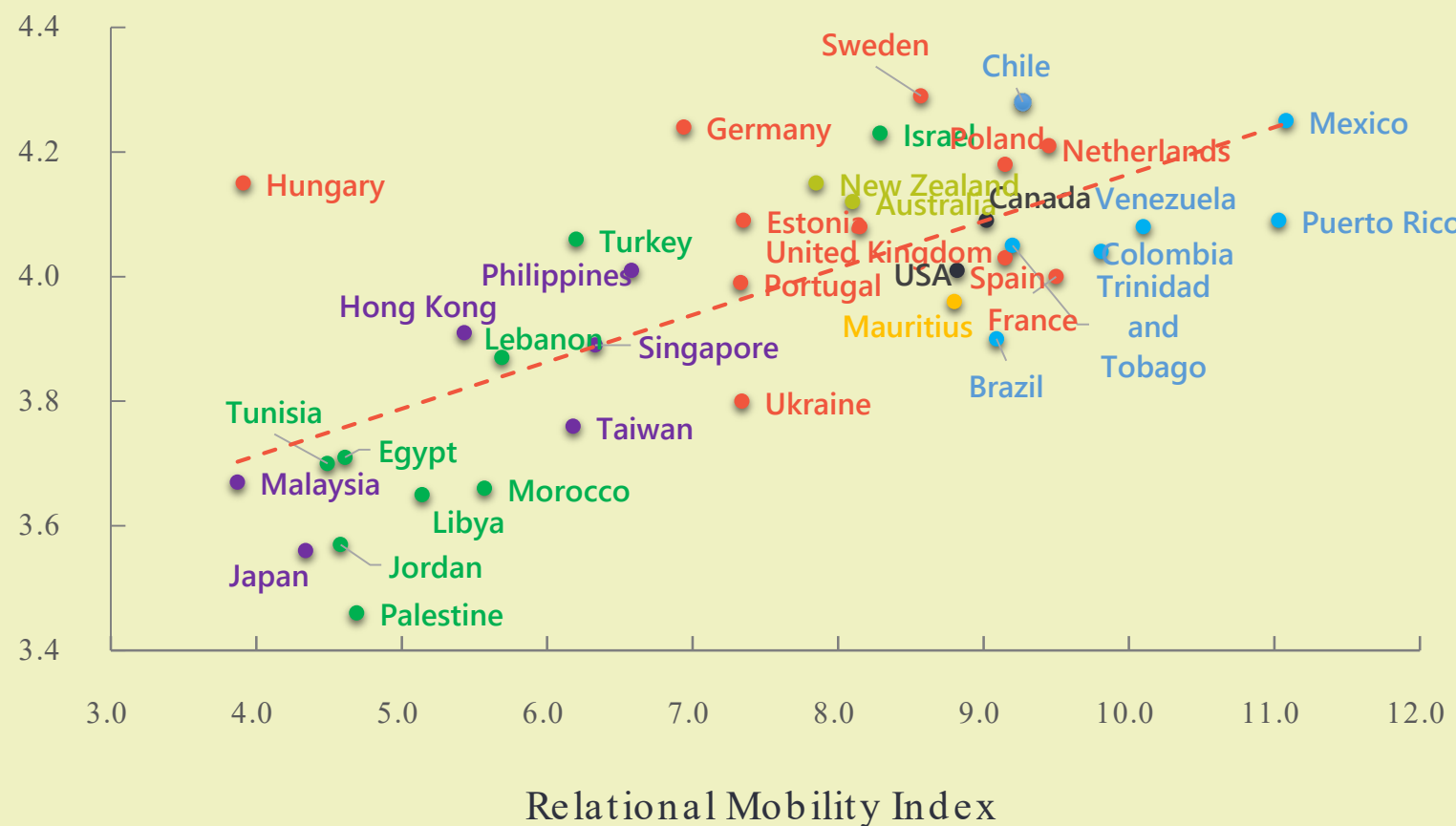


Story is supported

- Higher relational mobility requires strategies to acquire and retain desirable relationships
- Result is higher homophily in interpersonal relationships

Relational mobility and self-disclosure to a close friend

Self-disclosure to a close friend (scale: 1~5)



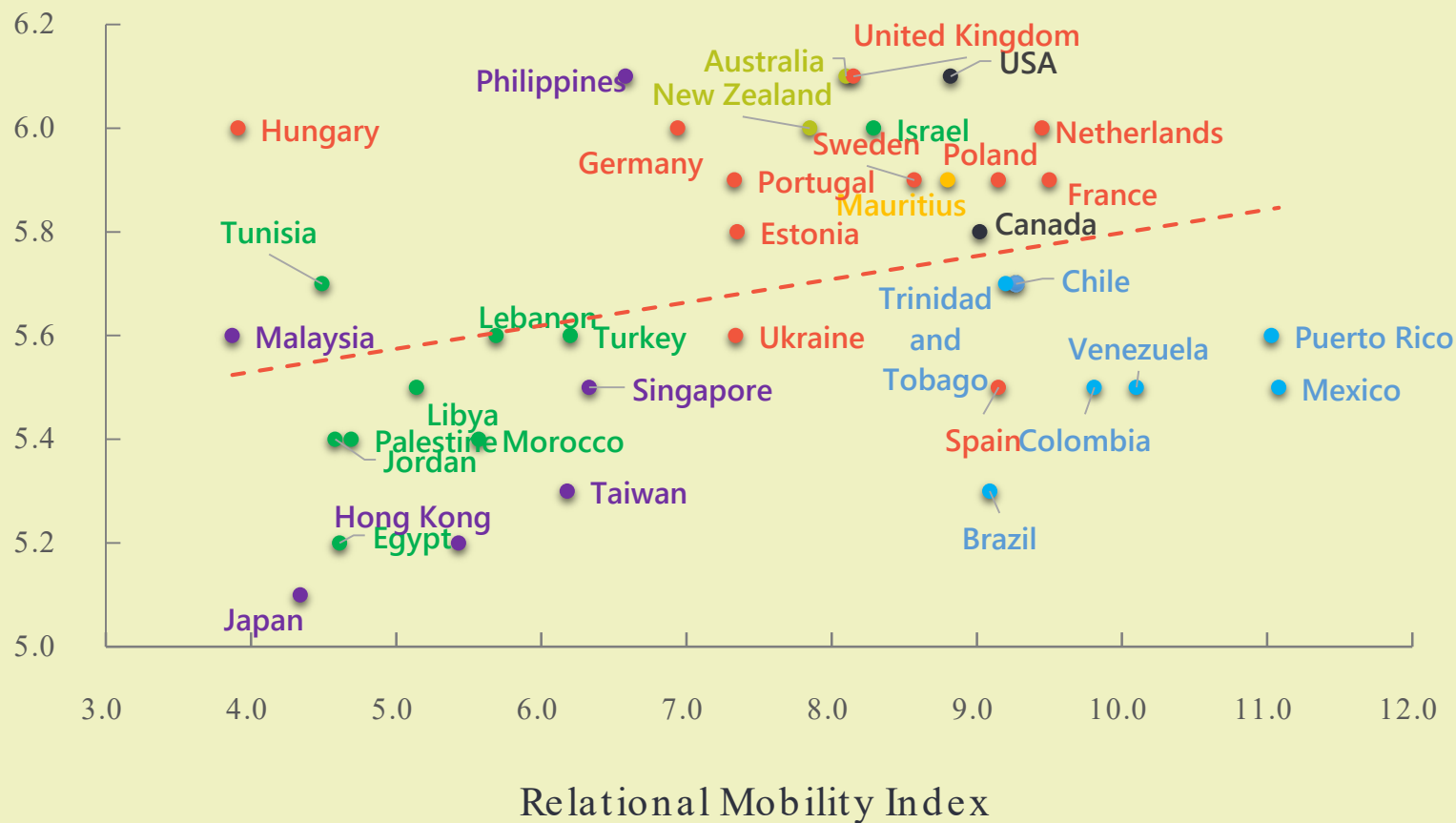
- Africa
- Asia
- Europe
- Latin America
- MENA
- North America
- Oceania

$r = .705$
 $p < .001$

Relational mobility and romantic intimacy

WRS Results

Intimacy with
romantic
partner
(scale: 1~7)



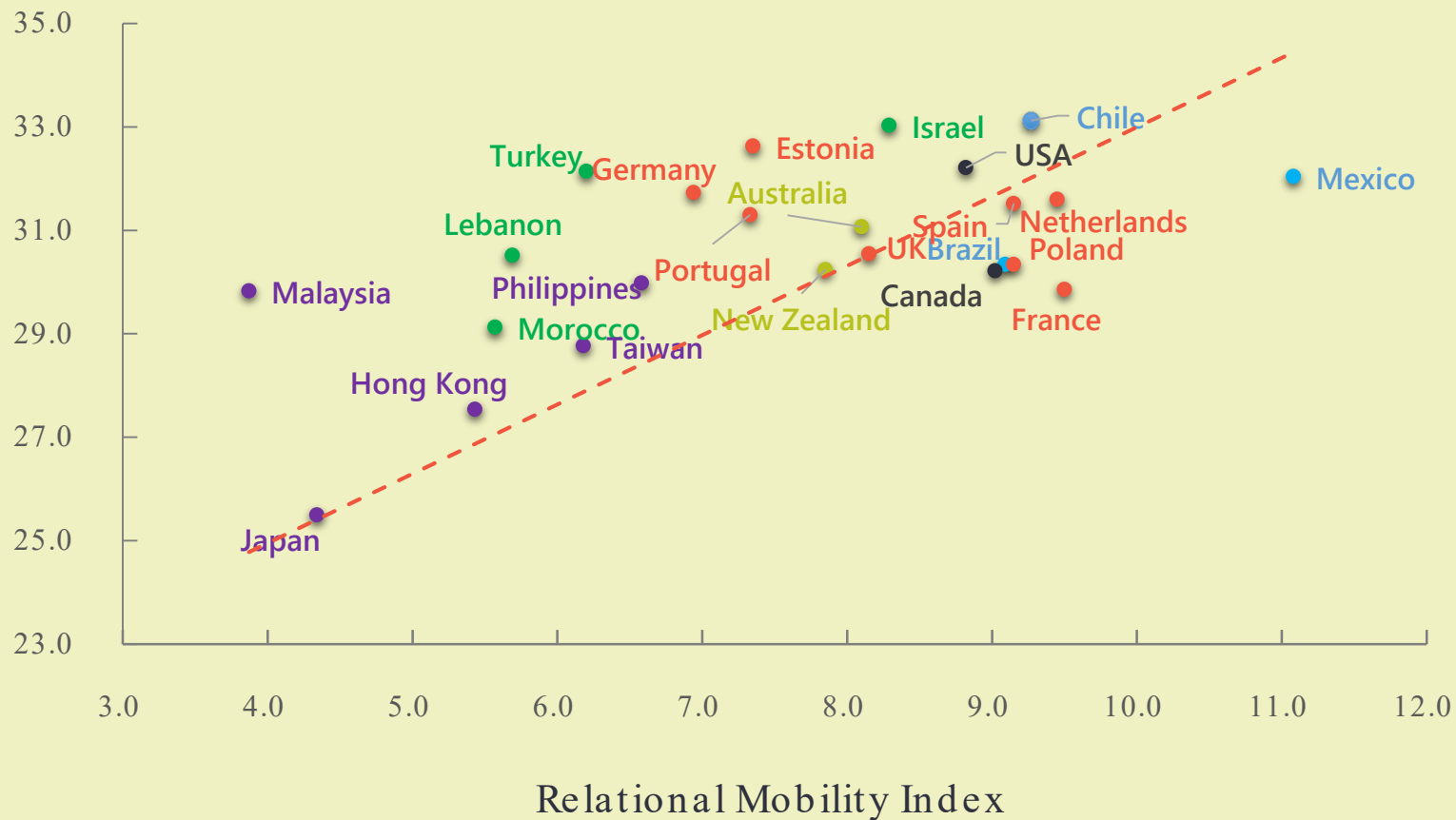
Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$r = .340$
 $p < .05$

