

From Innovation Clusters To National Innovation Policy

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General Country Information

- ◆ Located in the South Caucasus region of Eurasia continent.
- ◆ Neighbor countries:
 - Azerbaijan (east and southwest),
 - Georgia (north),
 - Iran (south),
 - Turkey (west).
- ◆ Area: 29,800 km² or 11,500 square miles.
- ◆ Population: 3.2 mln. people with 67% residing in cities and towns
- ◆ 98% of literacy rate for residents over 15 years old



Main economic indicators

- ◆ According to the 2008 Index of Economic Freedom compiled by the Heritage Foundation and the Wall Street Journal, Armenia is the 8th freest economy in the world (Sweden 27, Latvia 38).

	2005	2006	2007	2008
Gross Domestic Product, billions of U.S. dollars	\$4.87	\$6.41	\$9.20	\$11.9
Real GDP growth, % change over previous year	13.9%	13.4%	13.8%	6.8%
Inflation, annual average	0.6%	2.9%	6.0%	9%
Unemployment rate, end of year	8.1%	7.4%	7.1%	6.8%
Average wage, annual mean, U.S. dollars	\$1,365	\$1,846	\$2,718	\$3573
Exports of goods, FOB, billions of U.S. dollars	\$0.95	\$1.00	\$1.16	\$1.14
Imports of goods, CIF, billions of U.S. dollars	\$1.77	\$2.20	\$3.28	\$3.7
Exchange range USD/AMD, period average	457.69	416.04	342.08	306.7

Armenia at a Crossroad: The Benefits of Globalization

Throughout its long history, Armenia has served as an important crossroad for foreign culture and commerce.

Today, the Republic of Armenia is striving to re-emerge as a new crossroad for foreign capital, investment and technology.

The Republic of Armenia recognizes the unique role of innovation and entrepreneurship and bolstered by an impressive record of double-digit economic growth, and is now well-positioned to attain greater competitiveness and technological integration on a global level.

And as a leader among transition countries, Armenia has embraced technological change, innovation and entrepreneurship as the hallmarks of a modern, knowledge-based economy.

The Promise of the “Armenian Model”

The “Armenian Model” of innovation is defined by forward-looking policies based on the role of business incubators and techno-parks as drivers for innovation.

