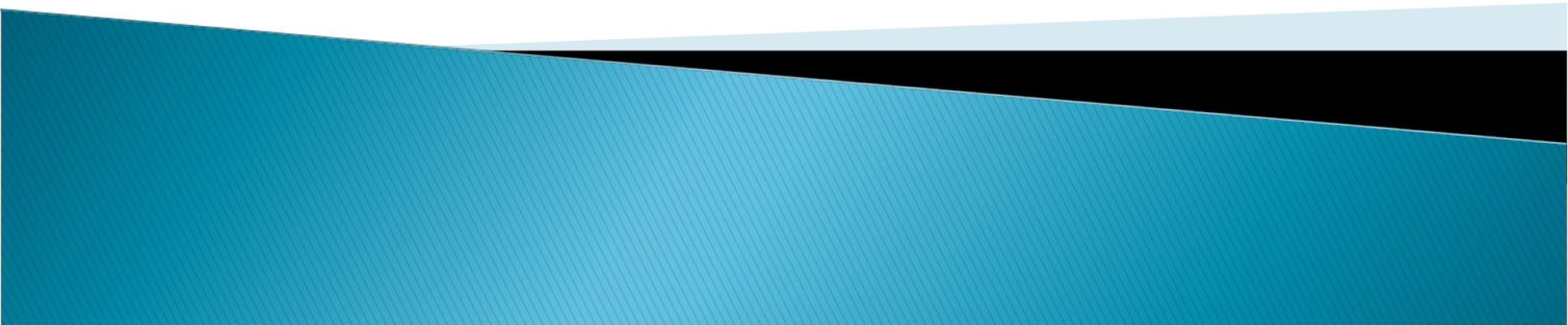


IT in Armenia today: Connecting to markets

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Outsourcing can be counterintuitive in terms of what will work

- ▶ Which business practices are good candidates for outsourcing?
 - McDonald's driver-thru(!), from Tom Friedman's *The World is Flat*
 - Drive-thru at the McDonalds in Cape Girardeau, Missouri, order taken by a call center operator in Colorado Springs (1500 km away!!) shared by other McDonalds. Owners say it has increased productivity, lowered costs and reduced wait time.
 - You are actually talking to someone in Colorado—you are not talking to someone at that McDonald's—who is taking down your order electronically, and taking your picture, incidentally, and zapping your picture and your order to a processor inside that McDonald's, who actually prepares the food and hands it to you, corresponding to your picture. McDonald's discovered they saved thirty seconds on every order and drove their error rate down to massively low levels.

If this is a call to arms for the USA, *what about Armenia?*

We (the USA) are still leading the world in science, education, capital markets and innovation, but we are running sprints while our competitors are running marathons. We have to change course even though it appears right now that it is not necessary. We don't want to wait until the storm comes to start dealing with our three dirty secrets:

1. Not enough Americans are going into science and engineering fields.
 2. We are suffering from a serious lack of ambition while our competition is hungry.
 3. There is an education gap emerging between the U.S and China and India.
- 

The state of IT today in Armenia

Key Company-Specific Factors:

- ▶ 1. *Weak branding.*
 - Weak brand recognition constraints Armenian companies to charge premium prices and leads to substantial discounts. "Armenian IT brand" is not well established yet.
- ▶ 2. *Small and unsophisticated domestic market.*
 - Small and unsophisticated domestic demand impedes achievement of scale efficiencies and specializations of companies.
- ▶ 3. *Skill gap.*
 - Armenian IT companies are on the track of upgrading skills, however the gap with more advanced countries still exists. The skill gap chain starts in educational institutions and in many cases narrows at company level.
- ▶ 4. *Management quality.*
 - Management at strategic and project management levels is also in great need of upgrade.

See www.ev.am

The state of IT today in Armenia (cont)

Key Cross-Cutting Factors:

- ▶ 1. *Small number of globally competitive MNCs.*
 - Although a couple of MNCs are present in Armenia, the critical mass is not formed to shape large cross-industry spill-over effects. MNCs increase productivity not only through more efficient business processes, training of employees and other production-specific factors, but also by investing and using complex technological tools (eg. expensive and special software tools for chip design).
- ▶ 2. *Underdeveloped specialized infrastructure and related industries.*
 - *Armenian companies* suffer from a lack of technoparks, venture capital funds and underdeveloped telecom infrastructures which eventually increase costs and, hence, decrease value per employee. Foreign rivals in more advanced countries enjoy the support of related industries such as various high tech industries, R&D institutes and military units which enhance technological and human resources.
- ▶ 3. *Lack of specialized institutions preparing software companies for international accreditation/certification.*
 - *There is a lack of specialized institutions preparing and assisting* local companies to qualify for CMMI accreditation/certification, thus enabling them to compete for global off-shoring contracts. Certification at CMMI level 3 is becoming a basic requirement for entry into the Western European market. The direct effect of such accreditation will be an increase in productivity and performance of Armenian IT companies. According to survey results conducted by Carnegie Mellon Software Engineering Institute (2006) the median productivity increase was 62% after CMMI certification.

See www.ev.am

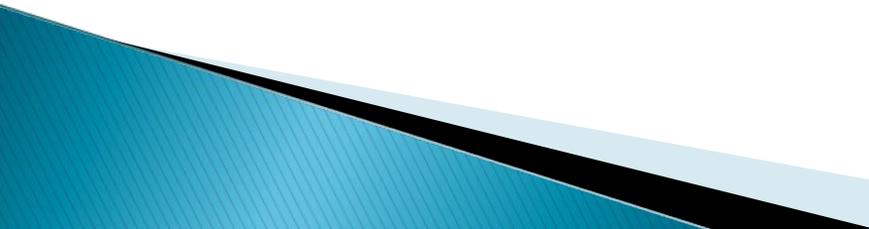
Enablers:

- ▶ Broadband access is growing, changing the way we behave
 - **Communication:** Skype
 - **Entertainment:** 5% of British fans watched the England-Slovenia match online
 - **Education:** ocw.mit.edu. 2000+ MIT courses online, free. (mirror at YSU ocw.mit.am)
- ▶ Social networking is going viral

Where does Armenia fit in?