Relational mobility and self-esteem

WRS Results

Self-esteem
(country-level
data from
Schmitt & Allick,
2005)

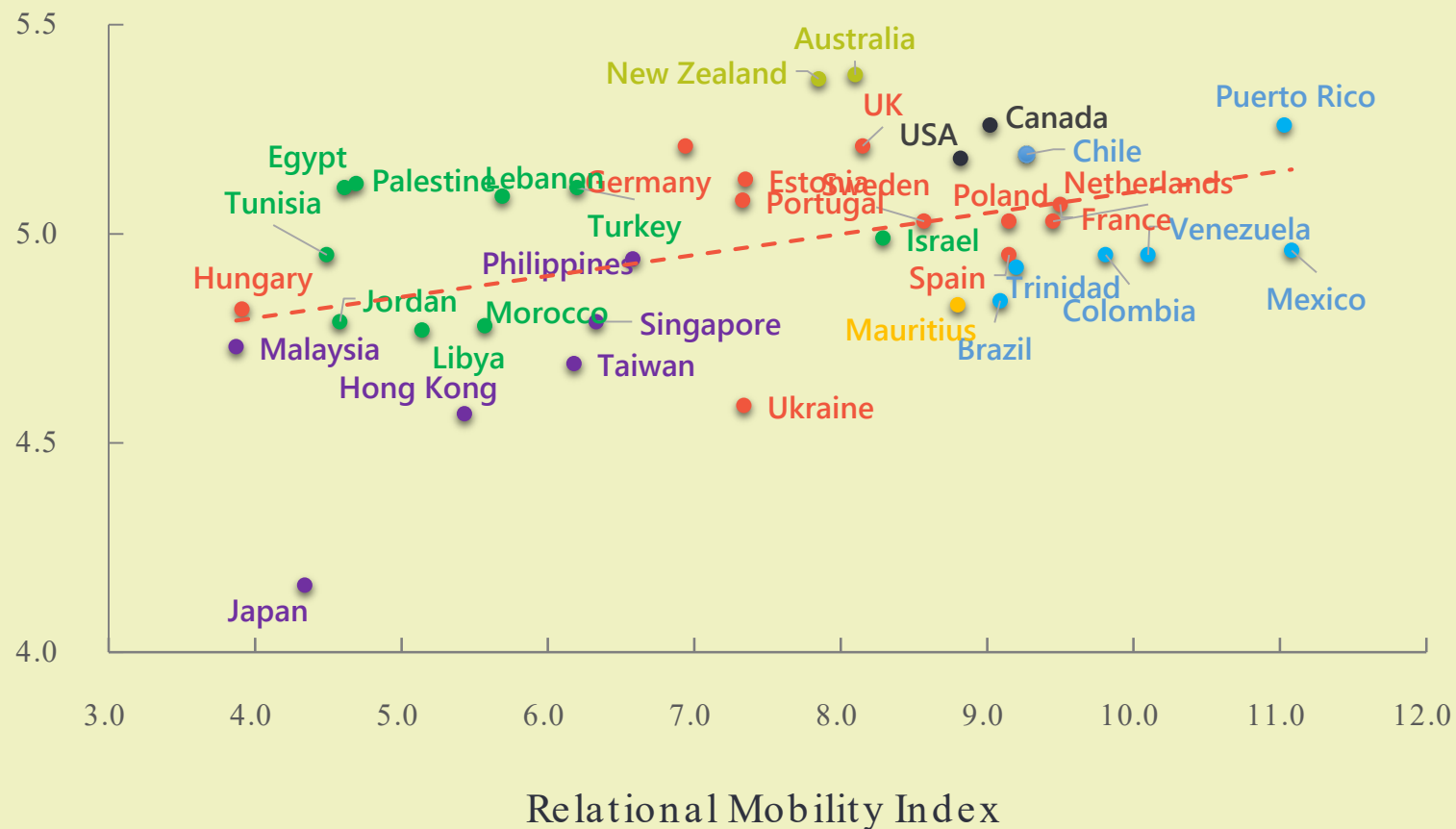


$$r = .581$$
$$p < .01$$

Relational mobility and interpersonal similarity

WRS Results

Interpersonal
similarity
with close
friend



$r = .433$

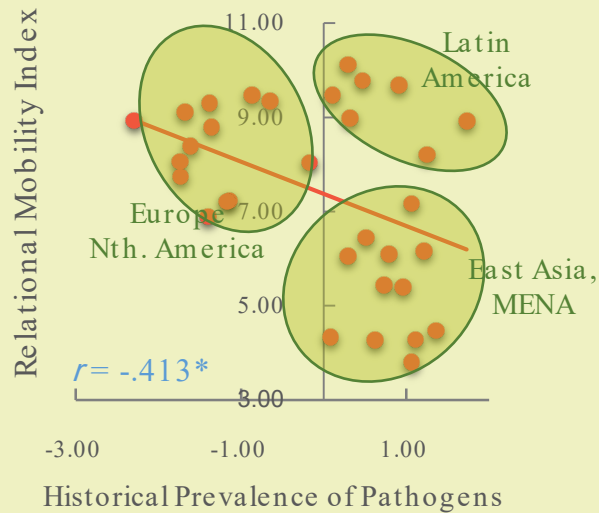
$p < .01$

(without Japan $r = .368$, $p < .05$)

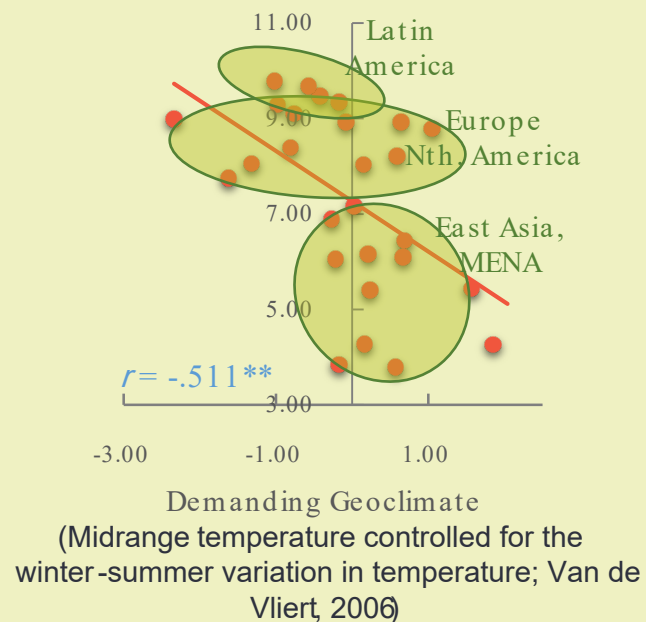
Construct validity: Antecedents to Relational Mobility

Association with closed/open societies...are they associated with relational mobility?

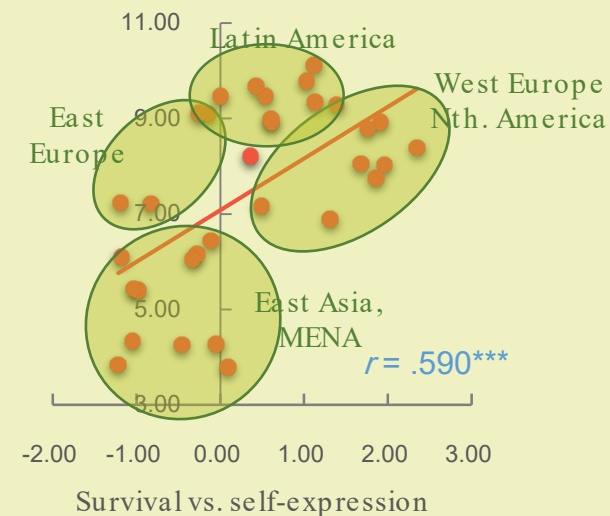
Pathogen prevalence (McEvedy & Jones, 1978) and relational mobility (N = 32)



Demanding geoclimate (Van de Vliet, 2006) and relational mobility (N = 27)



Survival vs. self-expression (Inglehart et al., 2005) and relational mobility (N = 34)



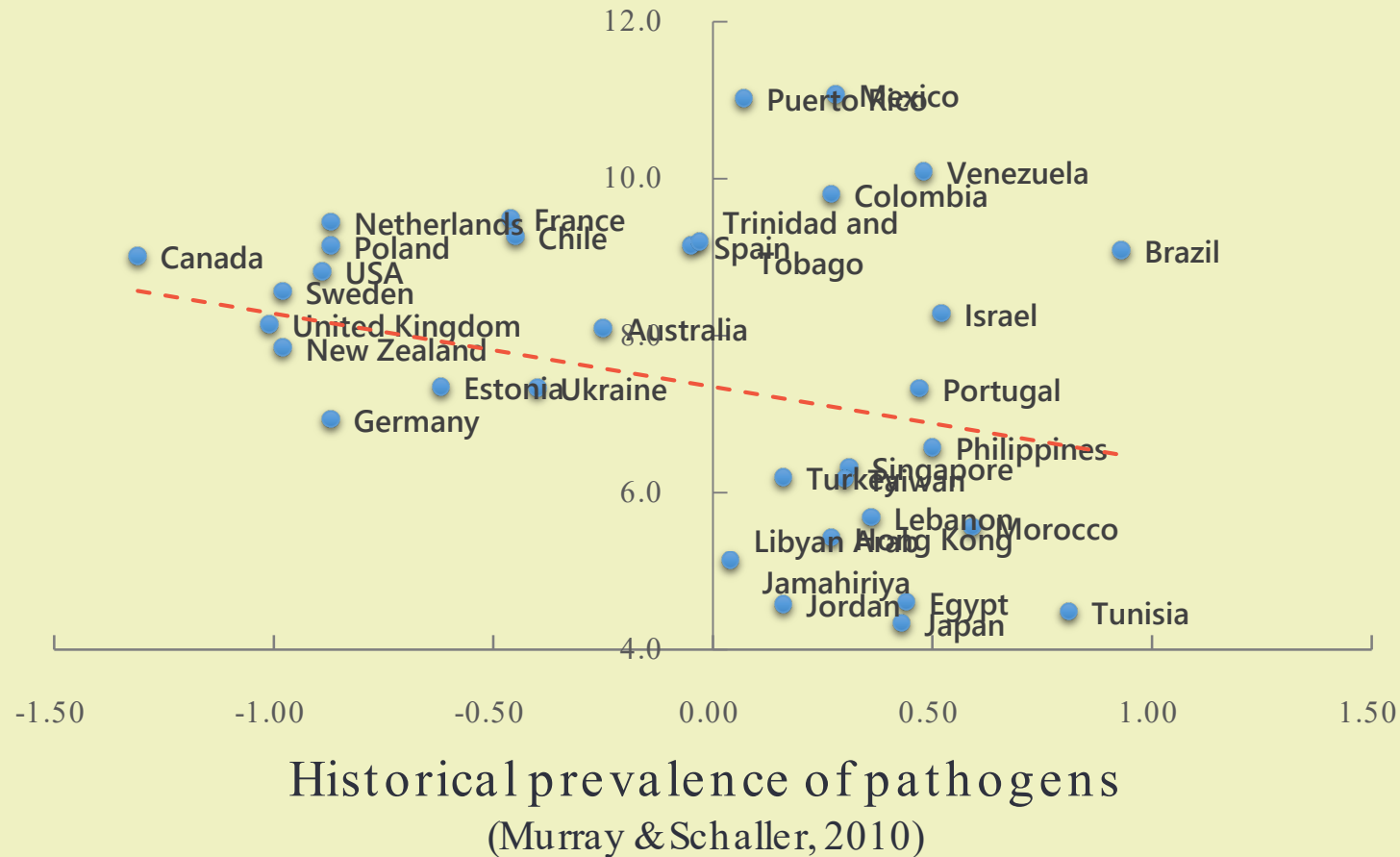
Story

Such ecologies select for exclusive, closed social systems

- Closed societies to avoid pathogen ingress
- High reciprocation, cooperation, high mutual surveillance to avoid free-riding in demanding geoclimate