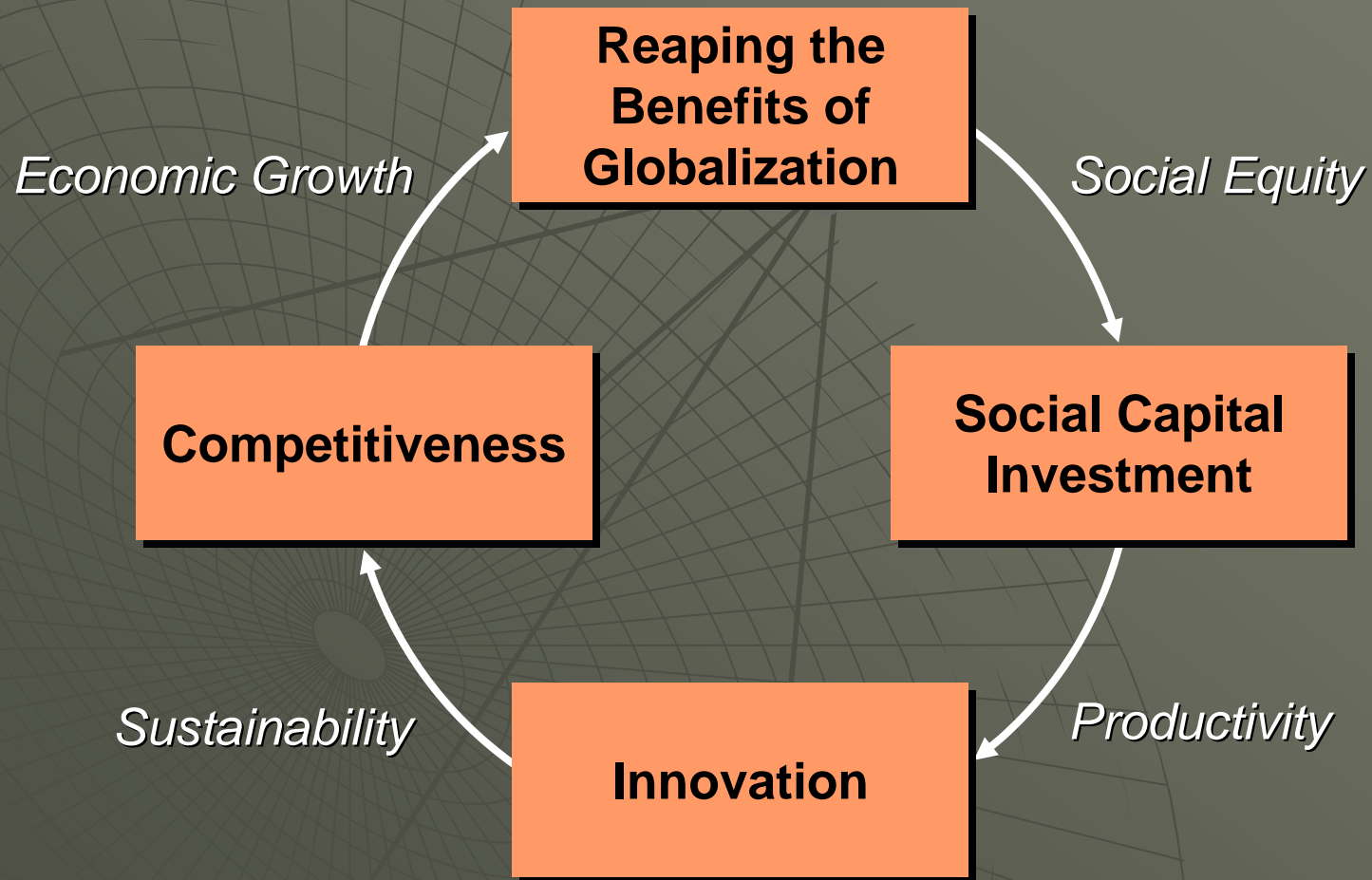
Armenia fosters greater innovation based on its comprehensive legal framework for investment policy, which supports innovation by promoting innovation-research centers, business incubators, techno-parks.

There is also a recognition of the close links between scientific research organizations and universities, technology parks, business incubators and industrial groups.

And the focus is on forging ties between Armenia’s established scientists and specialists, reaching out to the international community and relevant partners.

Only through such engagement, can Armenia actively pursue globalized innovation practices and programs.

