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Omnichannel banking and financial inclusion: thoughts and metrics

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Contents

1. **Our starting point**
2. Financial inclusion and the role of omnichannel banking
3. Access channels, use and financial inclusion: some metrics
4. From omnichannel banking to digital banking: future transformations
5. Conclusions

Omnichannel banking

- This involves being close to the financial customer at all times and in all places for whatever the customer needs, whenever they need it
- Any kind of intermediation possible, whatever the channel
- Implies multiplying the value of both traditional and new channels. The jump from multi-channel. High leverage of technology
- Different channels: branches, correspondents, ATMs, Internet, mobile phone transactions, telephone banking, Smartphones, diverse mobile devices and future technologies
- A way of fostering financial inclusion?

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Omnichannel banking and technological development

- The transfer to omnichannel banking has been heavily reliant on technological progress and digital change
- Greater storage capacity, speed, new platforms and new technologies
- Gradual regulatory adaptation
- Improves the financial customer experience
- Note: The technology underpinning omnichannel banking also gives scope for non-banking, digital players to enter banking
- New channels and the option of incorporating the non-banked

Financial inclusion, technology and omnichannel banking

- An important factor if households and companies are to continue sustained growth : better and more timely risk and resource management

- Financial exclusion, which is of particular concern in emerging markets, is a result of issues relating to use, access and the barriers to participating in the formal financial system

- Technology means financial services can be offered at a lower cost, with the potential to be everywhere and be better adapted to the customer’s needs

Financial inclusion, technology and omnichannel banking

- Lack of access to financial services can lead to the vicious circle of poverty and greater inequality (Banerjee & Newman, 1993; Galor & Zeira, 1993; Aghion & Bolton, 1997; Beck Demirguc-Kunt & Levine, 2007)

- Providing access to financial instruments increases saving (Aportela, 1999; Ashraf et al., 2010), productive investment (Dupas & Robinson, 2009), consumption (Dupas & Robinson, 2009; Ashraf et al., 2010b) and women's empowerment (Ashraf et al., 2010)

- Access to credit and to insurance has positive effects but the empirical evidence is less robust (Karlan & Morduch, 2010; Banerjee et al., 2010; Roodman , 2012)

Contents

1. Our starting point
2. **Financial inclusion and the role of omnichannel banking**
3. Access channels, use and financial inclusion: some metrics
4. From omnichannel banking to digital banking: future transformations
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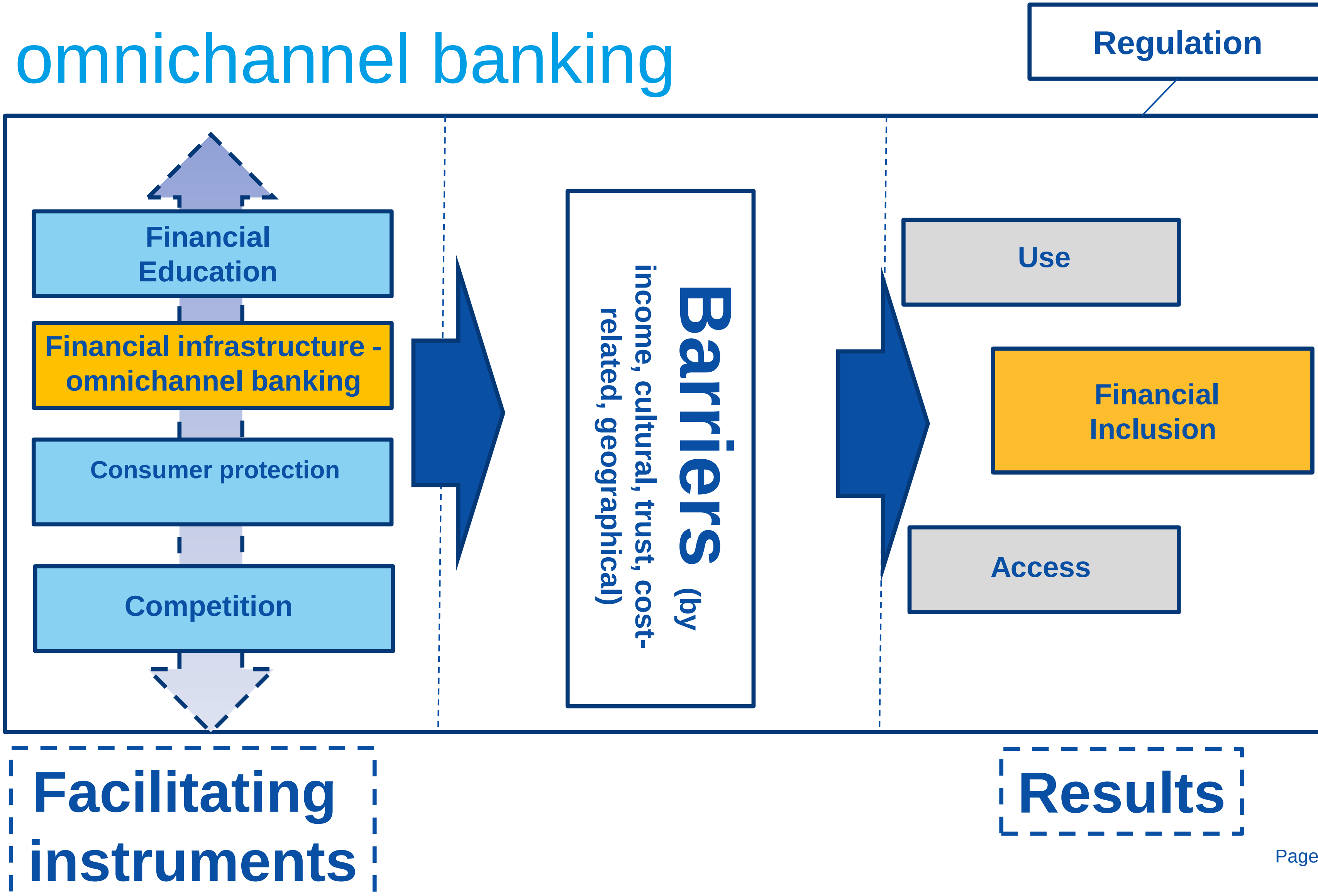
Towards financial inclusion and the role of omnichannel banking



Omnichannel banking: issues to bear in mind

- Omnichannel banking particularly affects access to the financial system, but that does not necessarily lead to greater use of, or interaction with, this system
- The financial and technological landscape and its applications in omnichannel banking are a necessary but not a sufficient condition for increasing the use of formal financial services: other factors must be considered when designing policies to improve financial inclusion
- Instruments that might support greater financial inclusion have to overcome the barriers excluding participation in the financial system; these tend to be country-specific

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Contents

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2. Financial inclusion and the role of omnichannel banking
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5. Conclusions