Pathogen prevalence and relational mobility

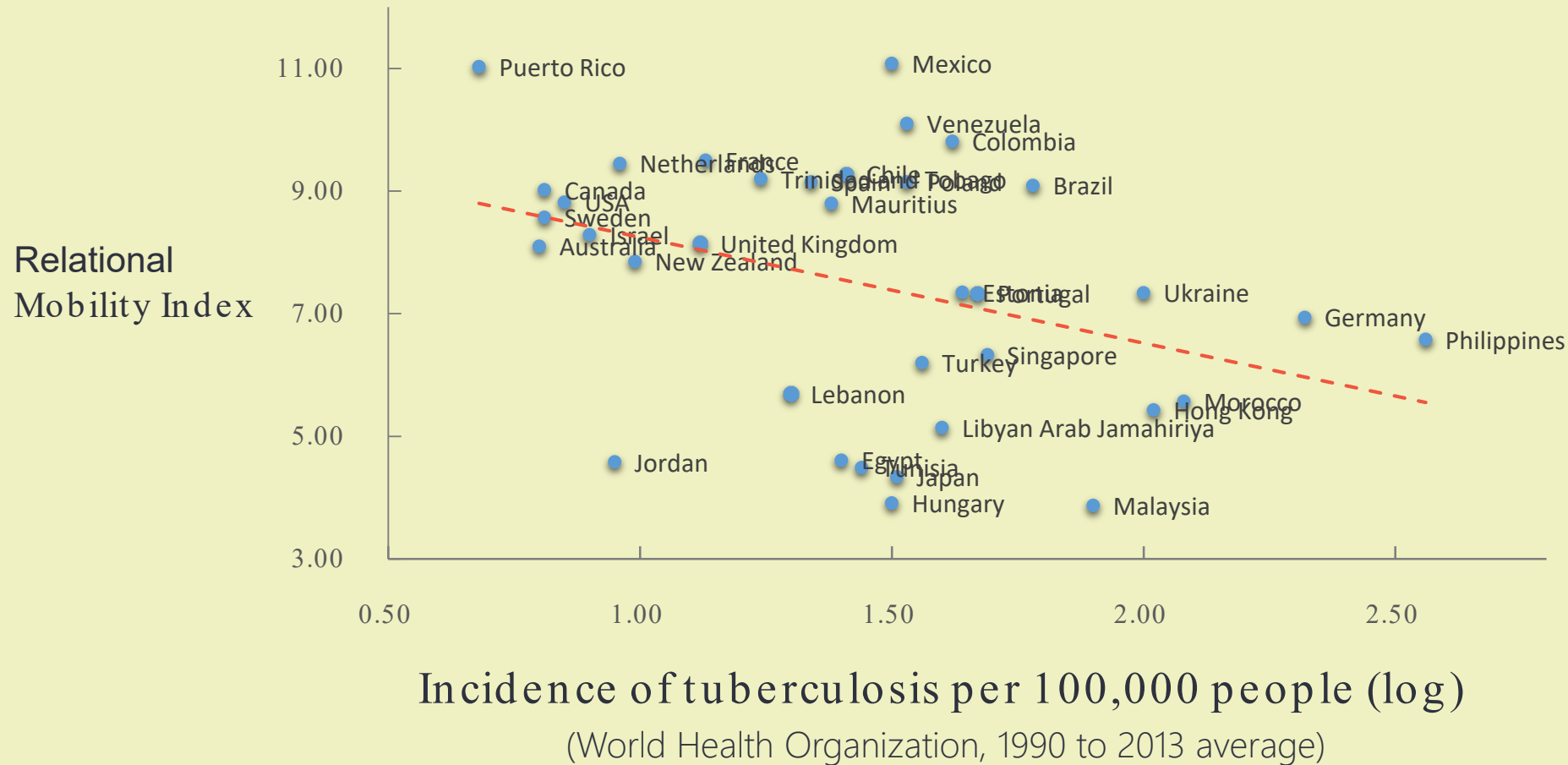
Relational
Mobility Index



$$r = -.279$$

$$p < .10$$

Tuberculosis per 100,000 people and relational mobility



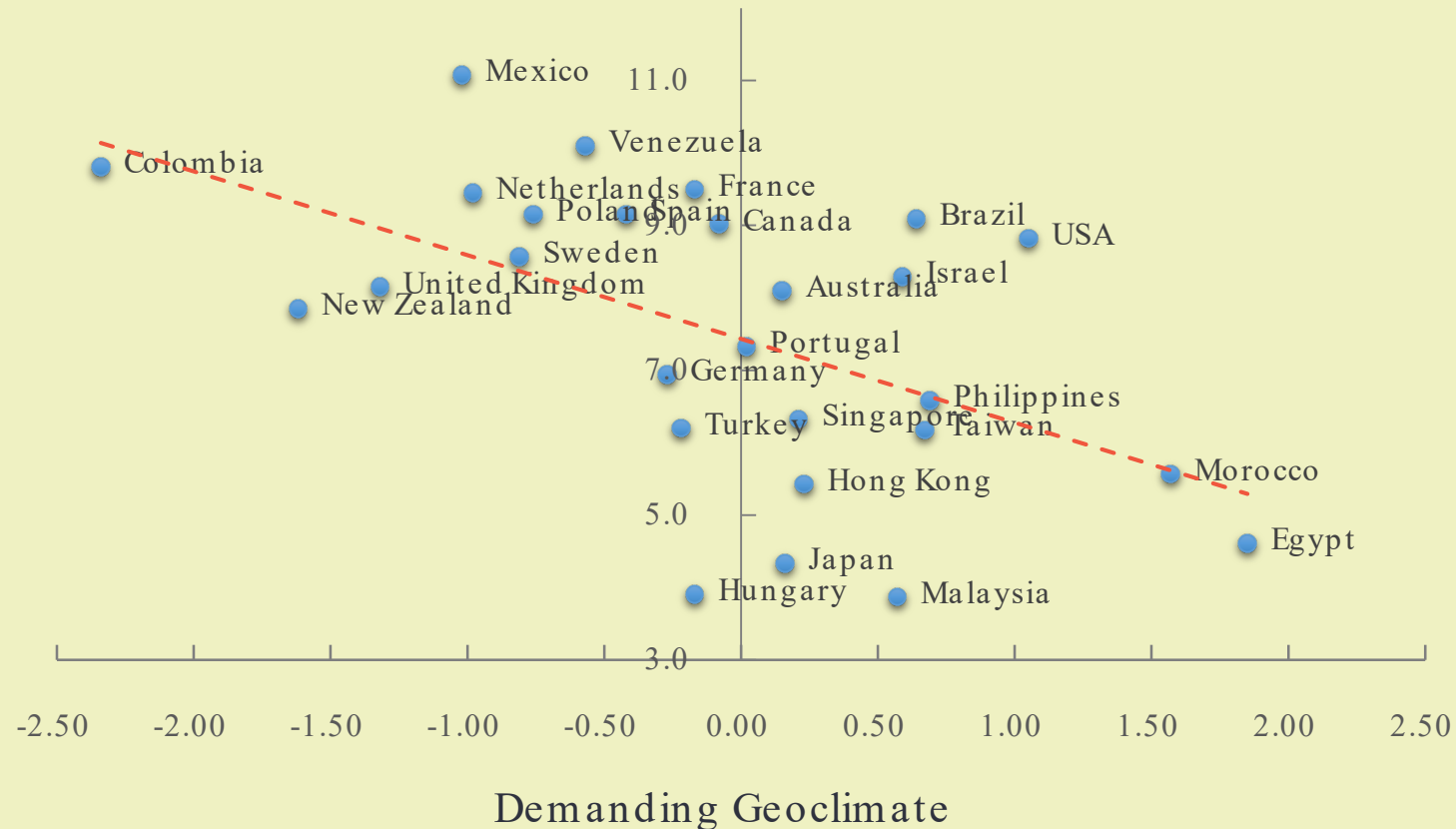
$$r = -.372$$

$$p = .026$$

$$N = 36$$

Demanding geoclimate and relational mobility

Relational
Mobility Index



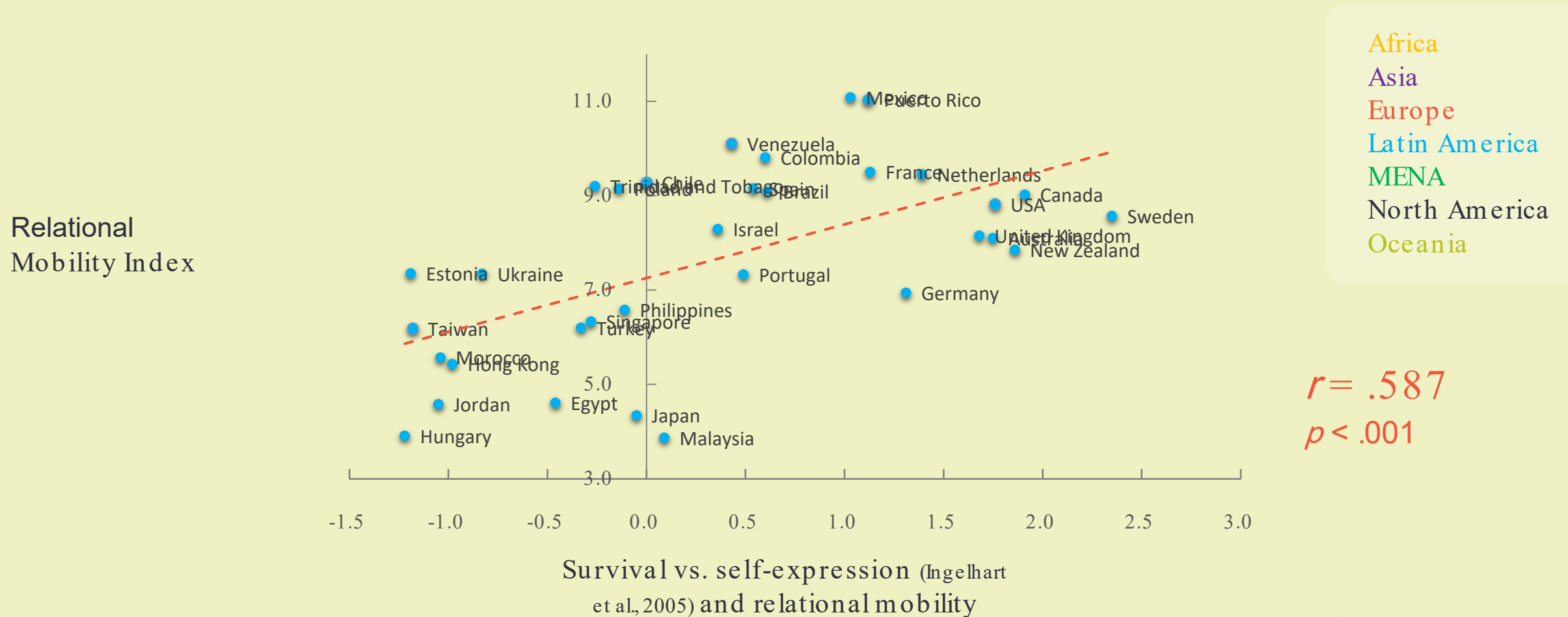
Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$$r = -.536$$

$$p < .01$$

Survival vs. self-expression

(Inglehart et al., 2005) **and relational mobility** (N = 33)