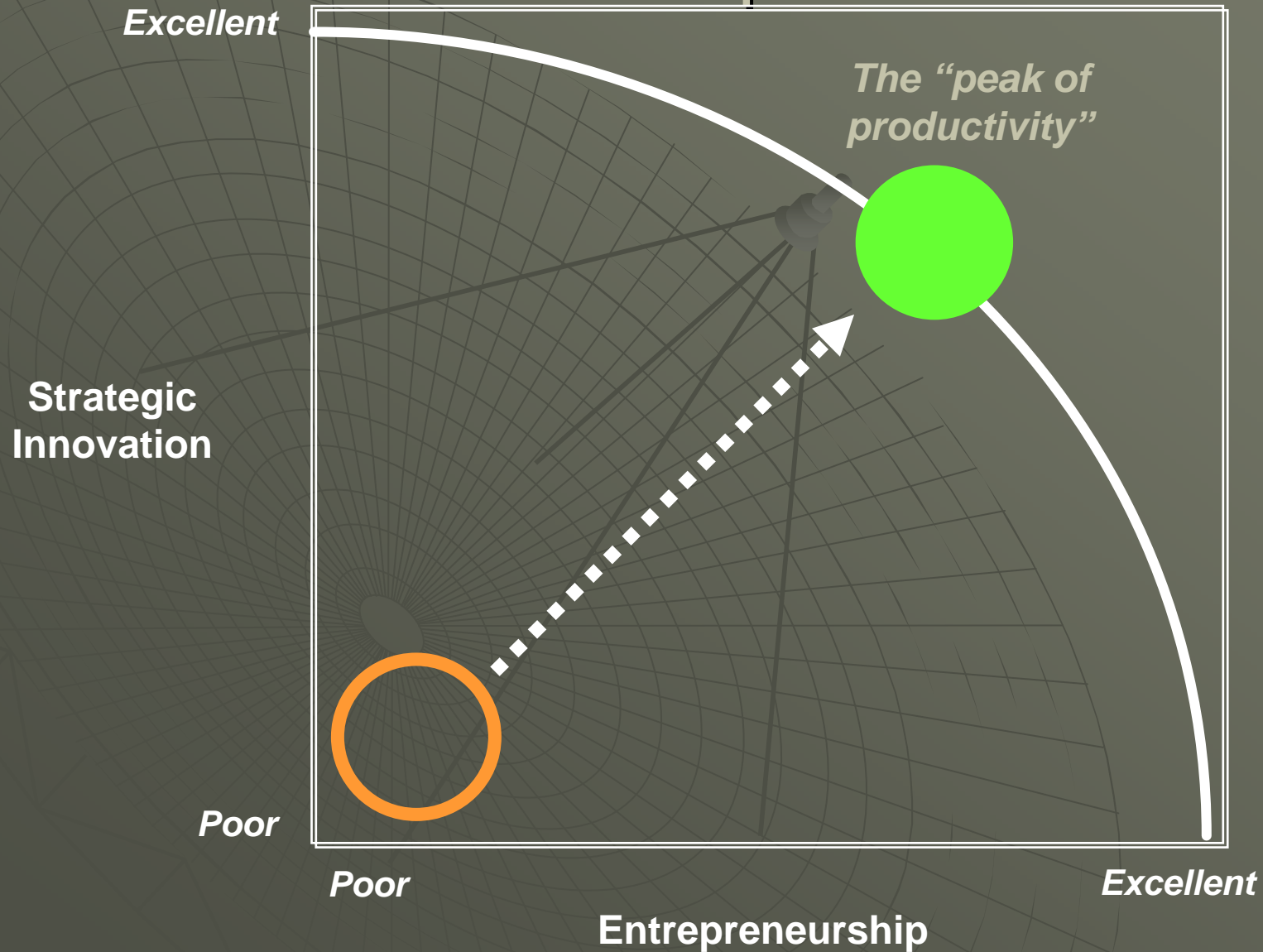
Armenia's Embrace of Innovation



What Do We Mean By Competitiveness?

- Competitiveness has emerged as the preeminent issue in every nation — for companies and governments
- Upgrading a nation's export competitiveness requires a **shared understanding** of competitiveness within the nation
- **Competitiveness is not simply:**
 - ◆ A favorable exchange rate
 - ◆ Positive balance of trade
 - ◆ Industrial subsidies
 - ◆ Low inflation rate
- Rather, competitiveness is the **productivity** with which resources are deployed
 - ◆ Human resources
 - ◆ Capital
 - ◆ Physical assets
- Since competitiveness relies on productive deployment of resources, industry sectors and their **firms compete, not nations**
 - ◆ Government has a partial but significant role in creating the platform from which firms compete

Strategy: Where You Compete, How You Compete



IT Industry in Armenia

- ◆ Number of companies: 175 (56 foreign)
- ◆ Foreign ownership: USA/Canada (64%), Russia/NIS (18%), Europe (16%)
- ◆ Major specializations: customized software and outsourcing (23% of firms), web design and development (13%), IT services and consulting (10%).
- ◆ Major export destinations: USA/Canada (60% of exports), Europe (18%), and Russia (16%).

Competitive Advantages

- ◆ World class R&D capabilities in computer science, physics and mathematics
- ◆ Well educated and talented workforce with a high degree of technical skills and English language proficiency
- ◆ Strong university programs with specializations in IT and Science
- ◆ Highly competitive labor cost