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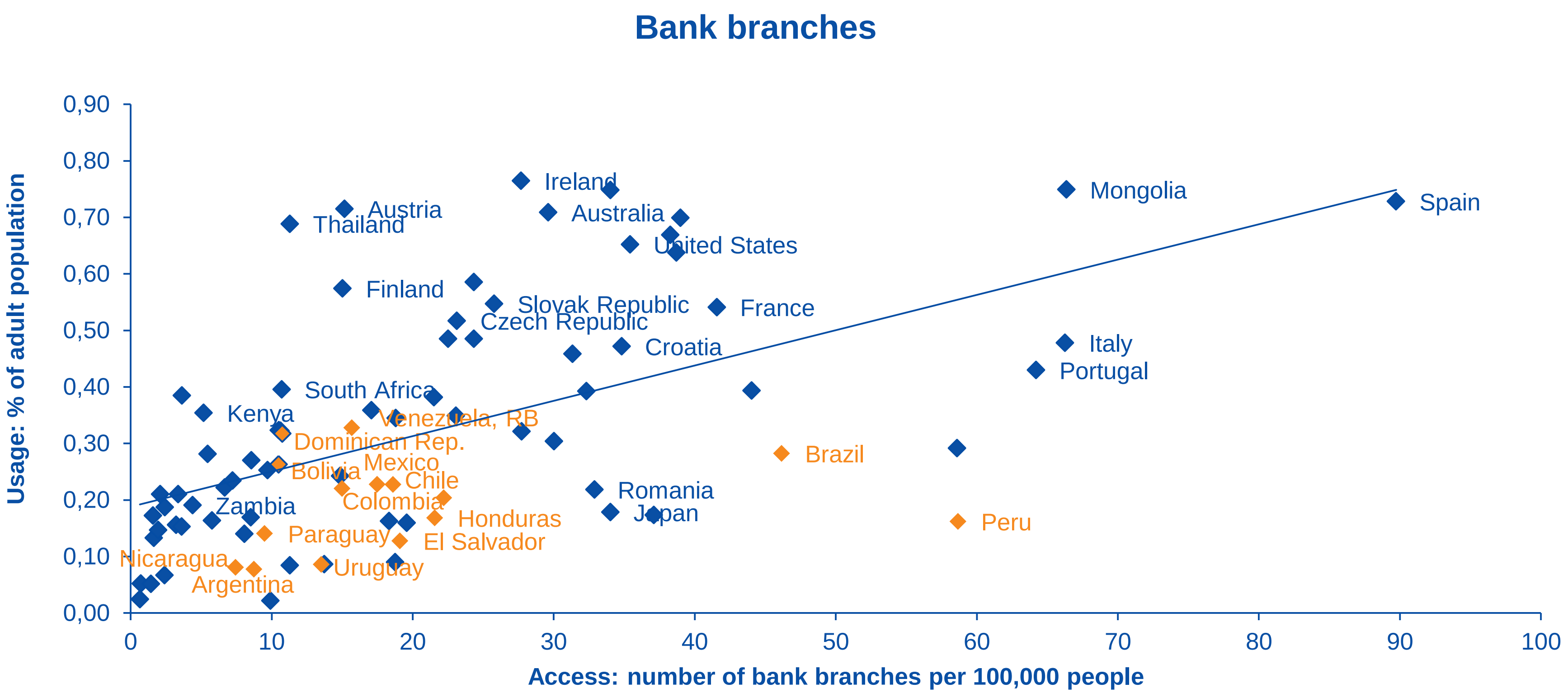
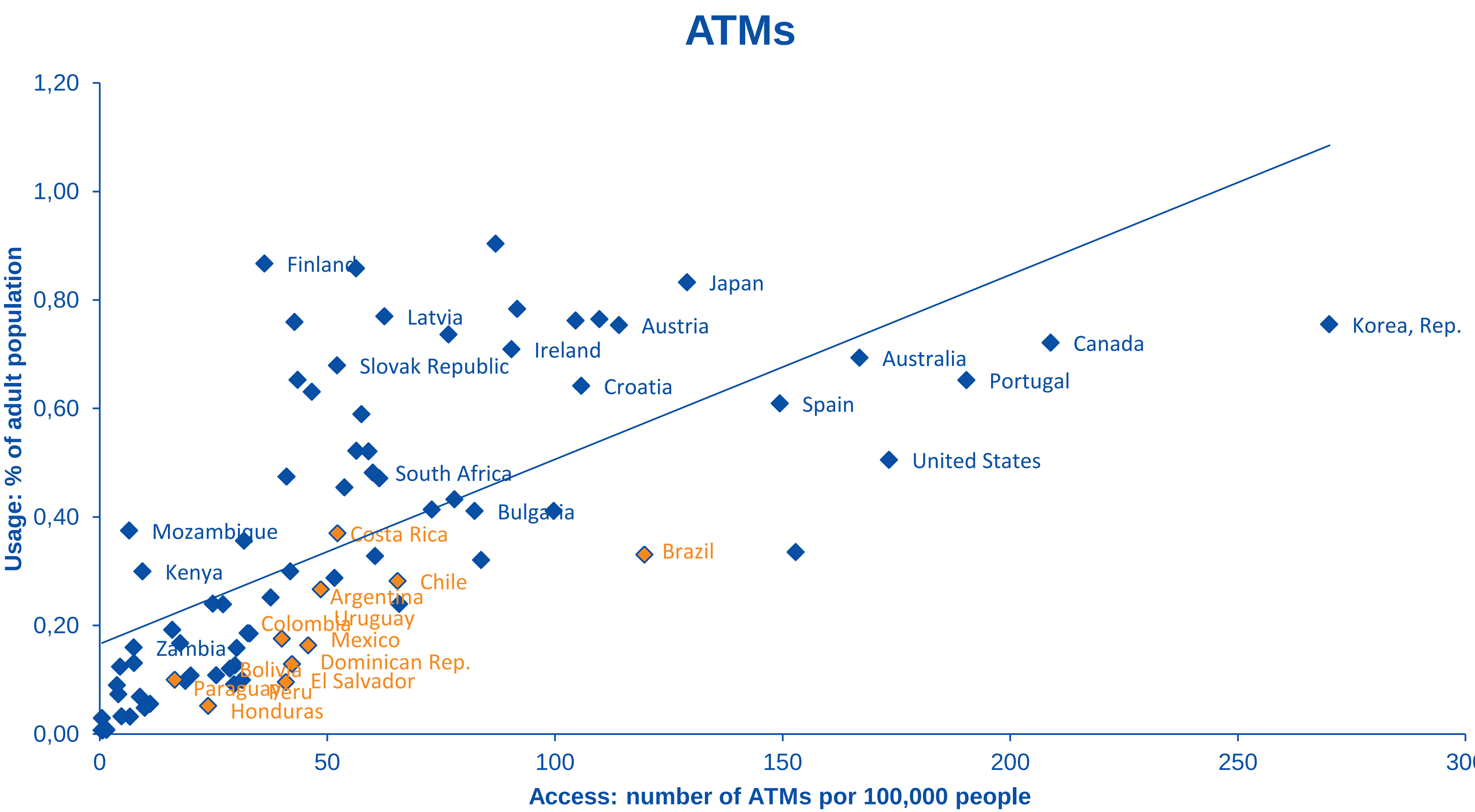
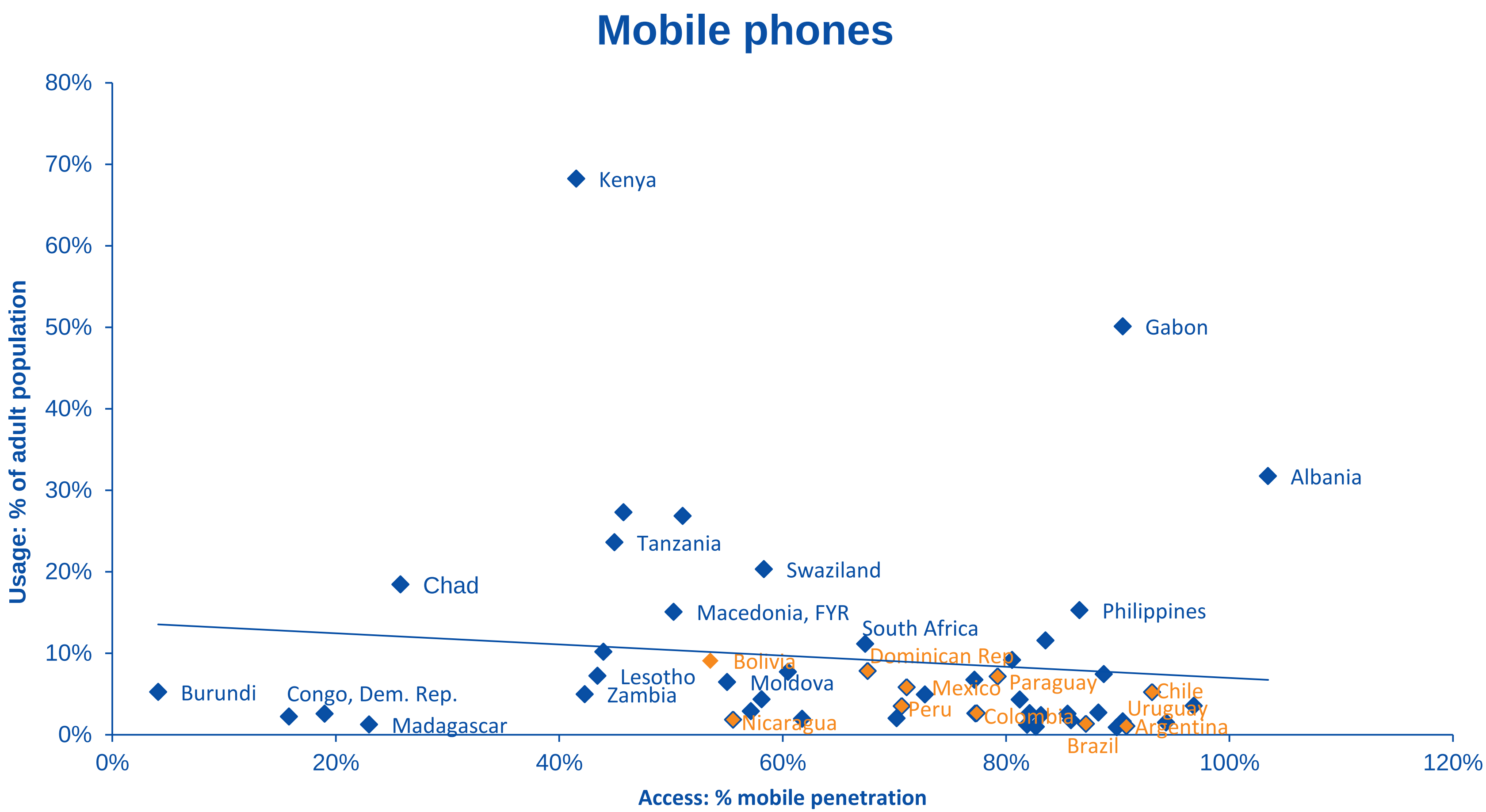
Access and use: bank branches