Construct validity: Outcomes

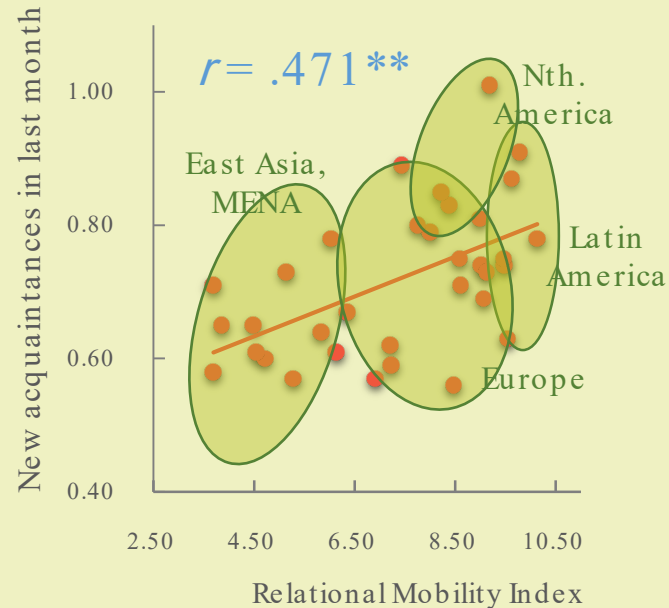
Expected associations with high/low relational mobility?

Story

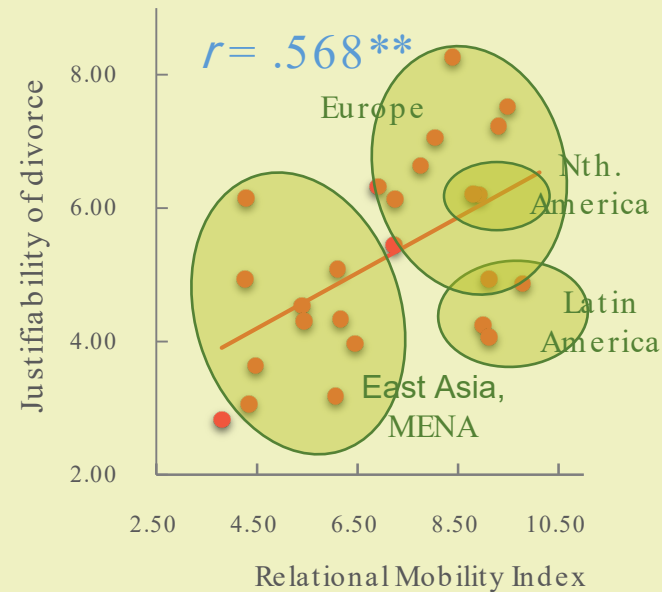
Where choice abounds, so should excuses for divorce.

Closed committed social contexts should foster strong norms; adherence of such should help avoid disharmony within long-lasting relationships.

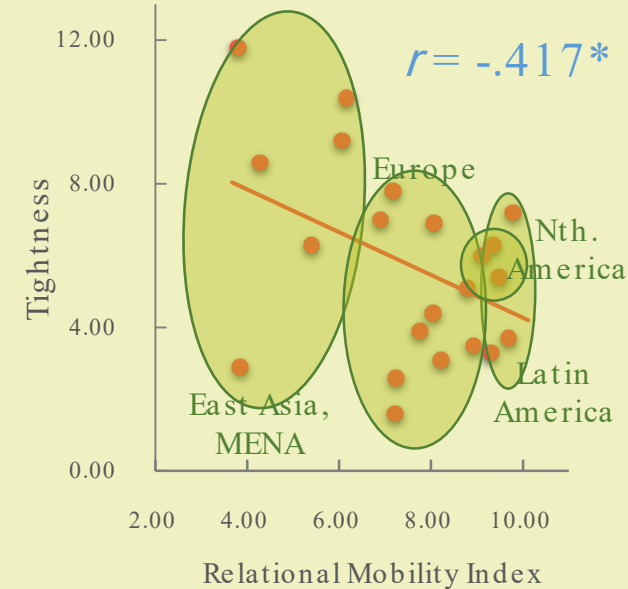
Relational mobility and number of new acquaintances in last month (log)



Relational Mobility and Justifiability of Divorce (WVS w6, 2014) (N=26)

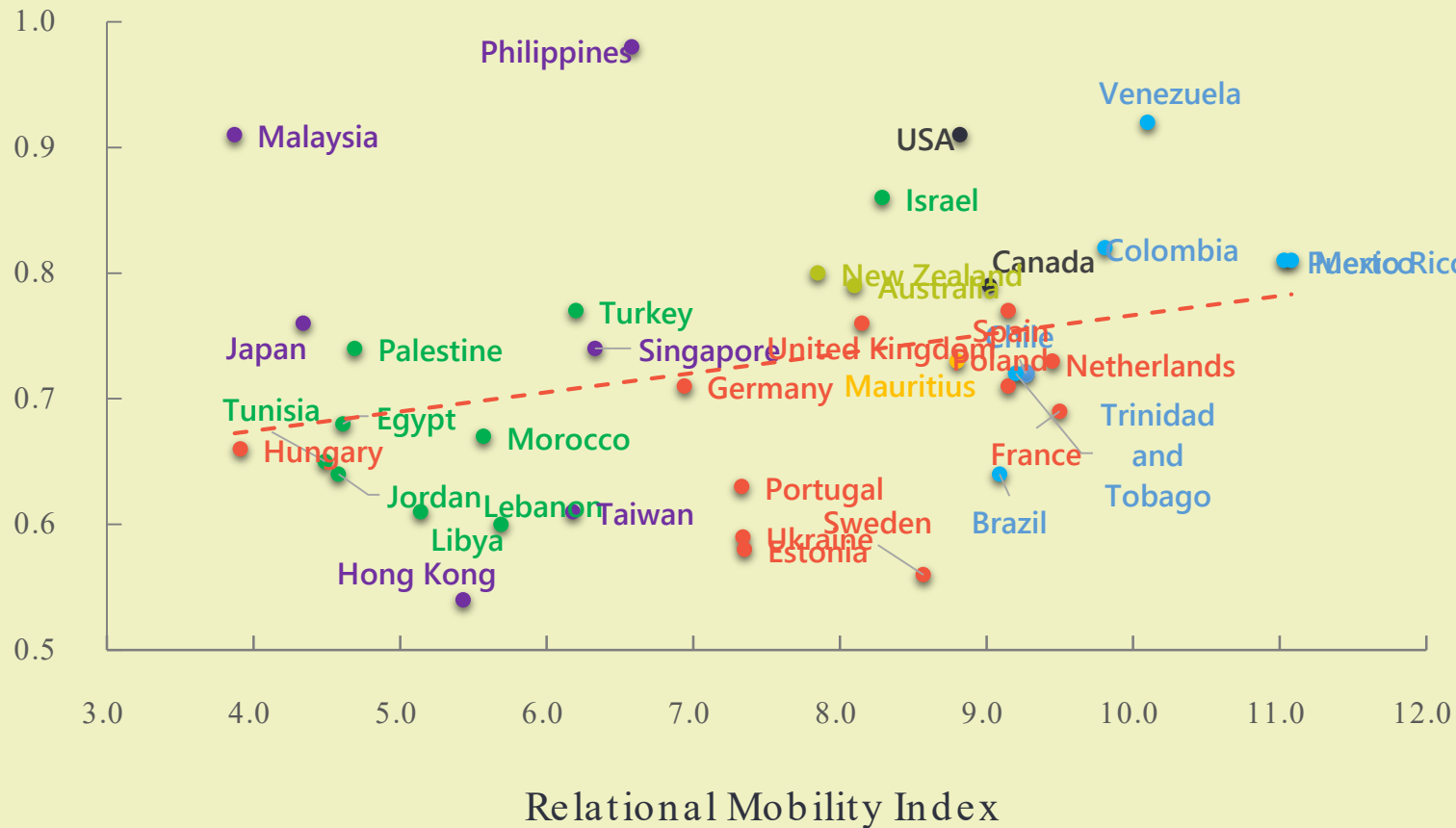


Relational Mobility and Tightness (Gelfand et al., 2011) (N=22)



Relational mobility and number of new acquaintances in last month (log)

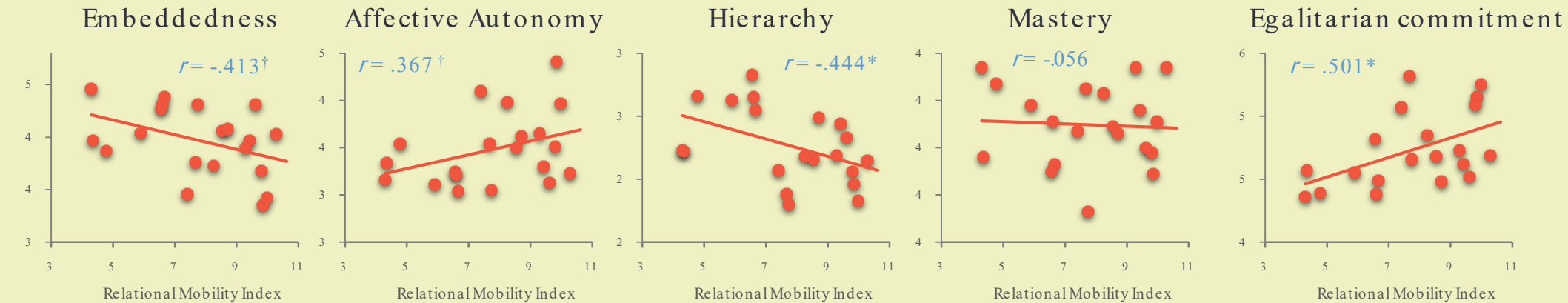
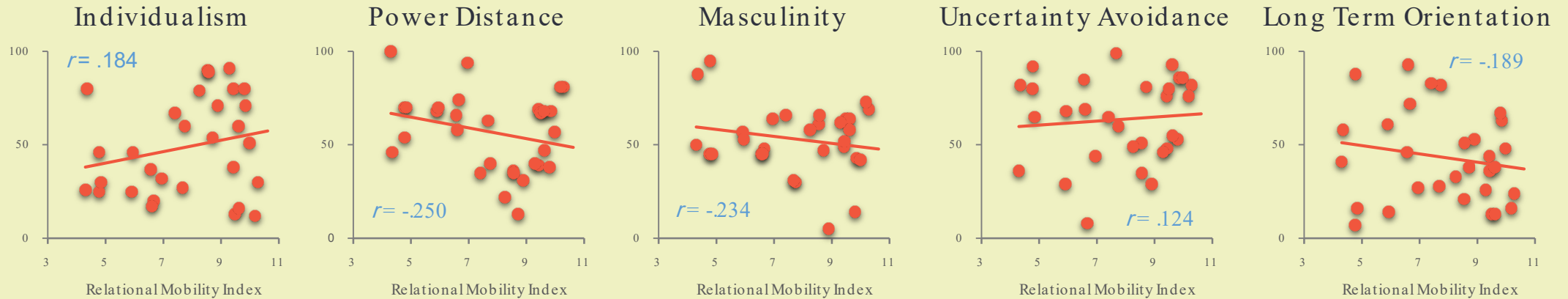
Number of
new
acquaintances
in last month
(log)



Construct validity: Values and culture

Associations with other cultural/value constructs?