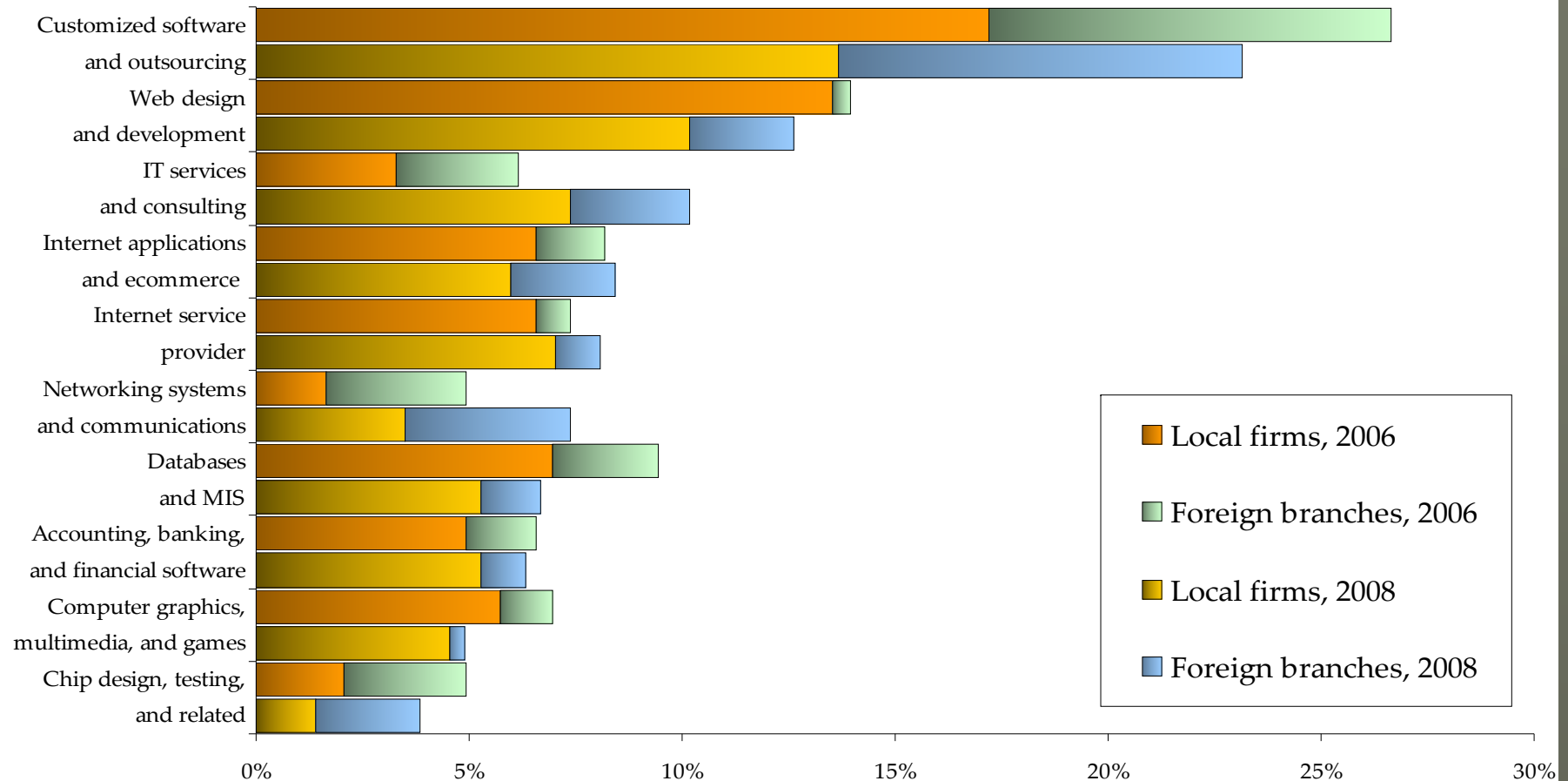
Competitive Advantages

- ◆ Solid Government support to the sector and commitment to improve the investment climate
- ◆ Strong and successful Diaspora in Europe and North America
- ◆ Extensive experience with multinationals
- ◆ Sound laws and regulations for IP protection

Specializations

Company Specializations: Distribution

overall industry = 100%



Turnover

- ◆ Total revenue: \$110 mln - 27% annual growth from 1998
- ◆ It is 1.2% of GDP (2007); India (1.4%), Germany (1.3%)
- ◆ Local firms produced ~\$50 mln or 45%; foreign - \$60 mln / 55%
- ◆ Average revenue per local firm increased by 30% from 2003
- ◆ Exports: \$70 mln (63% of revenues)
- ◆ Software & services: \$96 mln (86% of revenues), ISP: \$15 mln (14%)

