



PREDICTIVE  
ANALYTICS  
INTEGRATORS

THE CELLULAR OPERATOR ANALYSIS TOOL  
(COAT)

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Introduction to Canback

Cellular operator analysis tool (COAT)



*Founded by Dr. Staffan Canback, we are an elite management consulting firm anchored in predictive analytics and market knowledge.*

*Canback serves clients through five practices: Strategy, M&A Due Diligence, Sources of Growth, Corporate Finance, and Organizational Performance.*

*We operate globally with the world's largest companies as clients. This has taken us to 87 countries since our founding in 2004.*

*We also offer analytic services with the Canback Global Income Distribution Database (C-GIDD) as our cardinal product.*

*Canback is a subsidiary of The Economist Group since 2015.*



Introduction to Canback

Cellular operator analysis tool (COAT)



The COAT database allows Canback to predict future winners and losers among cellular operators around the world, and to understand what drives profitability and growth

**OVERVIEW OF COAT (CELLULAR OPERATOR ANALYSIS TOOL) DATABASE**

**BACKGROUND**

- Originally developed in 1999 to model cellular profitability and 3<sup>rd</sup> entrant probability of success in emerging European markets
- Later expanded to a global dataset
- Builds on country and operator data collected from annual reports, analysts, regulators, and proprietary sources
- Uses pooled time series cross-sectional analysis for the years 1999-2014

**COUNTRY VARIABLES**

- Cellular market size
- Cellular penetration
- Cellular revenue
- Cellular revenue growth
- GDP
- GDP growth
- Market age
- Market concentration
- Number of operators
- Population
- 3G/4G/LTE network starting year

**MARKET VARIABLES**

- Cellular revenue
- Cellular revenue growth
- Country ARPU
- Country cellular EBIT
- Country cellular data usage
- Entry order
- Global capex
- Global total EBIT
- Global total revenue
- Market share
- Users
- Years in market

**COUNTRIES\***

- Australia
- Canada
- China
- Czech Republic
- Egypt
- Greece
- Hong Kong
- Hungary
- India
- Ireland
- Italy
- Japan
- Lithuania
- Malaysia
- Mexico
- Netherlands
- Pakistan
- Philippines
- Portugal
- Russia
- South Africa
- S. Korea
- Spain
- Sweden