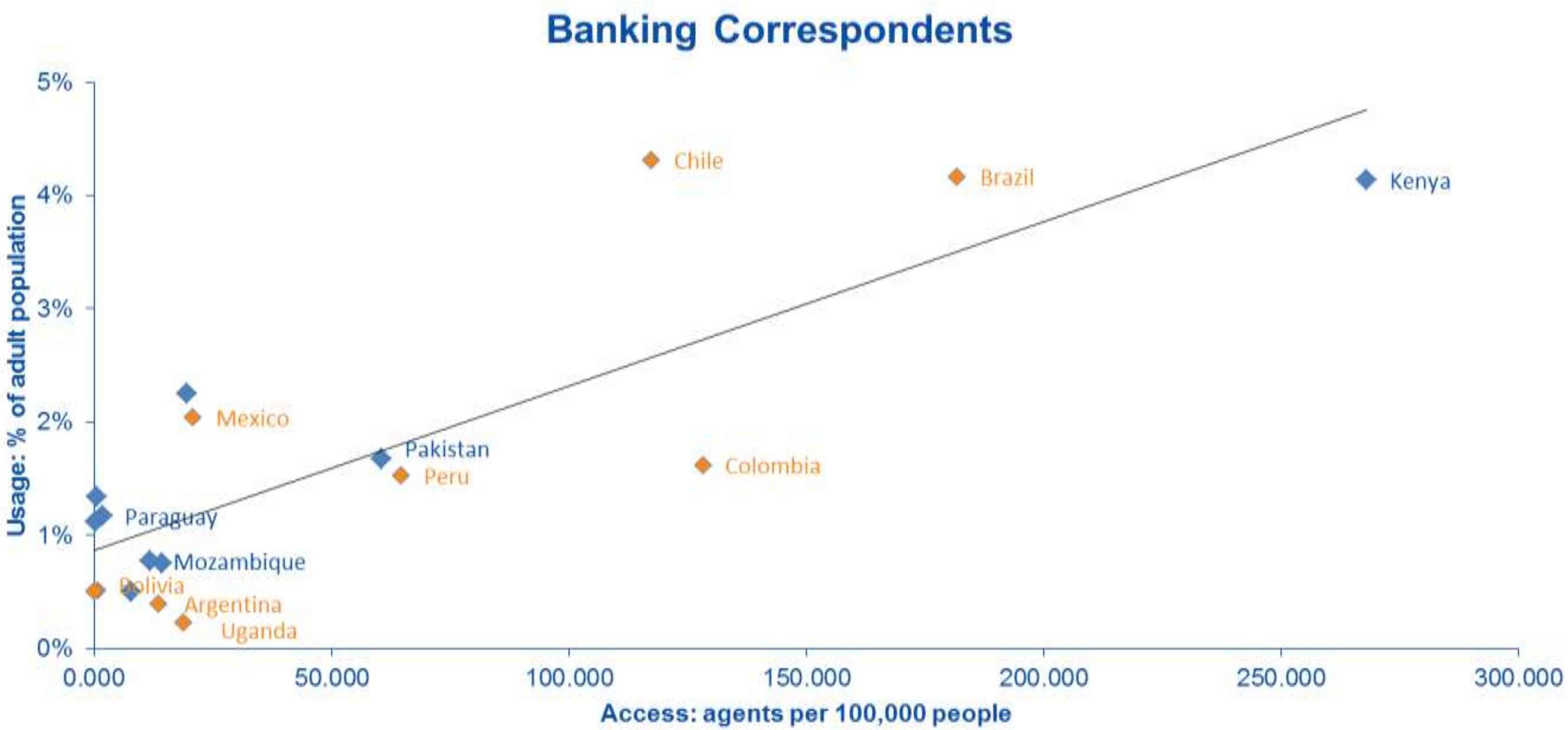
Access and use: ATMs



Access and use: mobile phones



Access and use: correspondents



How to measure financial inclusion? What factors affect it? What part do access channels play?

- Despite the importance of financial inclusion, little is known about how to measure it, about policies to promote it (Demirguc-Kunt et al., 2008) and its determinants from a micro-economic point of view (Allen, Demirguc-Kunt, Klapper & Martinez Peria, 2012)
- Existing studies lean heavily on macroeconomic data (Beck, Demirguc-Kunt, & Martinez Peria, 2007; Honohan, 2008; Kendall, Mylenko & Ponce, 2010). This makes it difficult to analyse to what extent specific features determine financial inclusion
- How much weight do the different factors facilitating greater financial inclusion have? How does inclusion interact with other factors? Developing a Financial Inclusion Index

Building a financial inclusion index

- Defining a complete set of measurements for financial inclusion with a multi-dimensional approach (access, usage and barriers)
- Harmonised financial inclusion index that can be compared between countries and time periods, allowing differing levels of aggregation
- Useful guideline for policymakers, governments, financial institutions and international bodies interested in tracking financial inclusion or in designing policies

Financial Inclusion Index (FII)

- We define an inclusive financial system as one which maximises usage and access, while also minimising involuntary financial exclusion
- The minimisation of perceived barriers is measured by the reduction of the obstacles faced by individuals not participating in the formal financial system
- The level of financial inclusion is determined by three dimensions: usage, access and barriers
- The three dimensions are, in their turn, determined by several indicators
- The FII we have built covers 82 countries and aggregates information from a total of 11 indicators
- Methodology : Two-step PCA

Financial Inclusion Index

- First step: estimating the three dimensions: usage, access and barriers

$$Y_i^u = \beta_1 account_i + \beta_2 savings_i + \beta_3 loan_i + u_i$$

$$Y_i^a = \gamma_1 ATMpop_i + \gamma_2 branchpop_i + \gamma_3 loanATMkm2_i + \gamma_4 loanbranchkm2_i + v_i$$

$$Y_i^b = \theta_1 distance_i + \theta_2 affordability_i + \theta_3 docuents_i + \theta_4 trust_i + \varepsilon_i$$

i : denotes country and (Y_i^u, Y_i^a, Y_i^b) is a vector which contains the dimensions, where the superscripts *u, a* and *b* denote each dimension

- Second step: estimating the weights of the dimensions and the overall FI index

Financial Inclusion Index

PRINCIPAL COMPONENT ESTIMATES

Financial Inclusion Index				
Variable	PC_1	PC_2	PC_3	norm. weight
Usage	0.5775	-0.5758	0.5787	0.29
Access	0.5437	0.8001	0.2535	0.42
Barriers	0.609	-0.1682	-0.7752	0.28
Eigenvalues	2.2805	0.4855	0.2339	