(2001) Hofstede
N = 32

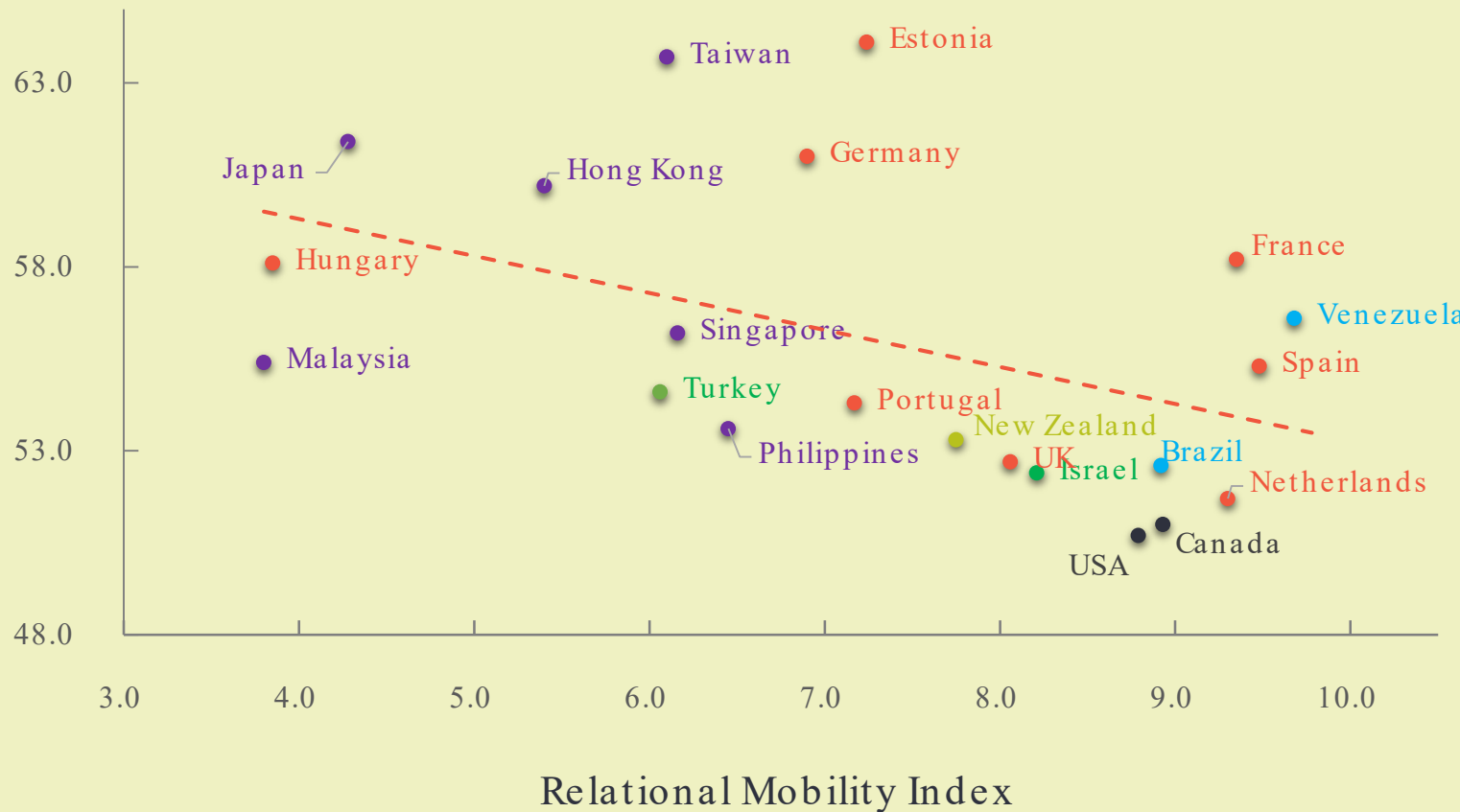


Schwartz (1994)
N = 20

Relational mobility and social cynicism

WRS Results

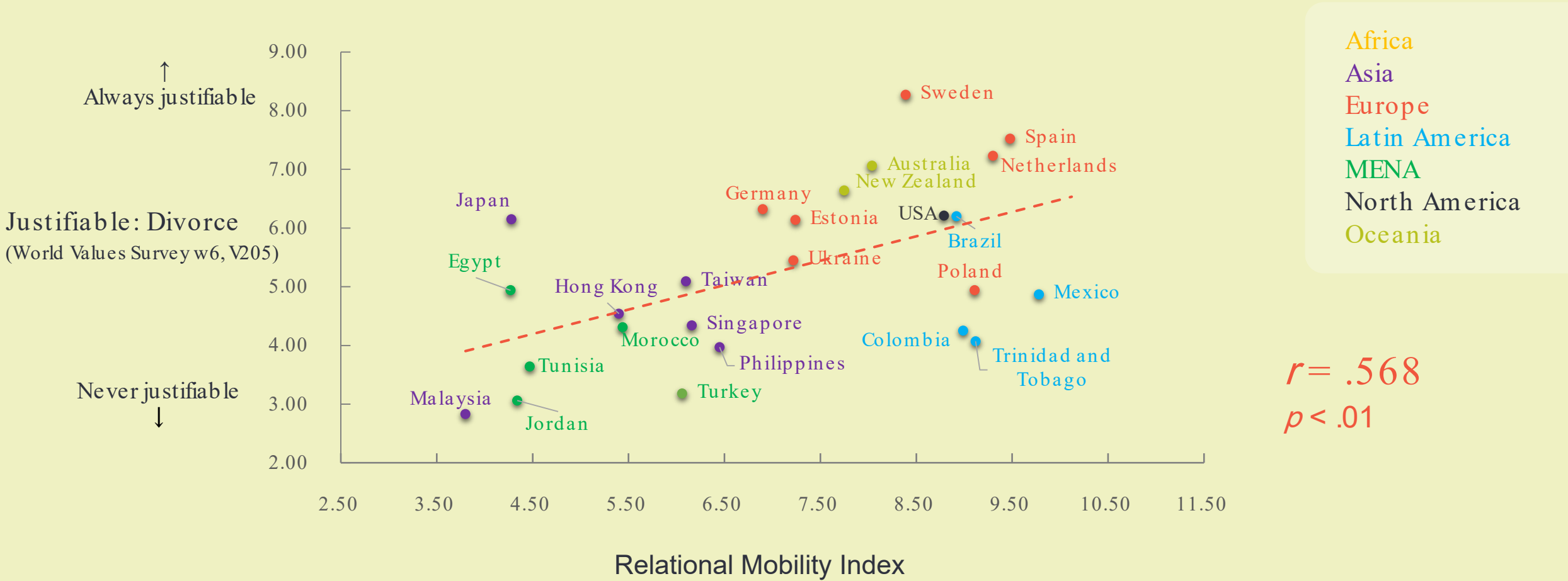
Social Cynicism Index
(Bond et al., 2004)
“Represents a negative view of human nature, especially as it is easily corrupted by power; a biased view against some groups of people; a mistrust of social institutions; and a disregard of ethical means for achieving an end.”



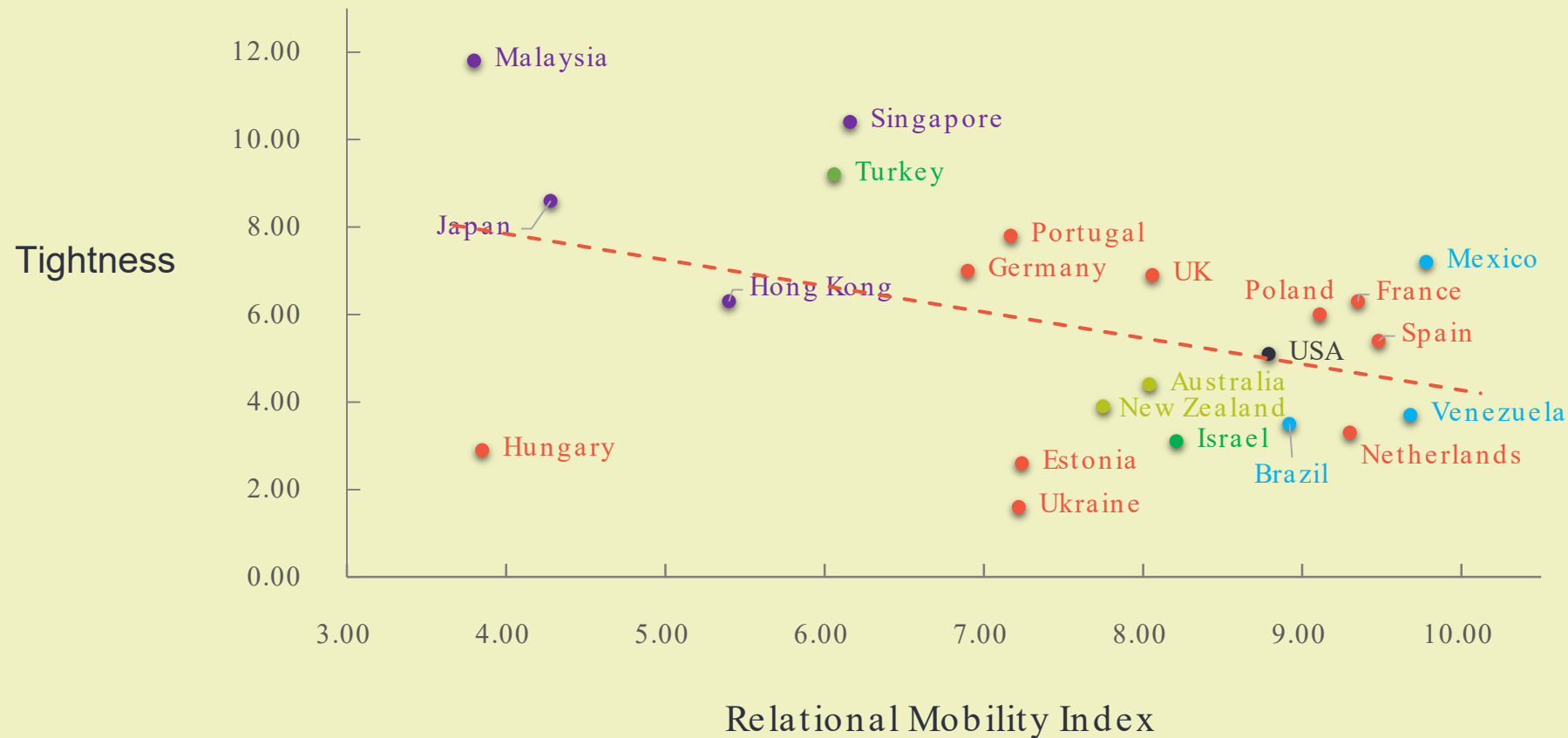
Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$r = -.460$
 $p = .04$