**OPERATORS\***

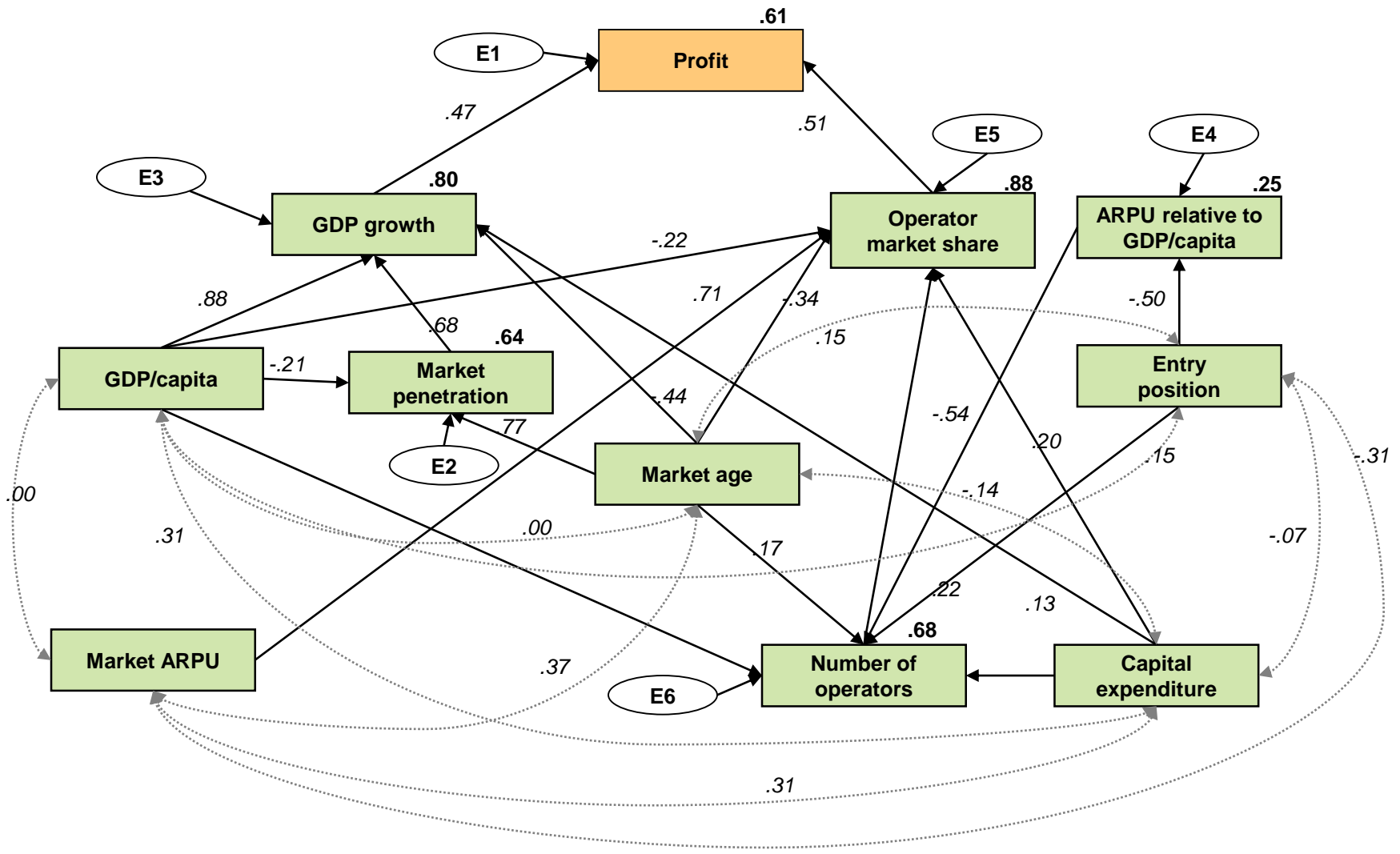
- Airtel (India)
- Bell Canada (Canada)
- Bité (Lithuania)
- Celcom (Malaysia)
- China Mobile (China)
- China Mobile(Hong Kong)
- China Unicom (China)
- COSMOTE (Greece)
- Globe Telecom (Philippines)
- Hutchison (Hong Kong)
- IUSACELL (Mexico)
- KPN (Netherlands)
- KTF (S Korea)
- Maxis (Malaysia)
- Magyar Telekom (Hungary)
- Mobile TeleSystems (Russia)
- Mobilink (Pakistan)
- Mobilil (Egypt)
- MTN (S Africa)
- NTT DoCoMo (Japan)
- O2 (Ireland)
- Omnitel Vodafone (Italy)
- Optus (Australia)
- Oskar Mobil (Czech Republic)
- PLDT (Philippines)
- Portugal Telecom (Portugal)
- Reliance Infocomm (India)
- Rogers (Canada)
- SK Telecom (S. Korea)
- SmarTone (Hong Kong)
- SoftBank Mobile (Japan)
- Tele2 (Lithuania)
- Telefonica (Spain)
- Telenor (Hungary)
- TeliaSonera (Sweden)
- Telstra (Australia)
- T-Mobile (Czech Republic)
- Ufone (Pakistan)
- Vodacom (S Africa)
- Vodafone (Greece)
- Vodafone (Ireland)
- Vodafone (Netherlands)
- Vodafone Egypt (Egypt)
- Vodafone Portugal (Portugal)
- Vodafone Spain (Spain)
- WIND (Greece)

\* Countries and operators used for a particular effort. There are 12 additional countries and 28 operators in the total database.



The COAT database is analyzed using a sophisticated structural equation model (SEM)