Notes: The weights are normalised add up to 1

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Financial Inclusion Index

Financial Inclusion Index Country Ranking

Country	rank	Country	rank	Country	rank
Korea, Rep.	1	Brazil	29	Colombia	57
Spain	2	Russian Federation	30	Mozambique	58
Portugal	3	Macedonia, FYR	31	Ukraine	59
Belgium	4	Lithuania	32	Angola	60
Japan	5	Bosnia and Herzegovina	33	El Salvador	61
Canada	6	Malaysia	34	Honduras	62
France	7	Hungary	35	Moldova	63
United States	8	Romania	36	Bolivia	64
Australia	9	Costa Rica	37	Swaziland	65
New Zealand	10	Dominican Republic	38	Mexico	66
Denmark	11	Belarus	39	Philippines	67
Italy	12	Albania	40	Ghana	68
Netherlands	13	Georgia	41	Indonesia	69
Mongolia	14	Turkey	42	Pakistan	70
Slovenia	15	Uruguay	43	Nicaragua	71
Sweden	16	Kazakhstan	44	Gabon	72
Ireland	17	South Africa	45	Botswana	73
Croatia	18	Armenia	46	Zambia	74
Finland	19	Vietnam	47	Burundi	75
Austria	20	Venezuela, RB	48	Cameroon	76
Thailand	21	Chile	49	Uganda	77
Greece	22	Peru	50	Tanzania	78
Estonia	23	India	51	Lesotho	79
Bulgaria	24	Paraguay	52	Madagascar	80
Slovak Republic	25	Azerbaijan	53	Chad	81
Latvia	26	Kenya	54	Congo, Dem. Rep.	82
Poland	27	Nepal	55		
Czech Republic	28	Argentina	56		

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Contents

1. Our starting point
2. Financial inclusion and the role of omnichannel banking
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4. **From omnichannel banking to digital banking: future transformations**
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The digital era: beyond omnichannel banking

With the digital era, financial services provision is extending beyond the classic financial institutions. There are several vectors of change :

1. Moore's Law and cost-reductions in "doing banking"
2. Demographic shifts and digital natives
3. The learning curve of digital players transforming industries as they go
4. The incentives of high financial transaction costs and the development of financial services by non-banking digital players
5. Fixed cost barriers crashing down
6. Asymmetric regulation/supervision
7. The technological legacy of banking

The digital era: beyond omnichannel banking

- The consumer experience is now exposed not only to what is offered by the supervised financial institution, but also to new digital alternatives from non-banking players. Financial education is key in this context
- Payment systems, electronic money and facilitators
  - Telecoms companies
  - Pure digital: PayPal (USD350mn transactions/day), Dwolla (USD35mn), AliPay (USD400mn/day), Square (USD14bn/year), Venmo, LevelUp, Simple, among others
- Loans
  - Lending Club (USD5bn P2P/ 3% NPL), Zopa (GBP500mn/0.5% NPL), Lenddo (loans of USD400 to USD800 in emerging markets)

Contents

1. Our starting point
2. Financial inclusion and the role of omnichannel banking
3. Access channels, use and financial inclusion: some metrics
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Conclusions

- The transfer of the traditional financial system to omnichannel banking is based on technological progress, which have brought improved customer experiences (higher aggregate value)
- Omnichannel banking, with the development of its customer service channels, is a necessary but not a sufficient condition for driving financial inclusion. Greater access will not inevitably bring with it greater use. There are other important issues
- We are developing a global FII to make a multi-dimensional approach to the measurement of financial inclusion
- Financial inclusion requires effort to improve use and access and reduce the barriers limiting participation in the formal financial system
- Omnichannel banking can be understood as a transition phase from the traditional financial system to the next, truly digital experience, with new players on the global stage

Thank you very much

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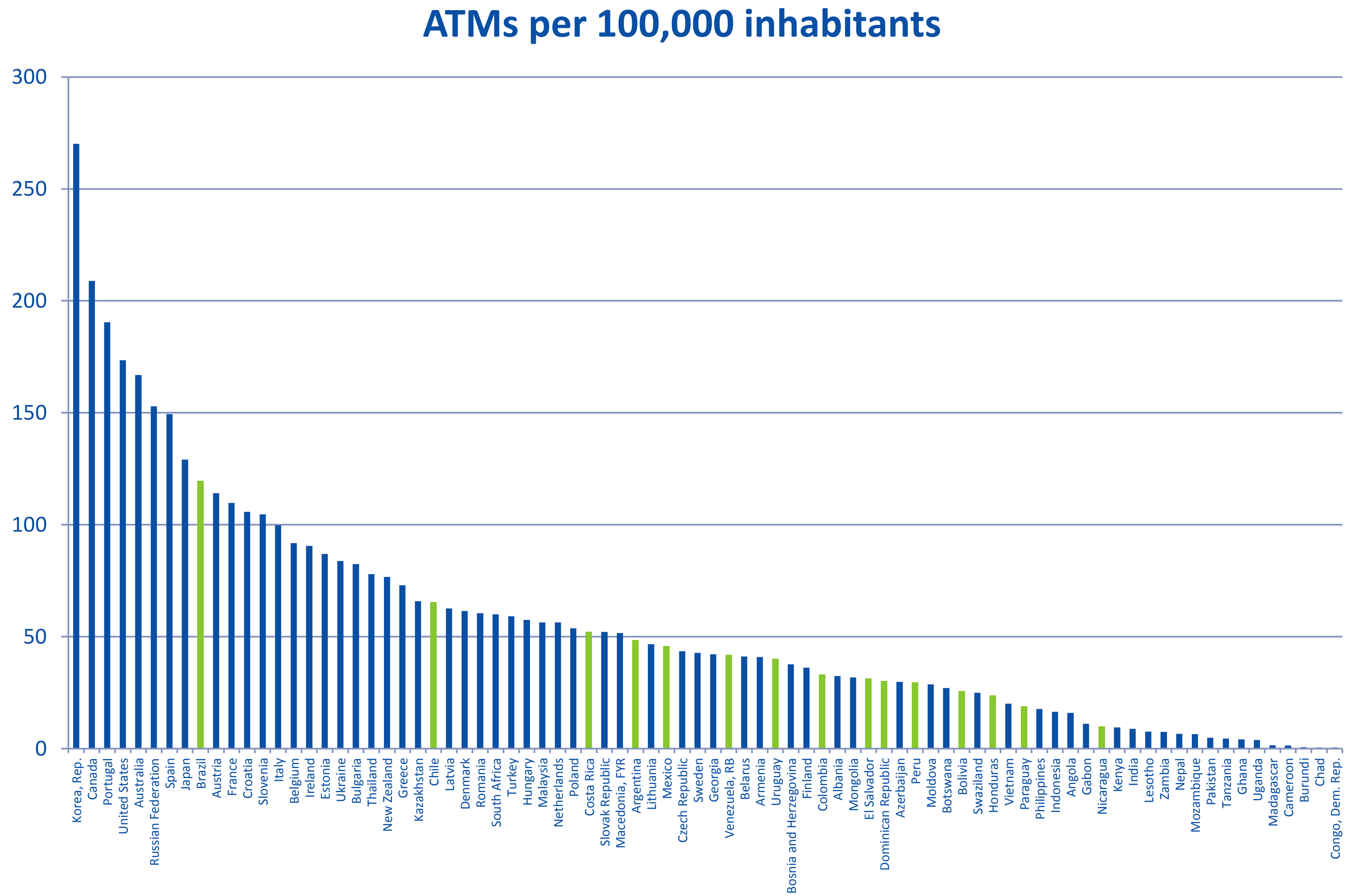
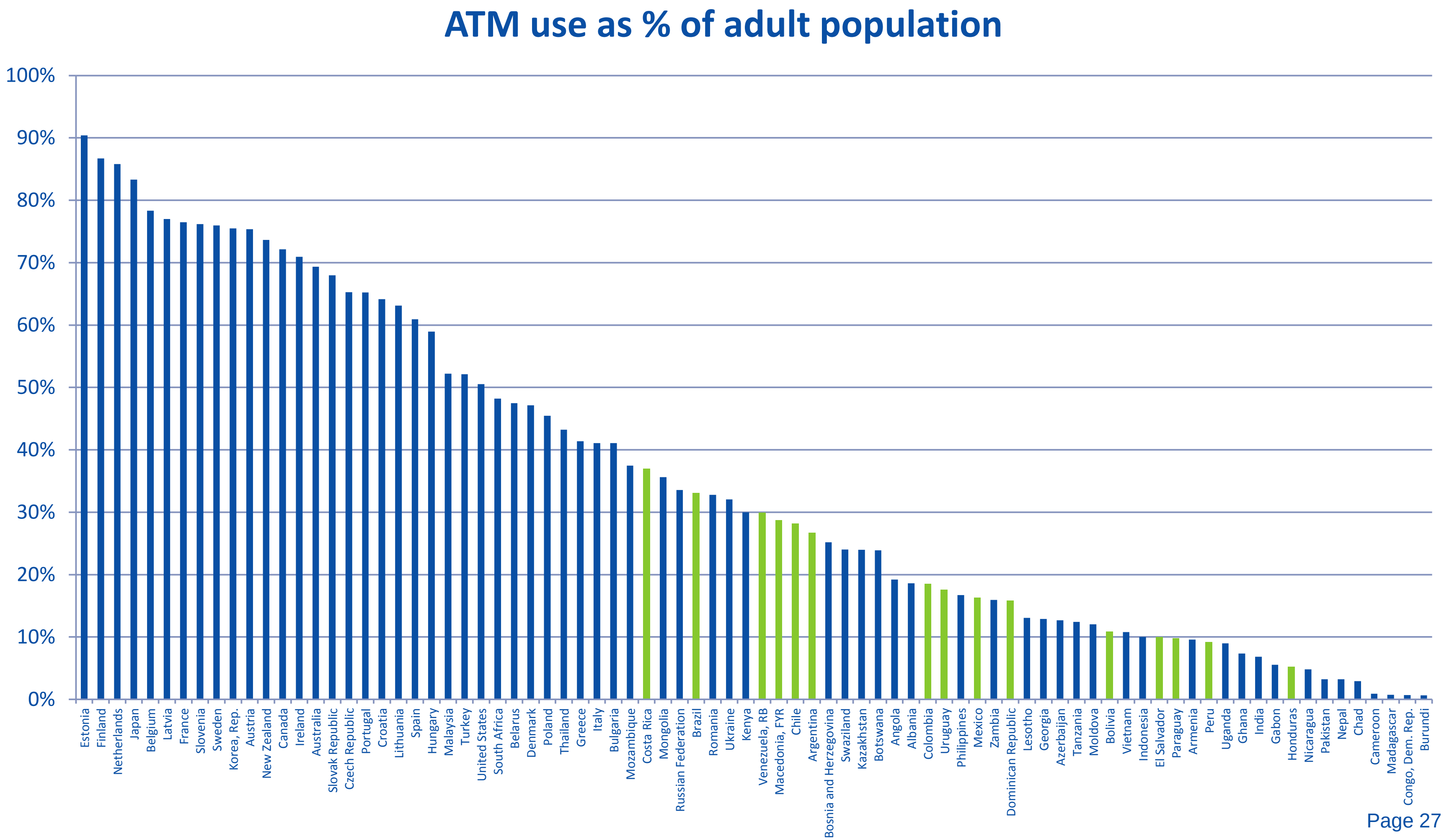
Channels, access and use