Relational Mobility and Justifiability of Divorce (WVS w6, 2014) (N=26)



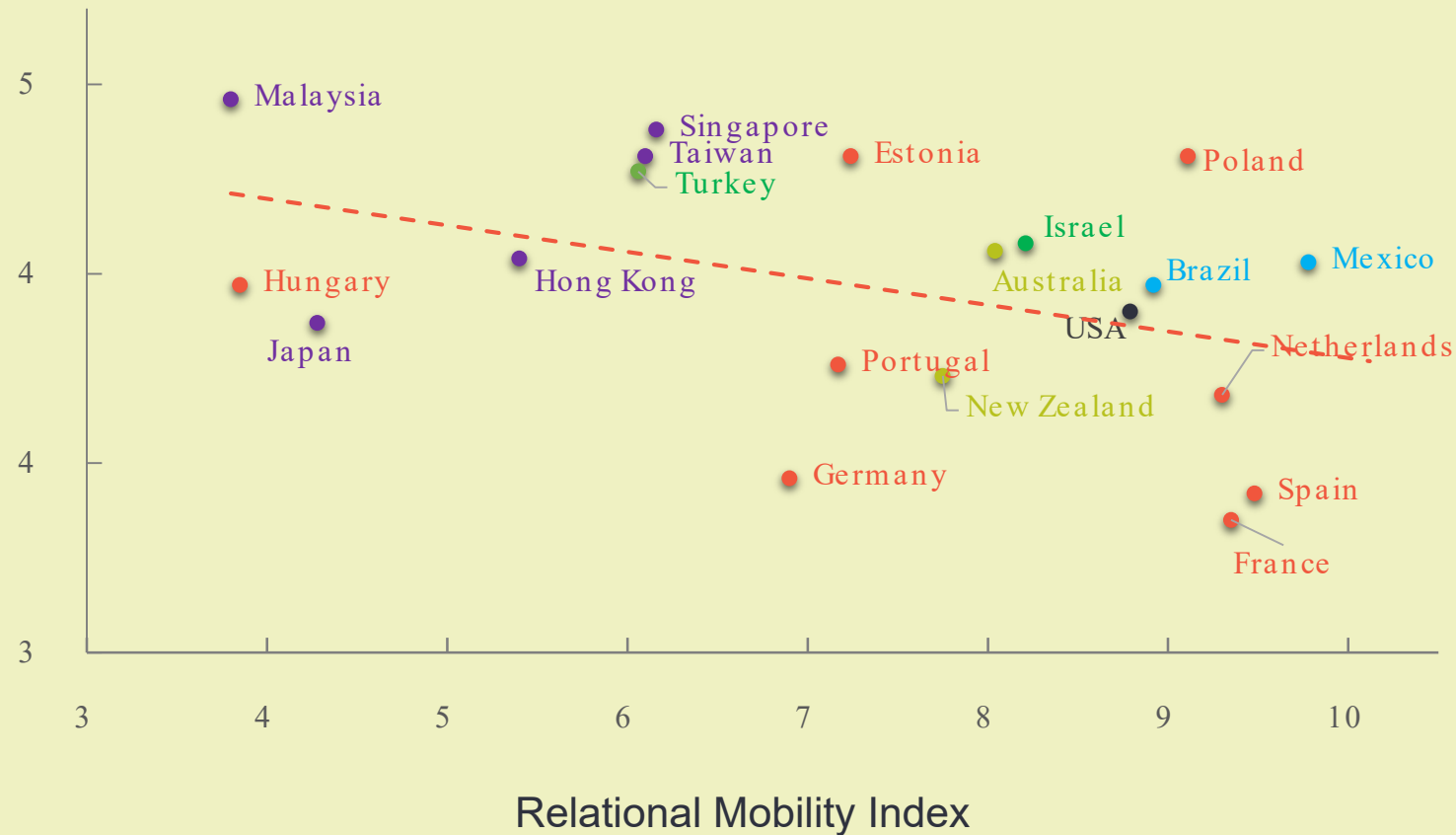
Relational Mobility and Tightness (Gelfand et al., 2011) (N=22)



$$r = -.417$$
$$p < .05$$

Embeddedness (Schwartz, 1994)

Embeddedness
Conformity with
norms, valuing
tradition, security,
obedience. Focus
on social order.



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

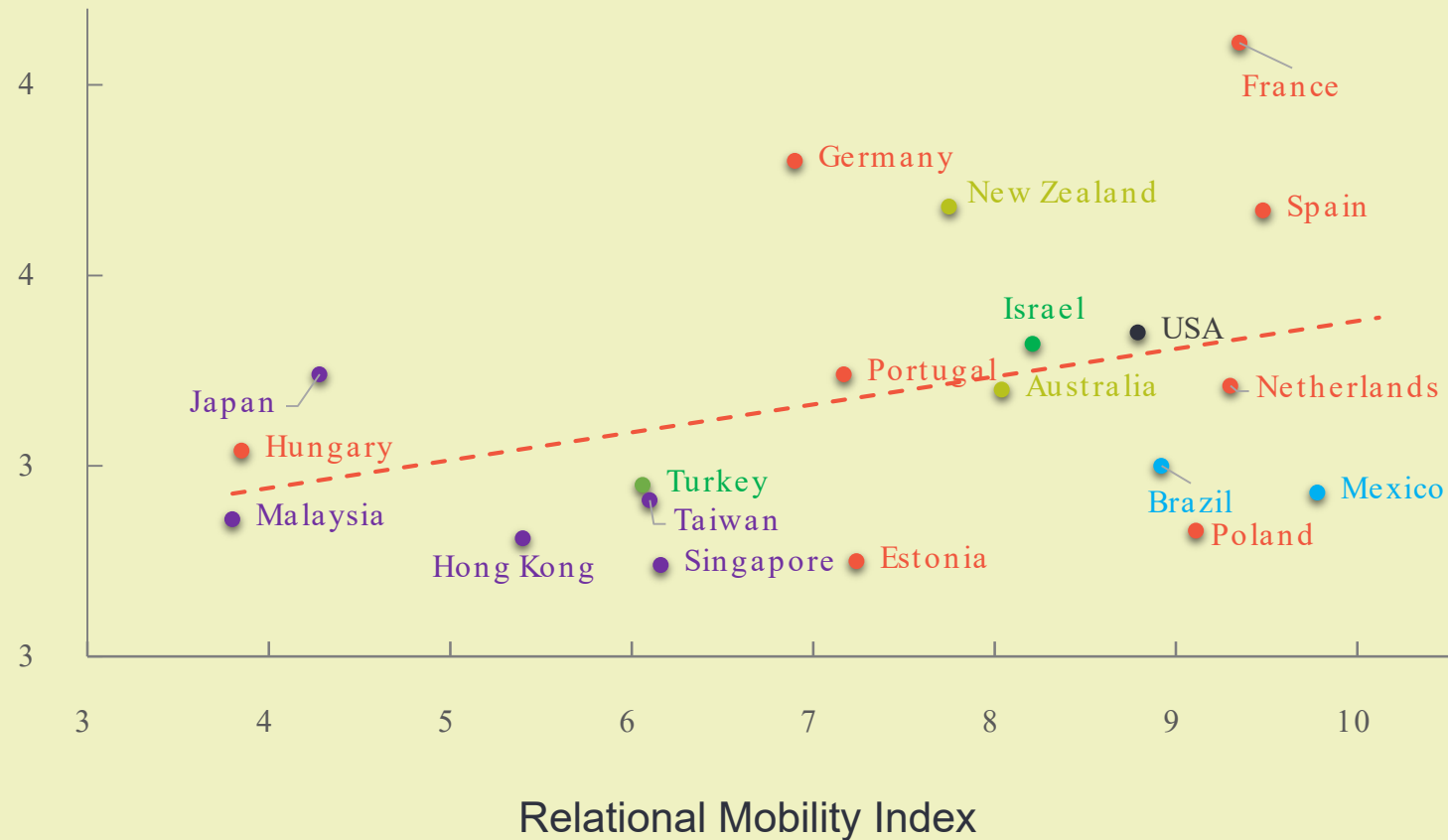
$$r = -.413$$

$$p = .07$$

$$N = 20$$

Affective autonomy (Schwartz, 1994)

Affective
autonomy
Independent
pursuit of
pleasure, seeking
enjoyment by
any means