- ▶ Finding the niche
 - Armenia is small (**maneuverable, low-inertia**)
 - Armenia is dispersed (**native speakers strategically located throughout the world biggest markets**)
 - Armenia is traditional (**strong legacies in certain critical fields**)
 - Armenia is cut off from the world economy (**thinking out-of-the-box is more common**)

Example: Chess

- ▶ Intellectual pastime, with a positive connotation/brand.
 - ▶ Two of the recent champions (Petrosian, Kasparov) are Armenian, as is a current contender (Aronian).
 - ▶ Armenia = among the highest proportions of Grandmasters/total population in the world.
 - ▶ Champions of last 2 Olympiads
 - ▶ Investment in youth, commitment to future
- 

http://www.bbc.co.uk/programmes/p004j7zg

Armenia:
the
cleverest
nation on
earth

The screenshot shows the BBC World Service website interface. At the top, there is a navigation bar with the BBC logo and links for Home, News, Sport, Weather, iPlayer, TV, Radio, and More... A search bar is located on the right. Below the navigation bar, the 'WORLD SERVICE' logo is displayed, along with the tagline 'The BBC's International Radio Station' and a 'LISTEN LIVE' button. The main content area features a 'Special Reports' section with the title 'Assignment' and the subtitle 'Armenia: the cleverest nation on earth'. A 'Listen now (25 minutes)' button is prominently displayed. Below this, there is an 'iPlayer' icon and text indicating that the program is available to listen to. A paragraph of text describes Armenia as a small, poor country that has won the chess Olympics twice in a row, and mentions that its over-the-board players have become national celebrities. A 'BROADCASTS' section follows, with a note that times are shown in BST (GMT+1). A table lists the broadcast schedule for the week of October 15-18, 2009. On the right side of the page, there is a 'MORE DETAILS' section with links for 'A PROGRAMME FROM', 'WEBSITE', 'DURATION', and 'MORE FROM BBC WORLD SERVICE'. The footer contains the BBC logo, copyright information, and various links including 'About BBC World Service', 'BBC Help', 'Accessibility Help', 'Jobs', 'About the BBC', 'Contact Us', 'Terms of Use', and 'Privacy & Cookies'.

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Assignment

Armenia: the cleverest nation on earth

Listen now (25 minutes)

iPlayer Available to listen.

Last broadcast on Sun, 18 Oct 2009, 10:05 on BBC World Service (see all broadcasts).

Armenia, a tiny, poor country of around 3 million people, has won the chess Olympics twice in a row. In so doing, it has triumphed over giants like Russia, China and the US. Chess is pursued fanatically in many parts of the world, but nowhere more so than Armenia, where its over-the-board stars have become national celebrities.

But how has little Armenia created a nation of chess geniuses; is there something in the water? Assignment investigates.

BROADCASTS These times are shown in BST, which is GMT+ 1

Thu 15 Oct 2009	09:05	BBC World Service
Thu 15 Oct 2009	13:05	BBC World Service
Thu 15 Oct 2009	20:05	BBC World Service
Fri 16 Oct 2009	01:05	BBC World Service
Sun 18 Oct 2009	10:05	BBC World Service

MORE DETAILS

A PROGRAMME FROM

- Assignment

WEBSITE

Go to the homepage for 'Assignment'

DURATION

25 minutes

MORE FROM BBC WORLD SERVICE

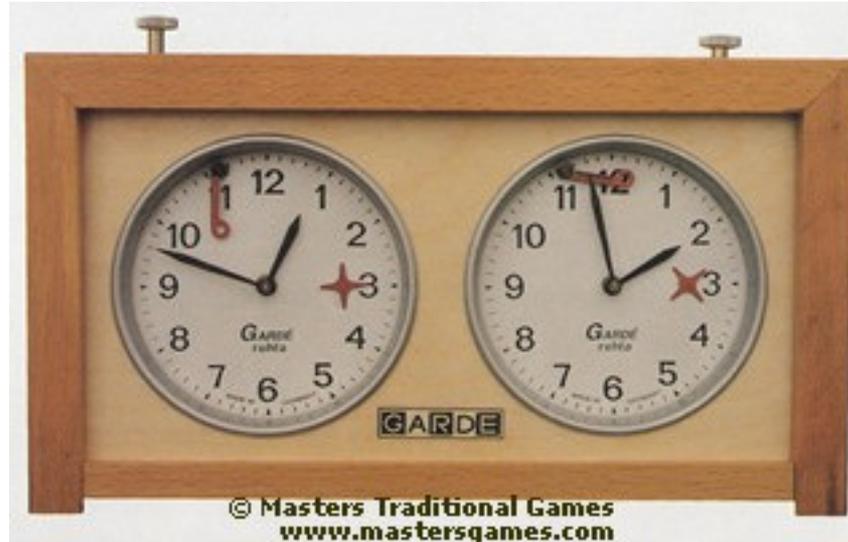
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Chess = Business opportunity?

- ▶ Top trainers can earn over 100 USD/hr giving online lessons.
- ▶ Personal Training →
Group (formalized, institutional) training →
Chess camps, retreats →
Tournament organization →
Media/corporate sponsorship →
???
- ▶ Secondary connections
 - Academia (AI)
 - Entertainment (Man vs machine match)
 - Other sports/games
 - Development of GUIs and teaching platforms transferable to other educational endeavors

It's now your move



Thank you!