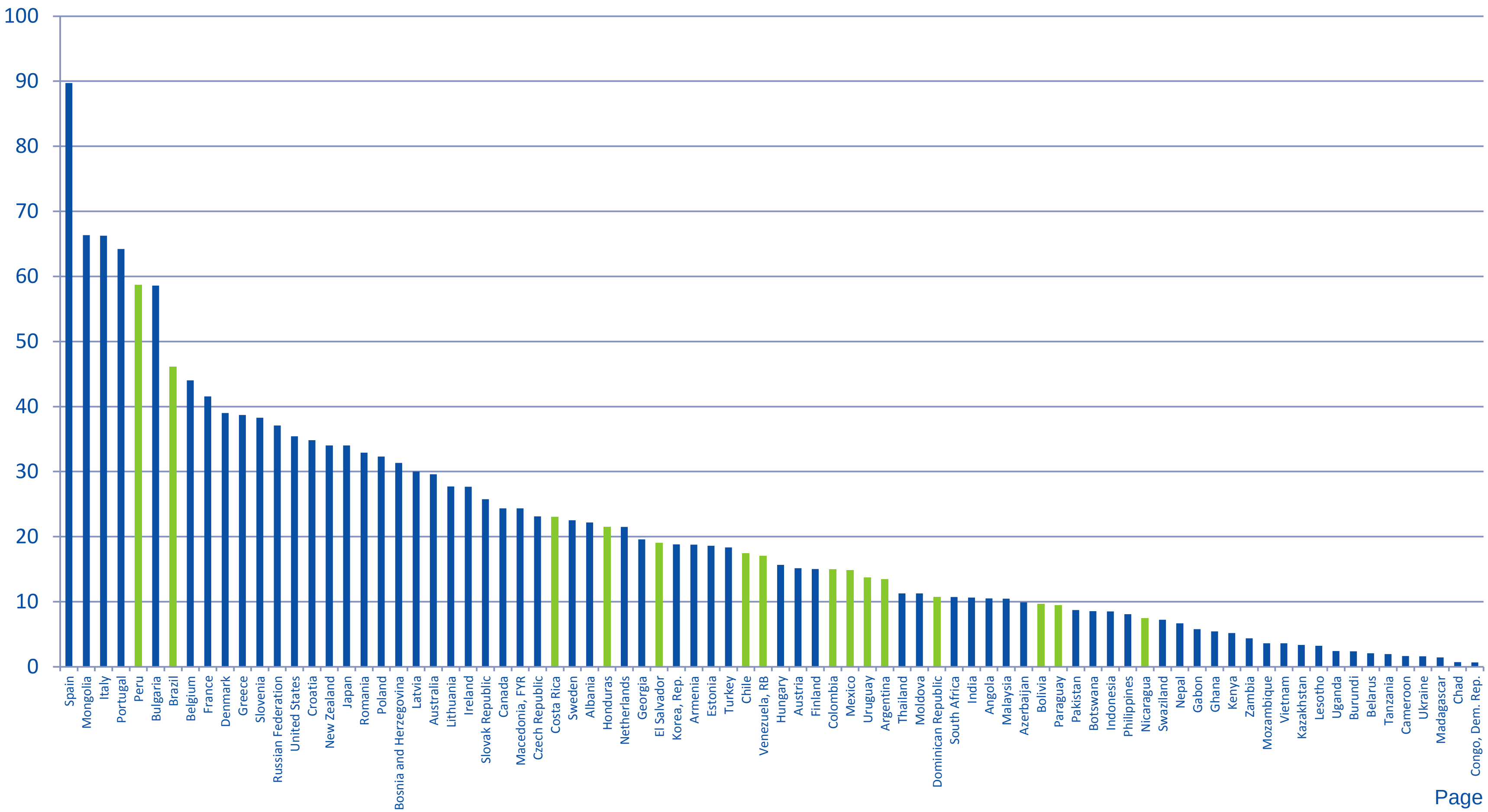


Channels, access and use

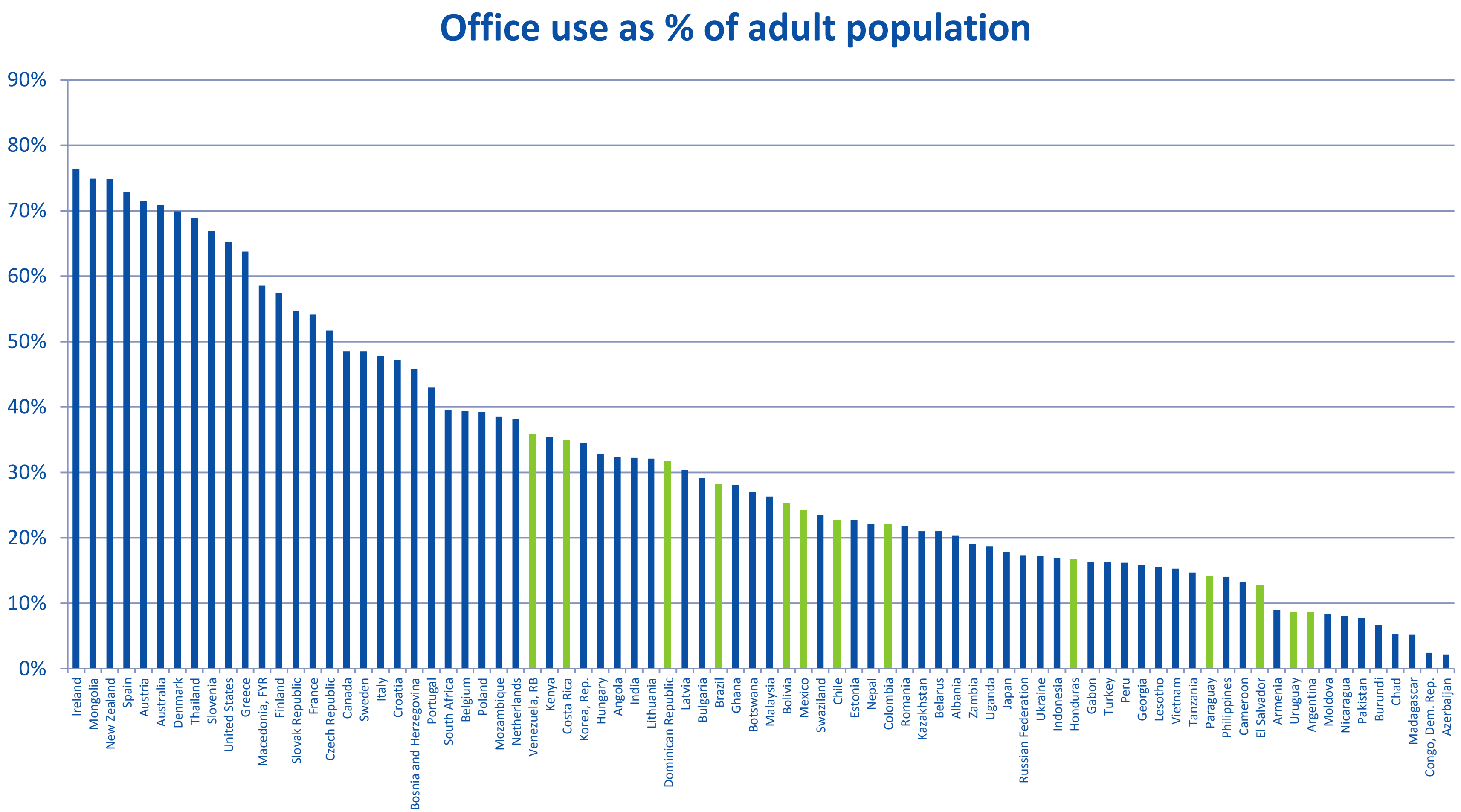


Channels, access and use

Offices per 100,000 inhabitants



Channels, access and use