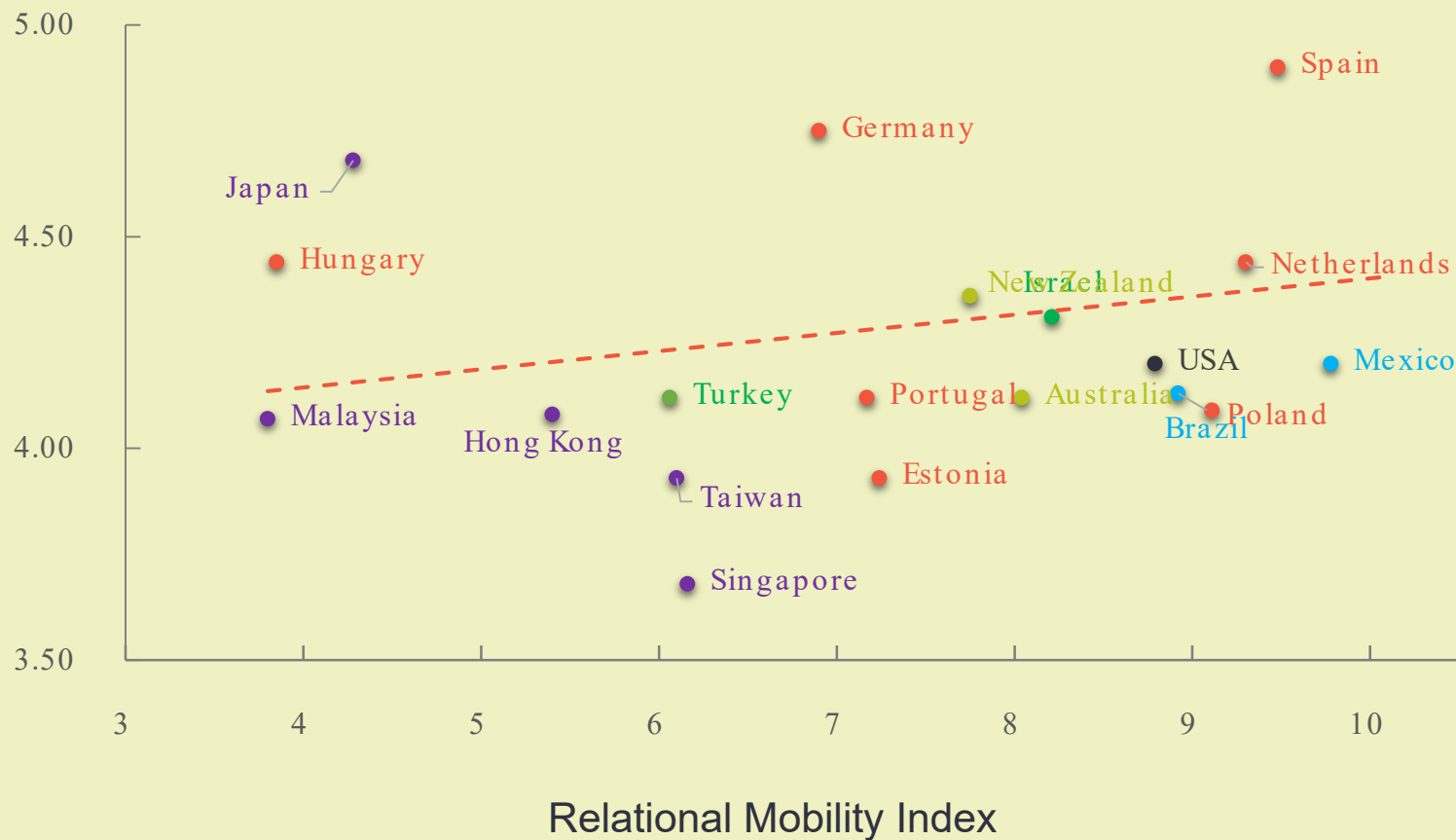
$$r = .367$$

$$p = .11$$

$$N = 20$$

Intellectual autonomy (Schwartz, 1994)

Intellectual
autonomy
Allowance for
independent
pursuit of ideas
and thought
(theoretical,
political, etc.)



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

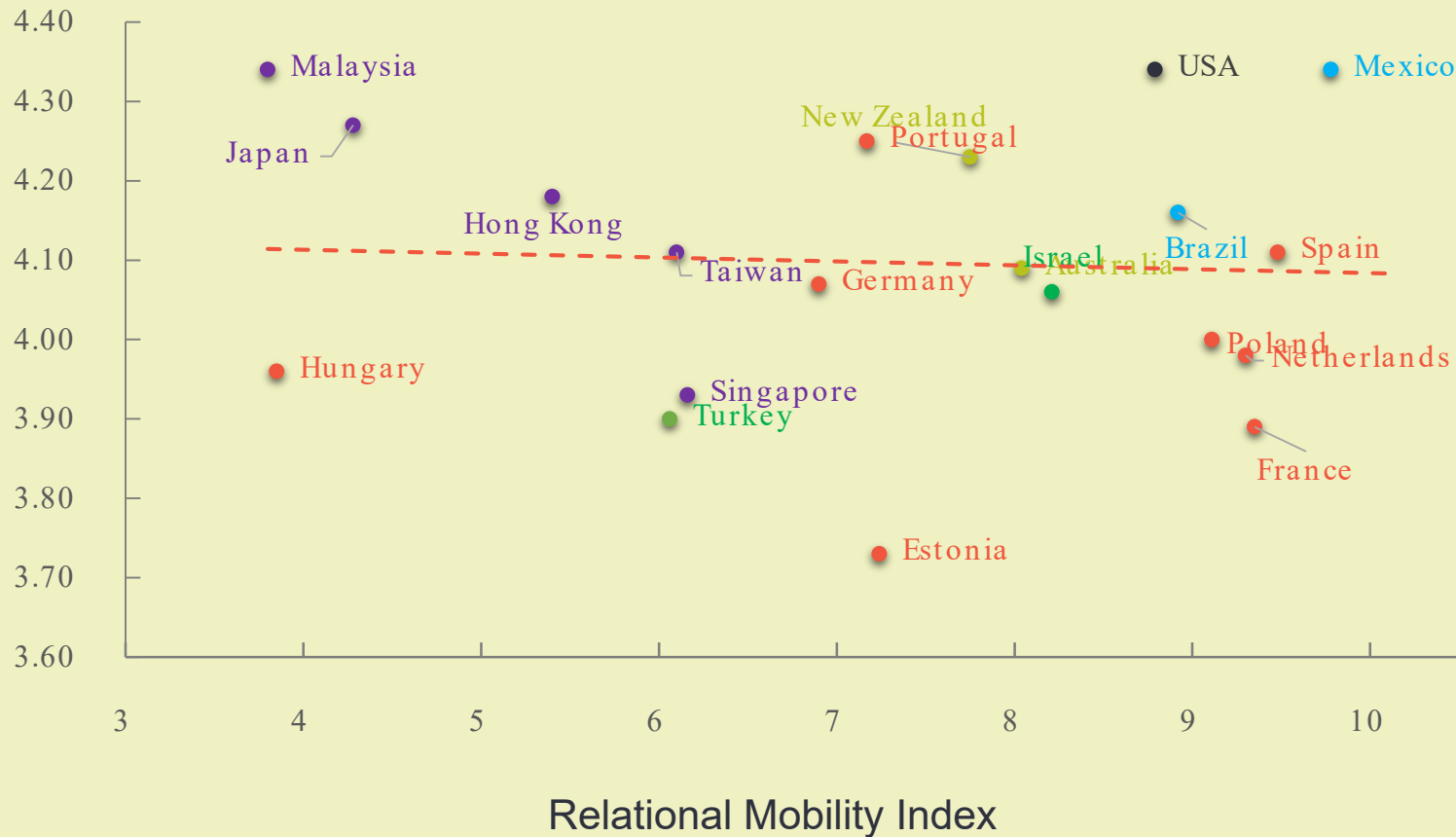
$r = .231$

$p = .33$

$N = 20$

Mastery (Schwartz 1994)

Mastery
Individuals seeking success through personal action, even at expense of others. Need for independence, courage, ambition, drive, competence.



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$$r = -.056$$

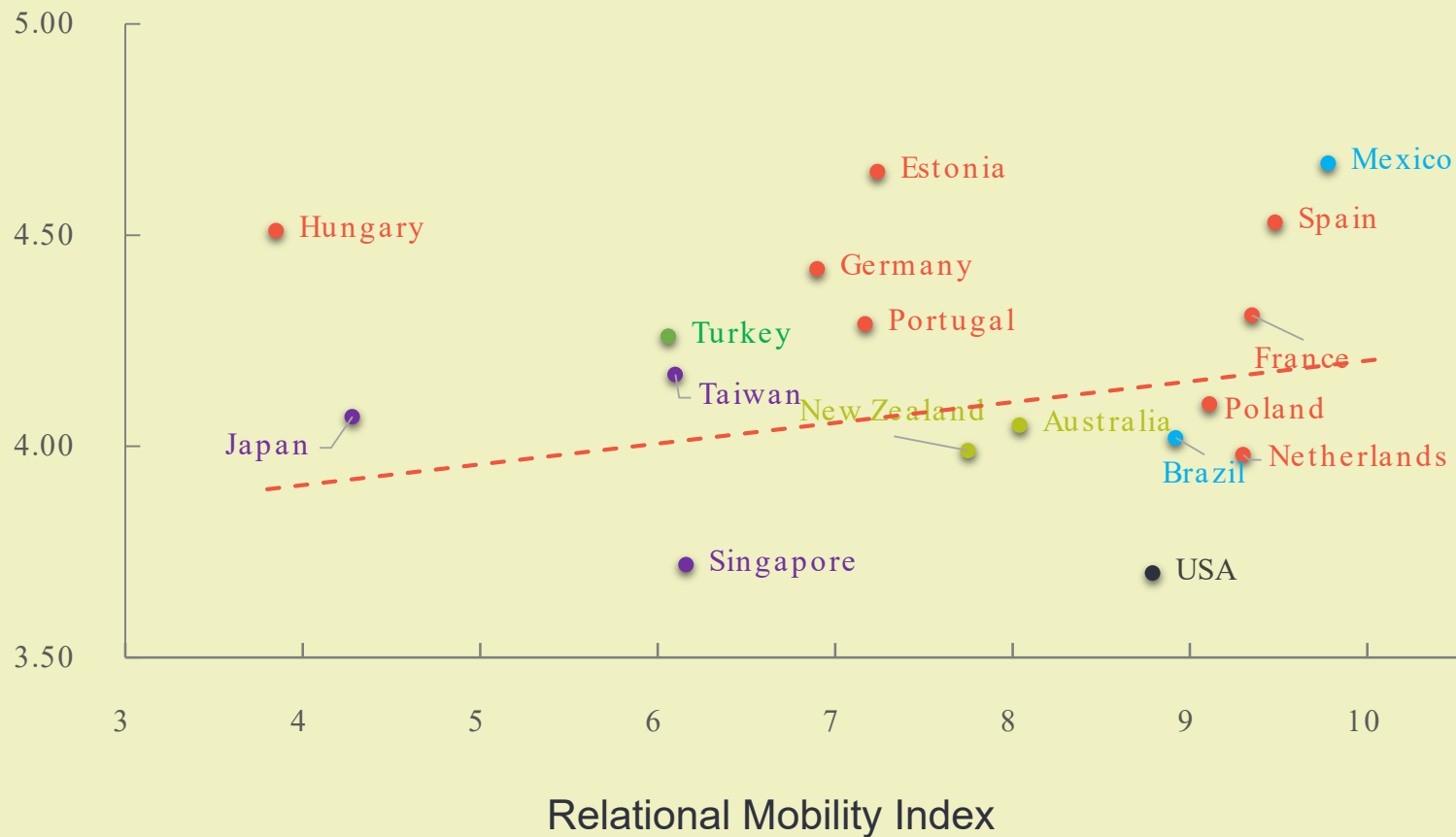
$$p = .81$$

$$N = 20$$

Harmony (Schwartz 1994)

Harmony

Individuals are happy to accept their place in the world, with high emphasis on group.