### PARTIAL PATH DIAGRAM FOR PROFITS IN THE CELLULAR OPERATOR MARKET

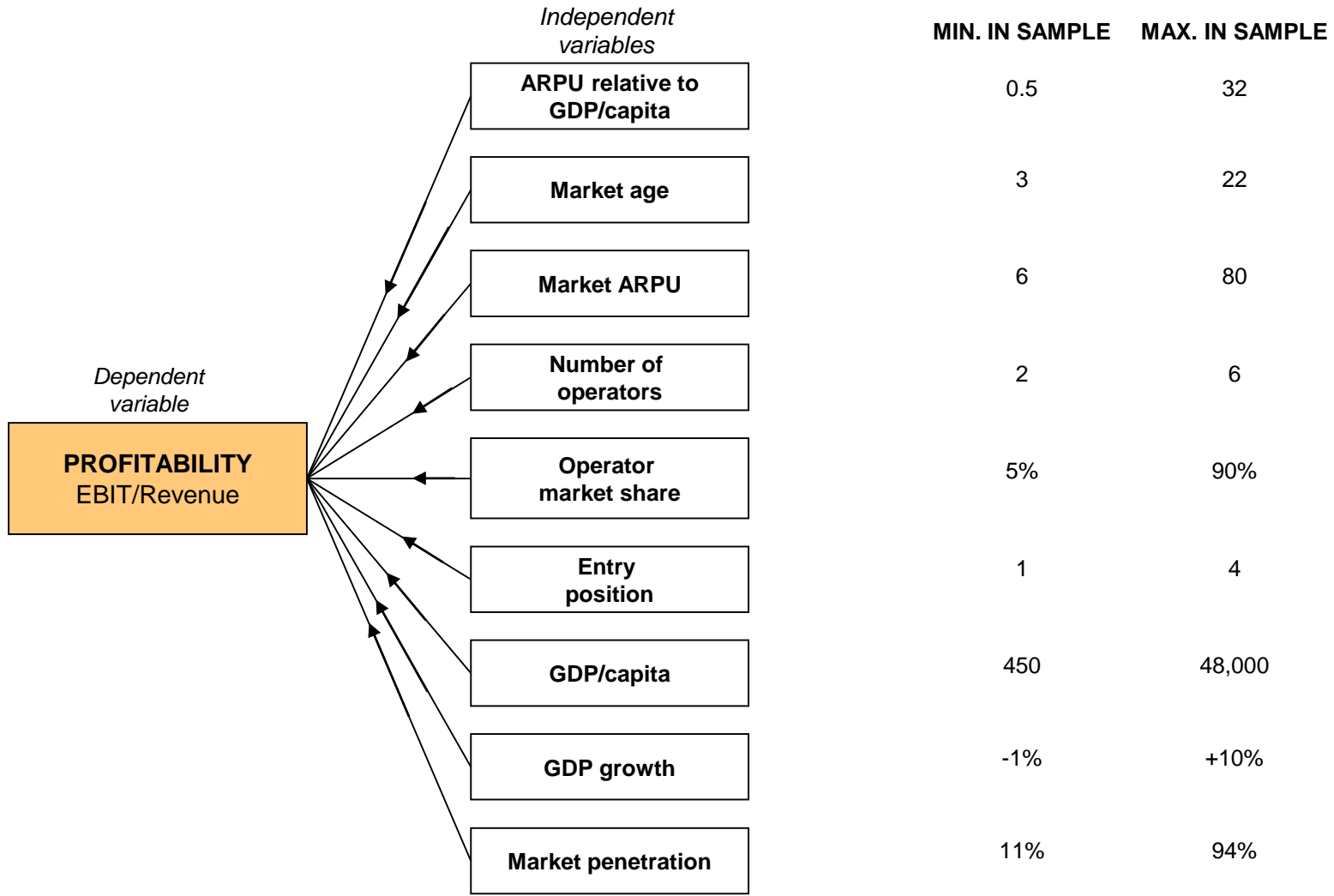


Source: COAT, Canback analysis



This technical approach is converted into a set of simplified relationships, to understand and explain the drivers of profitability (or growth—not shown here)