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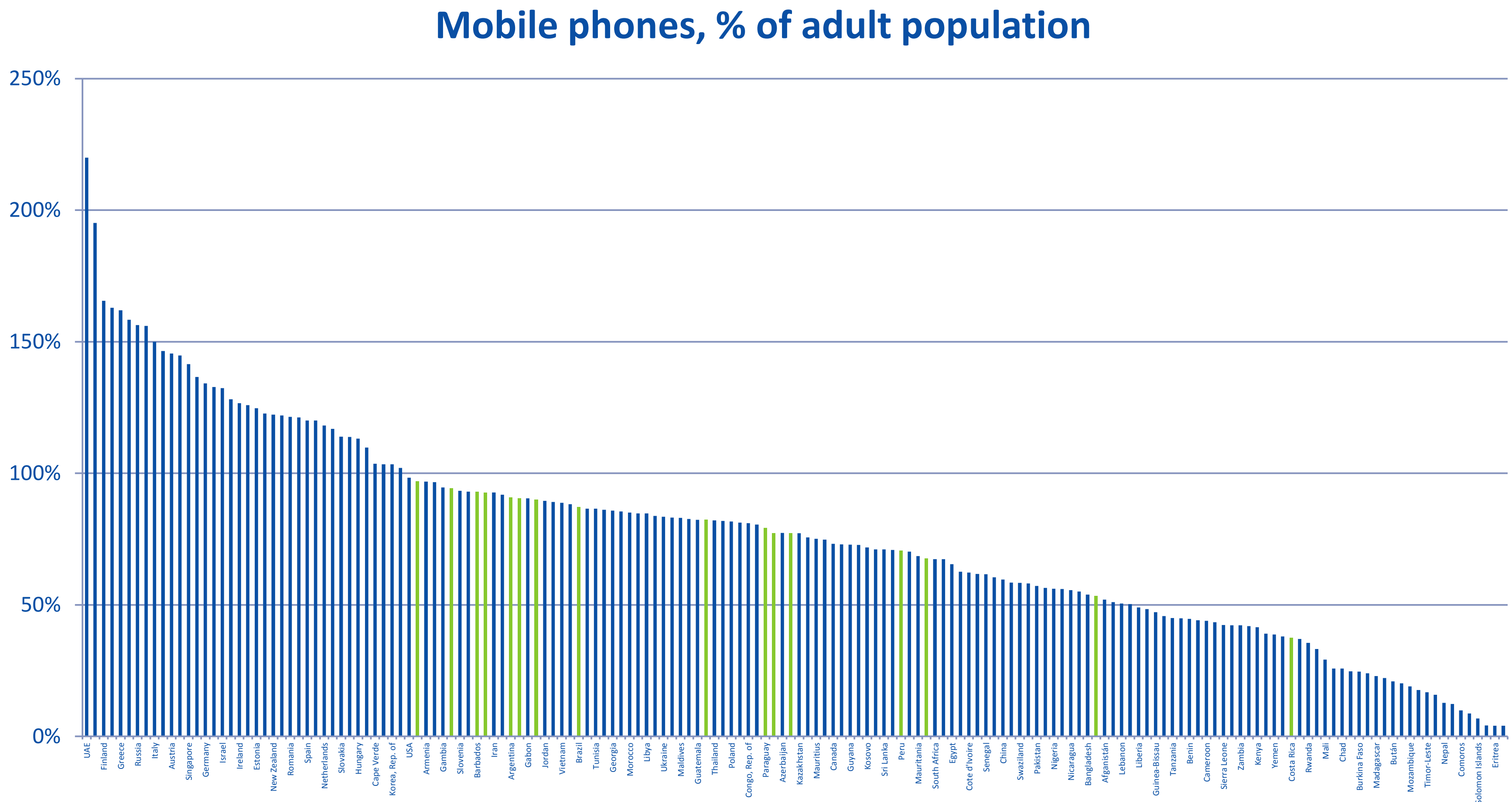

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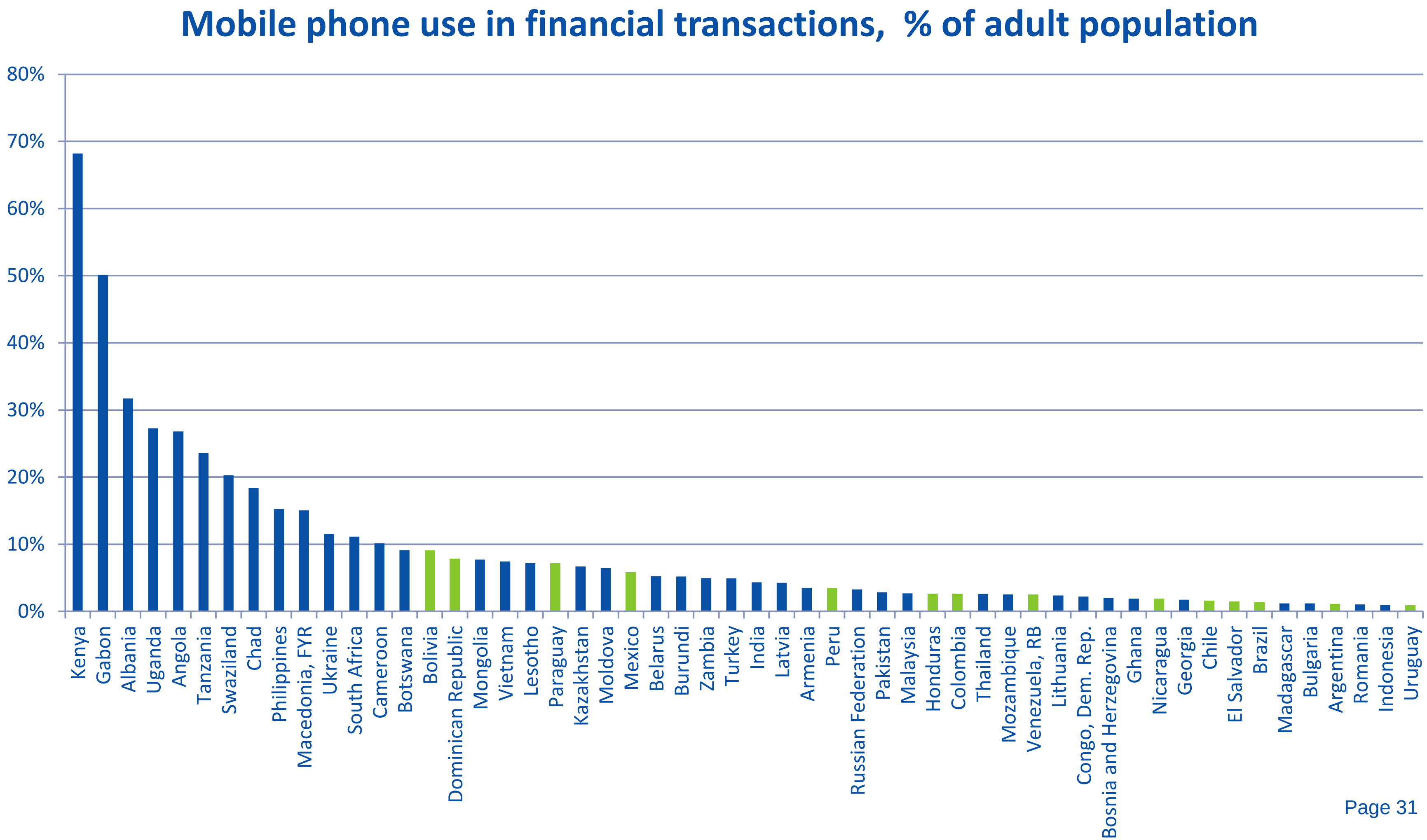