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$r = .224$

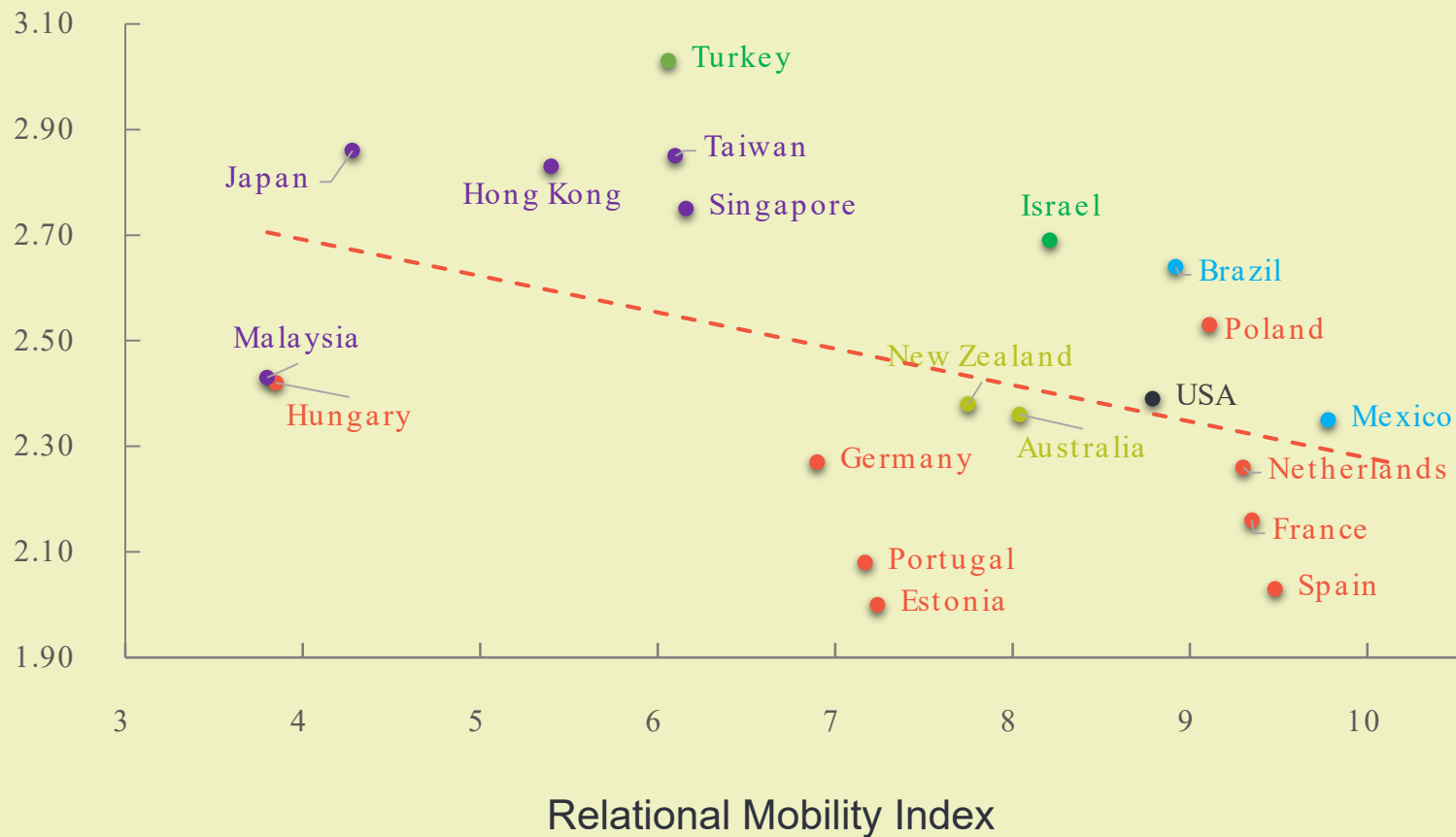
$p = .34$

$N = 20$

Hierarchy (Schwartz 1994)

Hierarchy

Clear social order,
one's place in
hierarchy is
accepted;
modesty and self-
control are
expected



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

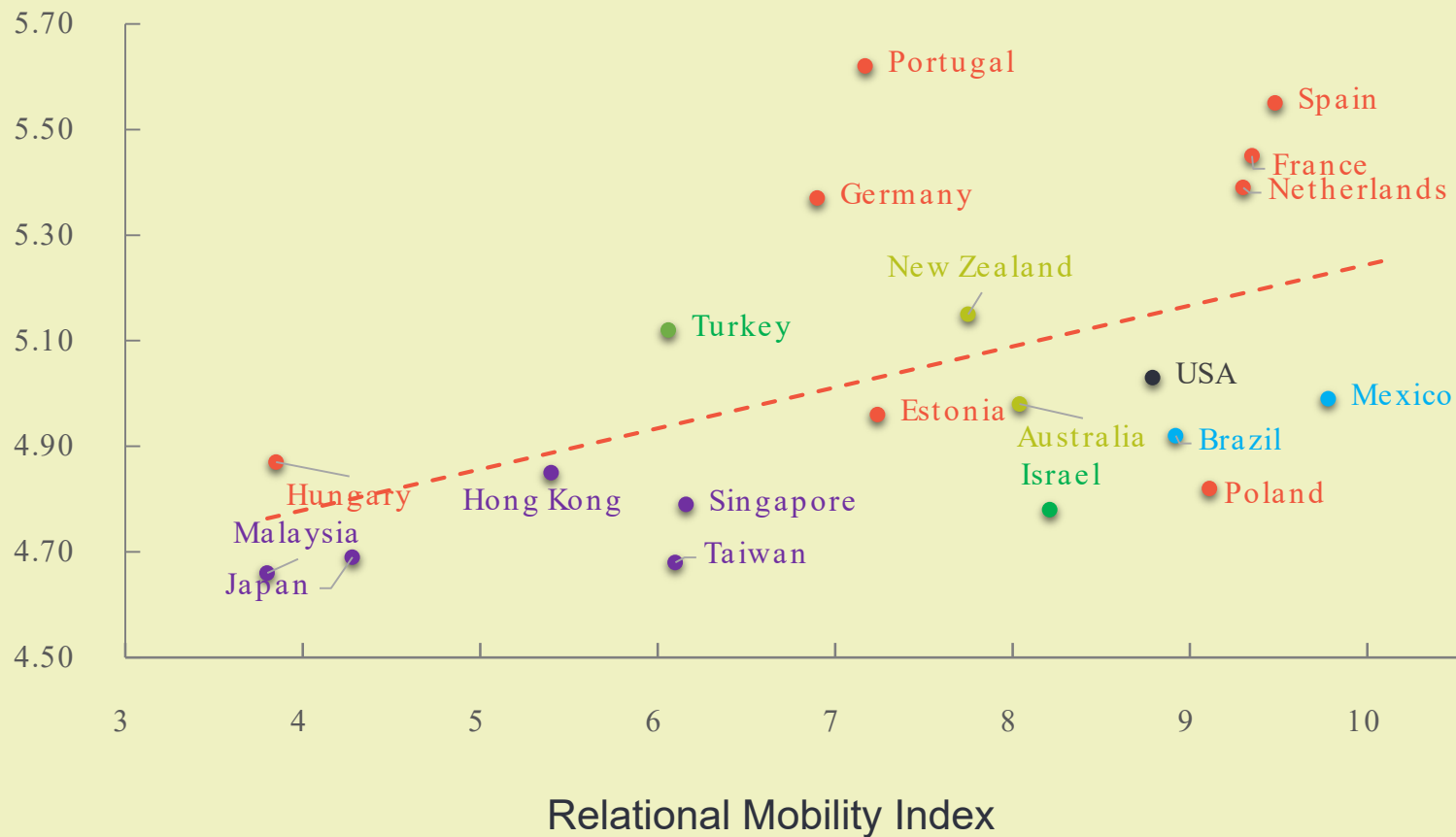
$$r = -.444$$

$$p = .05$$

$$N = 20$$

Egalitarian Commitment (Schwartz 1994)

Egalitarian
commitment
Expectation that
all are equal and
mutual concern
is important



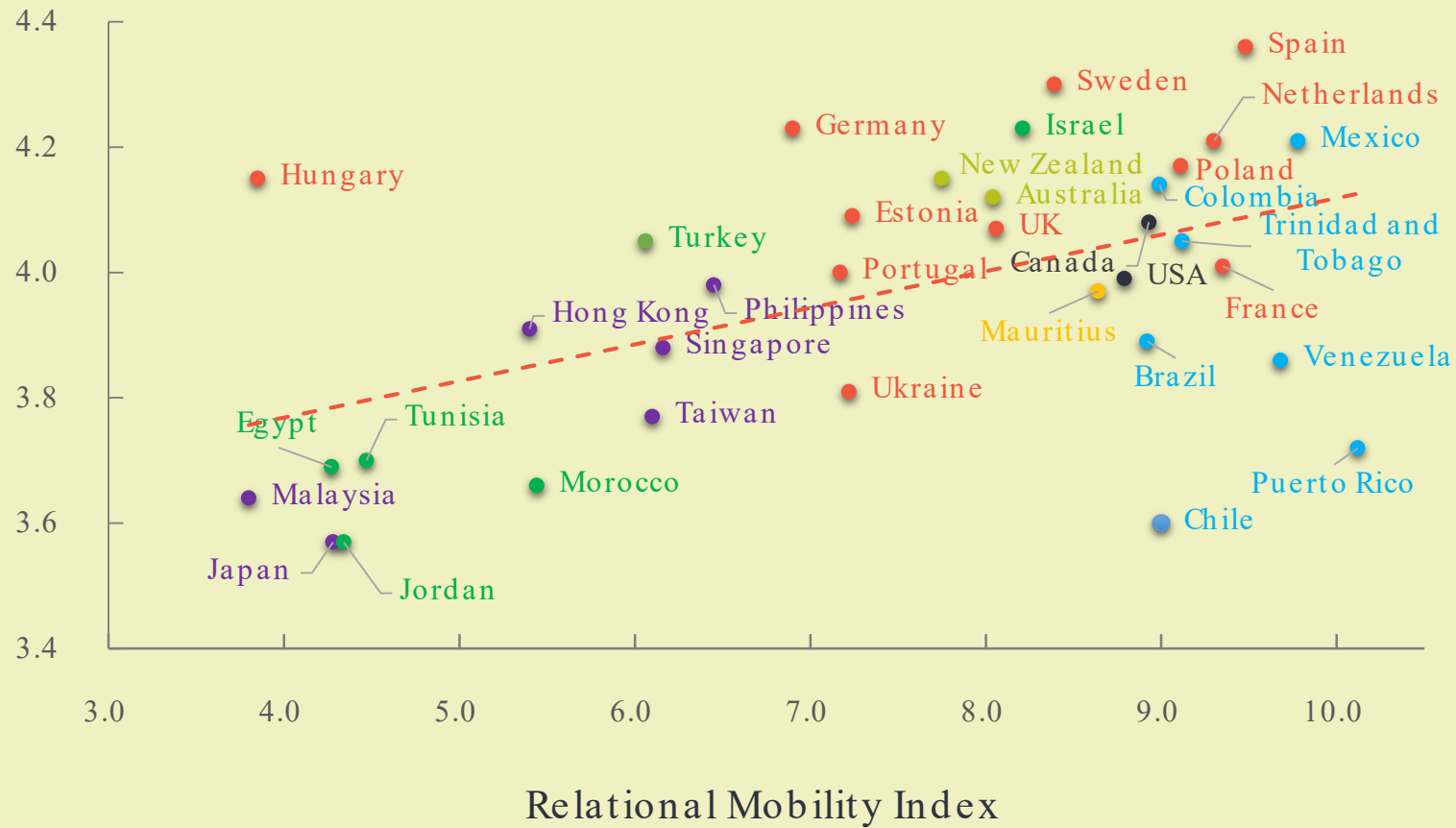
$$r = .501$$

$$p = .02$$

$$N = 20$$

TEMPLATE

Self-disclosure
to a close
friend
(scale: 1~5)



Africa
Asia
Europe
Latin America
MENA
North America
Oceania

$r = .581$
 $p < .001$

- Antecedents
- Infant mortality 1960 -2014 average $r = -.300$, $p < .10$
 - Adjusted $r = -.358$, $p = .04$
- A2012_death_disease_birth WHO $r = -.295$, $p < .10$
- 1980, 1990, 2000, 2010 agriculture value added GDP percent World Bank National accounts data and OECD National Account data files (perhaps make average)
 - 2010 $r = -.405$, $p < .05$
- 1500 real population density $r = -.366$, $p < .10$
- Adjusted pathogen prevalence 9 item $r = -.365$, $p = .04$