### PATH DIAGRAM FOR CELLULAR OPERATOR PROFITABILITY



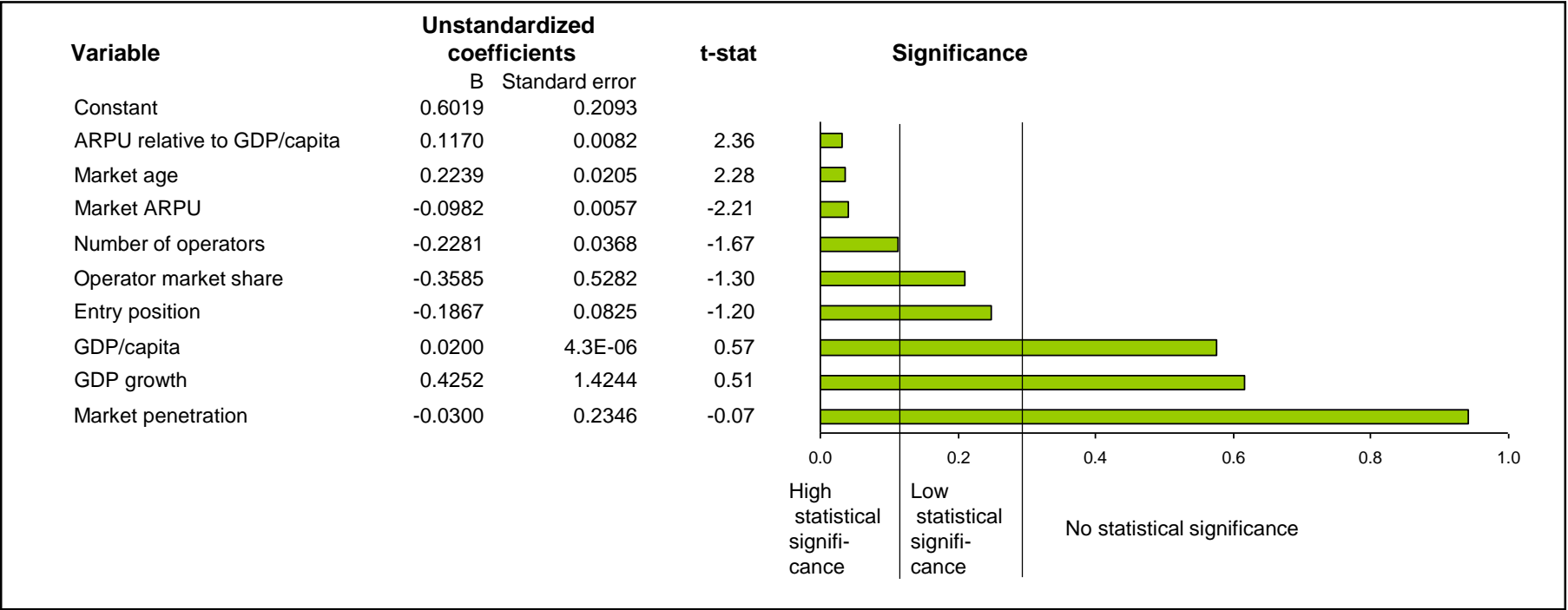
Note: EBIT/Revenue is the only profitability metric easy to collect for most operators  
Source: COAT



The analysis quantifies the importance of each profitability and/or growth driver