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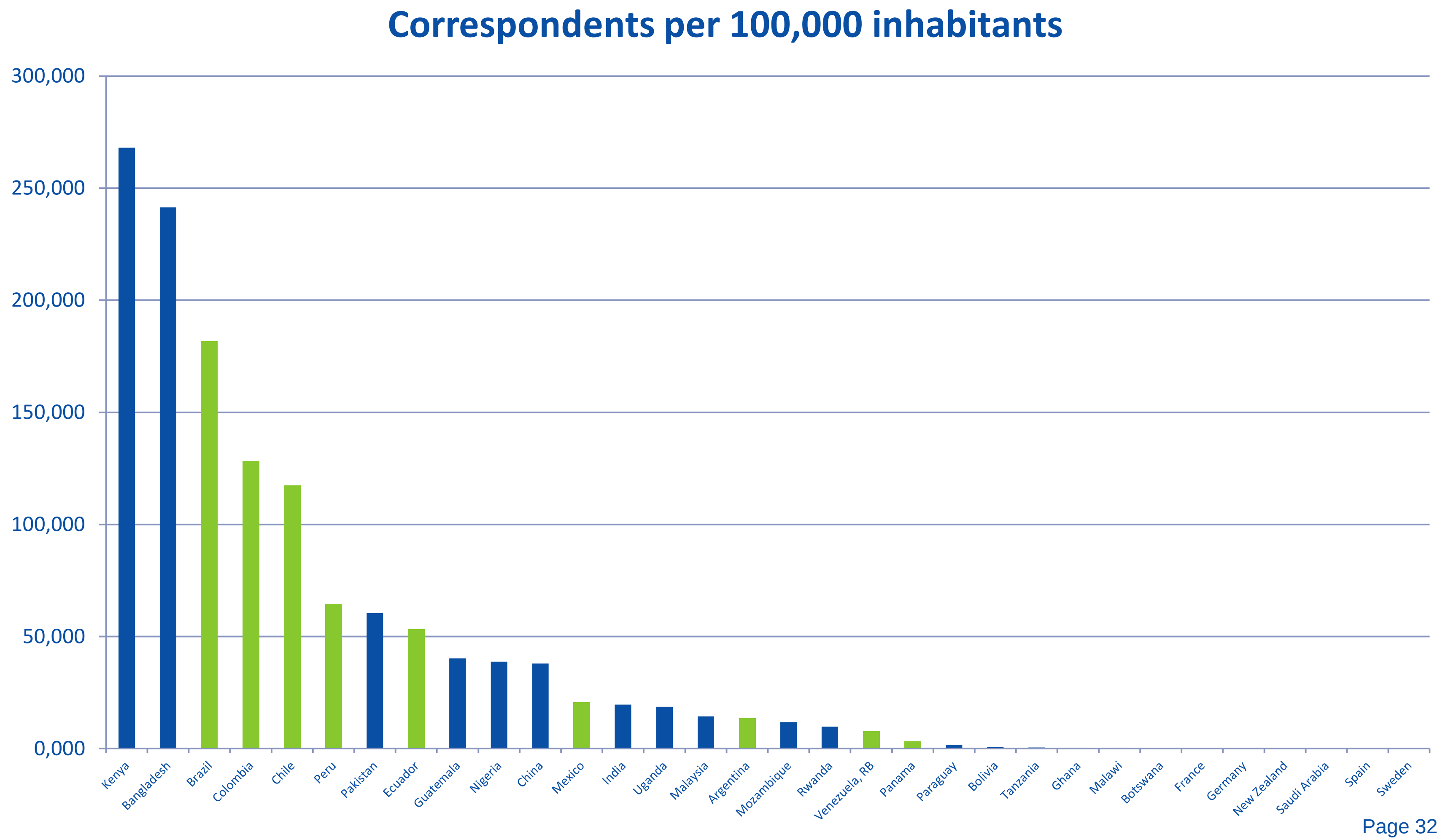

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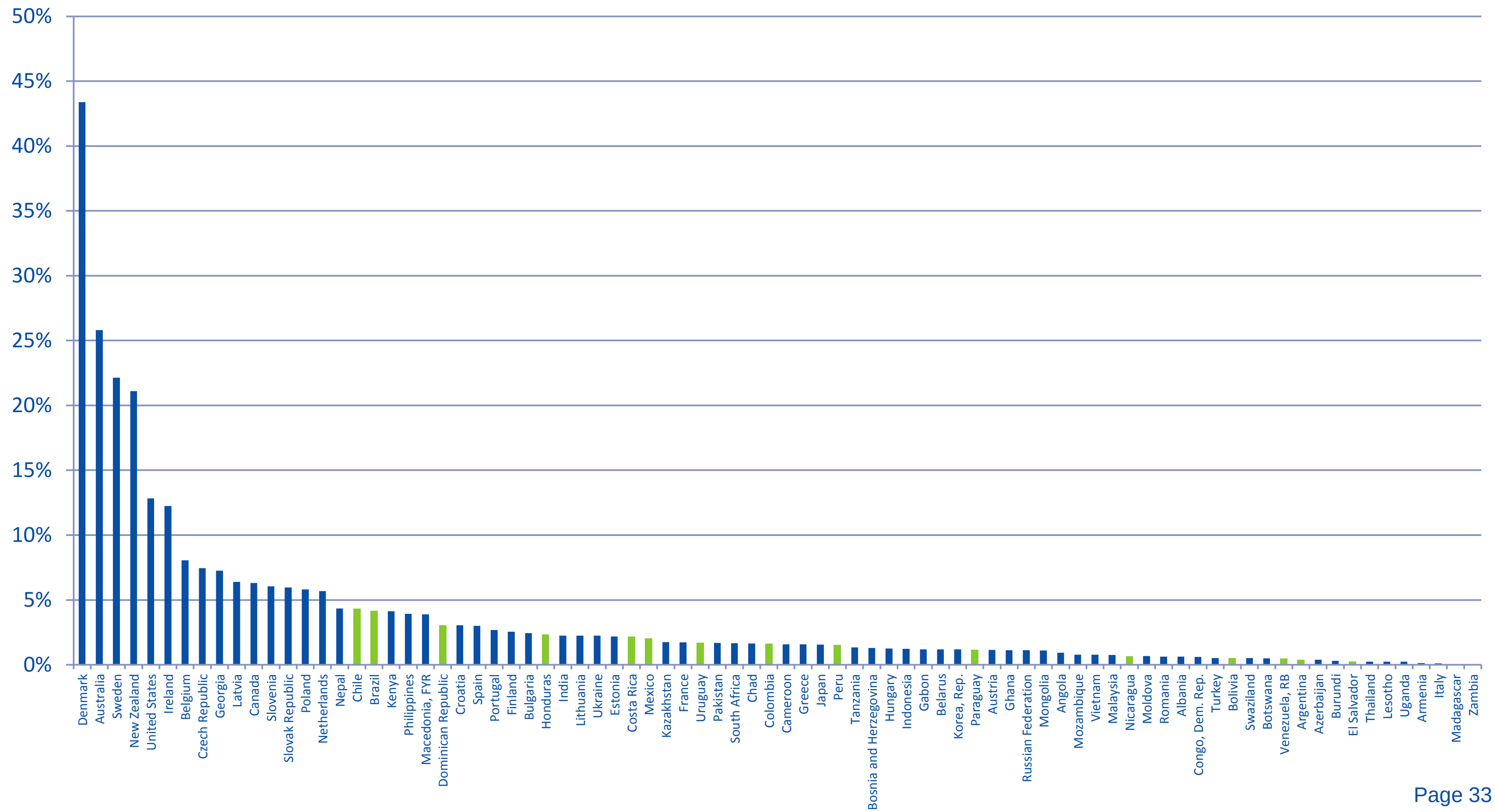
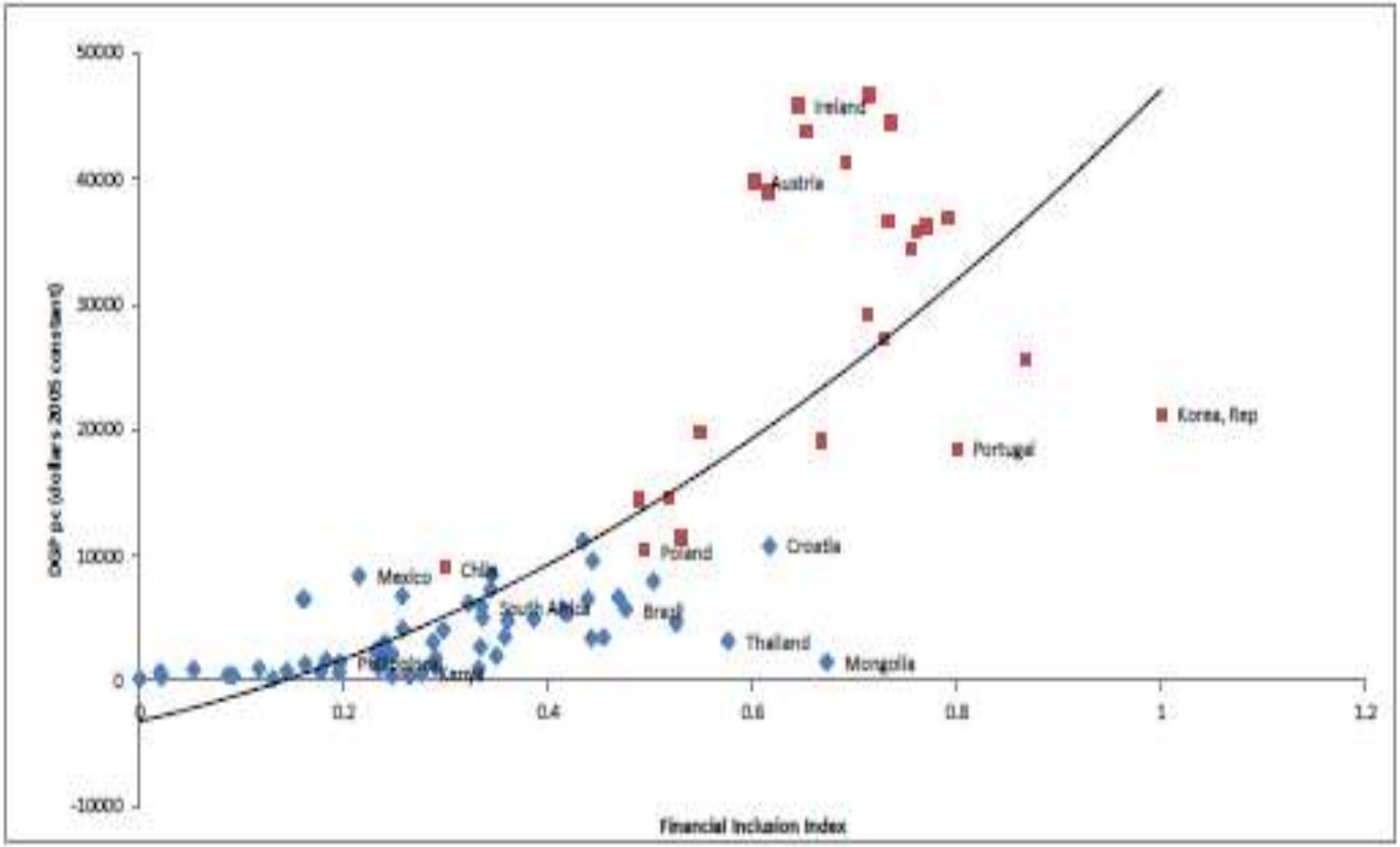
Channels, access and use

Use of correspondents, % of adult population



FII correlations



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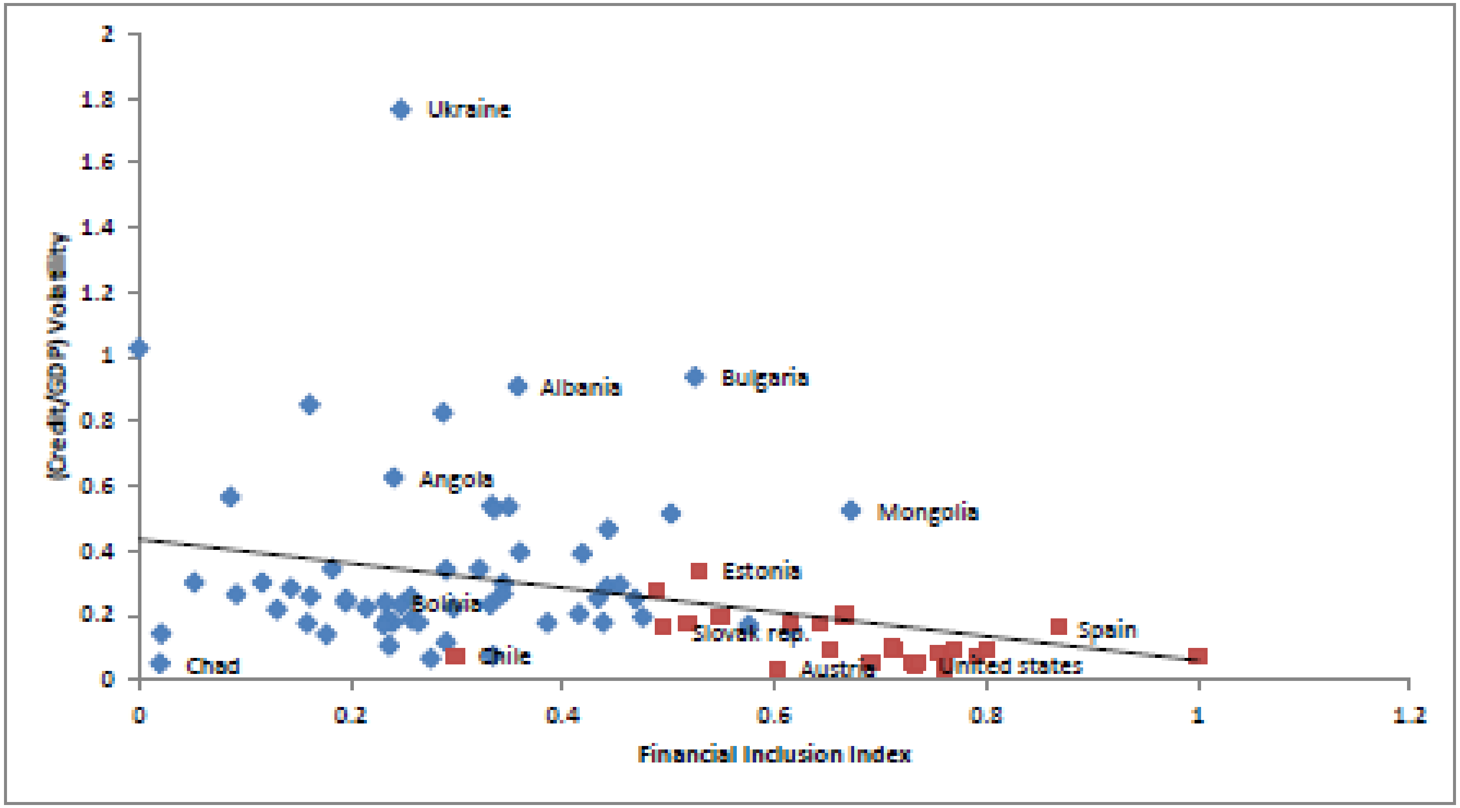

FII correlations