**MODEL SUMMARY**

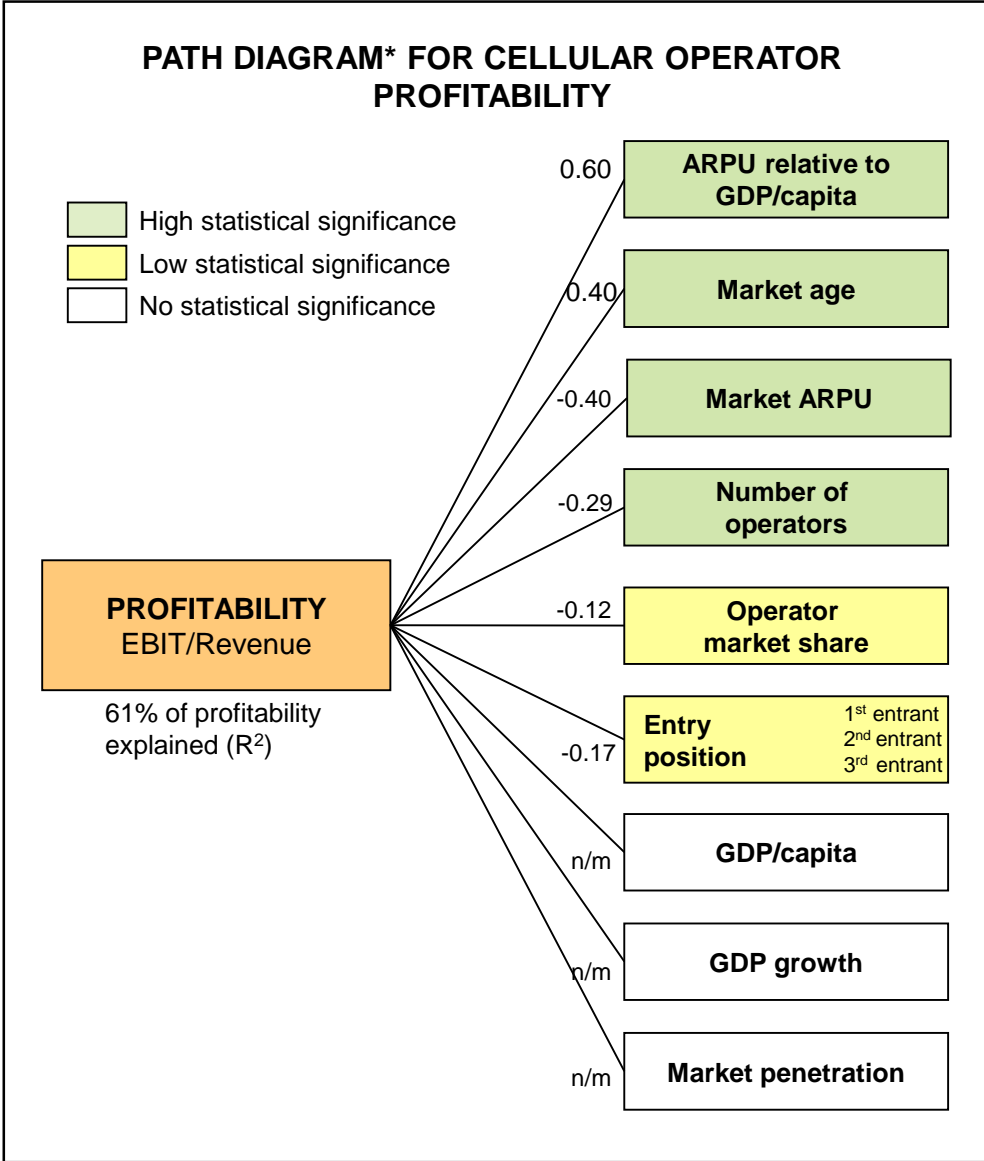
		<b>Standard error of the estimate</b>	<b>Durbin-Watson</b>
<b>R</b>	<b>R<sup>2</sup></b>		
0.78	0.61	0.12	2.0







The result is a detailed understanding of what drives growth and/or profitability, and how operators can succeed in a given environment



### COMMENTS

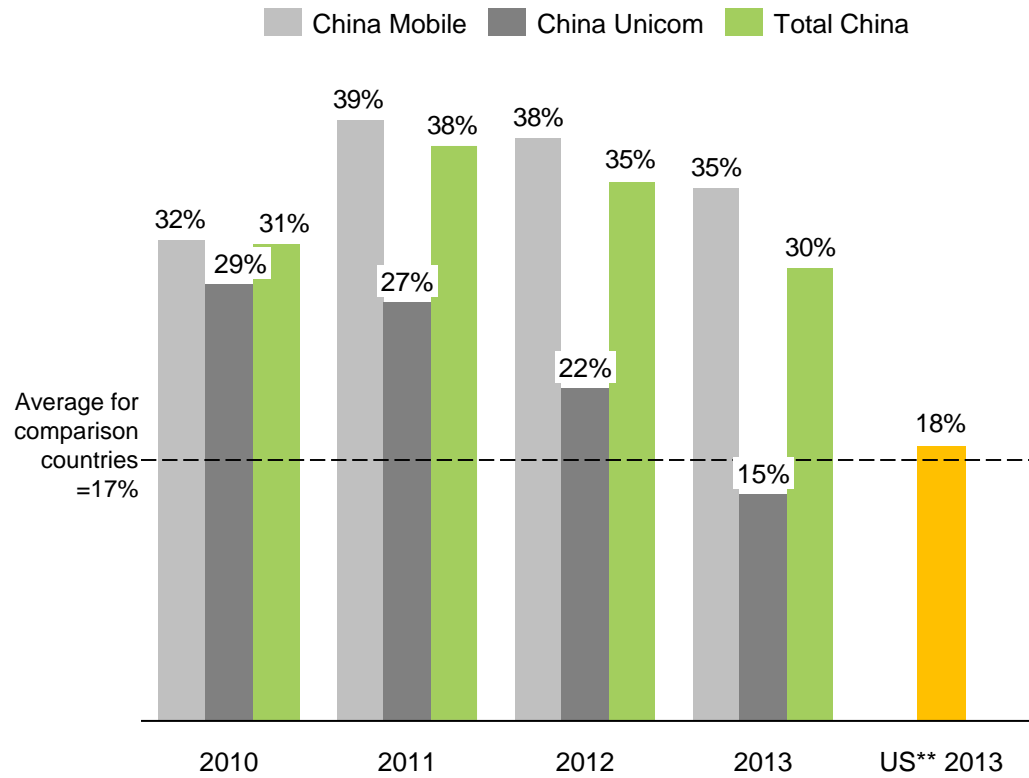
- In a given market, a high ARPU strategy leads to higher profitability
- The longer the cellular market has existed, the higher the profitability. (This is true in most markets and industries.)
- Operators with high prices are less profitable.
- Profitability declines with the number of operators
- Operator market share has a slight negative impact on profitability
- Third entrants are perhaps slightly disadvantaged, but the statistical significance is low, and disappears if 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> entrant groups are tested separately
- Rich (OECD) markets are neither more or less profitable than emerging markets
- General GDP growth does not influence profitability
- The level of market penetration does not affect profitability

\* Based on a statistical (SEM) analysis of 46 operators in 24 countries between 2008 and 2013 (pooled time series cross-sectional analysis).  
 Source: COAT, Canback analysis

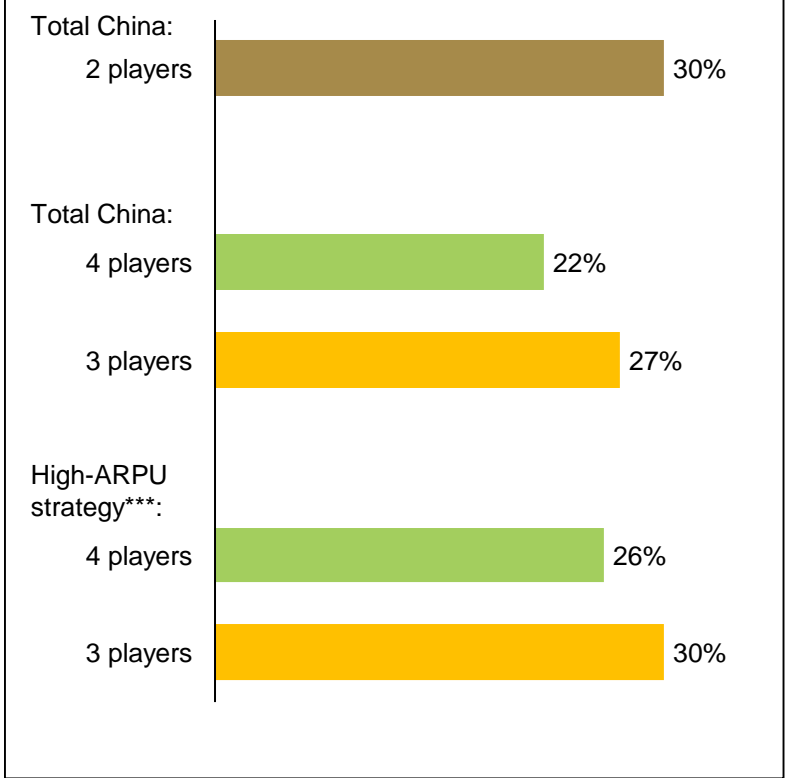


The COAT database can be used, for example, to predict the success of new market entrants or new price strategies

**PROFITABILITY IN THE CHINESE CELLULAR OPERATOR MARKET**  
EBIT/Revenue



**PROFITABILITY SENSITIVITY ANALYSIS\***  
2013



\* Based on a statistical (SEM) analysis of 46 operators in 24 countries between 2008 and 2013 (pooled time series cross-sectional analysis)  
 \*\* Data for US includes Cingular, Nextel and Verizon  
 \*\*\* High-ARPU strategy defined as 25% above China Mobile's 2013 ARPU  
 Source: COAT, annual reports, Canback analysis



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