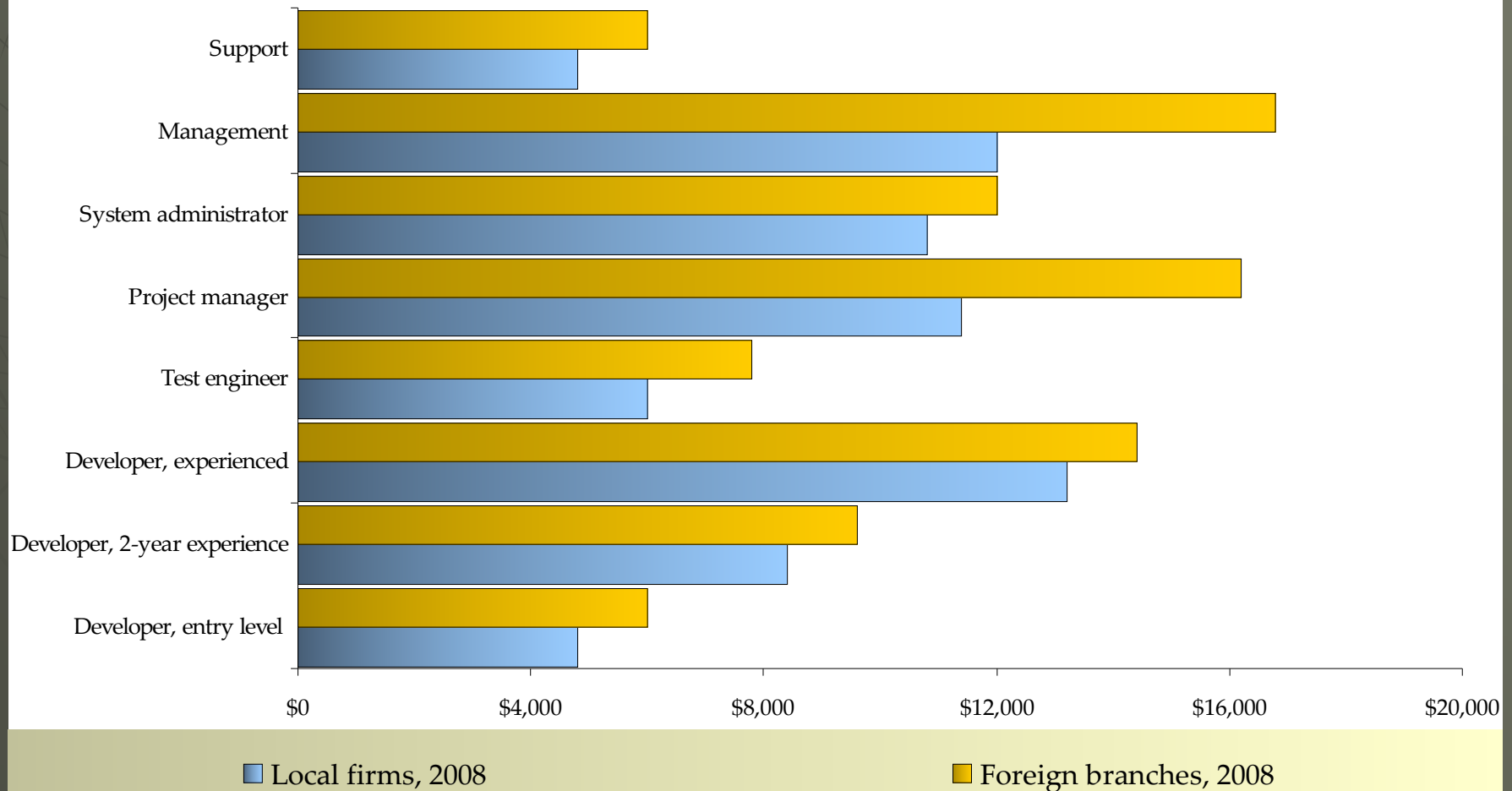
Workforce

- ◆ Workforce (technical and business) reached around 5,000 in 2008
- ◆ 17% annual growth from 1998
- ◆ Around 85% are technical specialists
- ◆ Work for local / foreign – 50/50
- ◆ Male / female – 65-70% / 30-35%
(females in US 27%, UK 15%)

Salaries

Employee Average Gross Annual Salaries

U.S. dollars



Successful Partnerships

- ◆ Enterprise Incubator Foundation
- ◆ Microsoft Innovation Center
- ◆ Sun Microsystems Testing and Development Lab
- ◆ National Instruments R&D Lab
- ◆ Synopsys
- ◆ Government Strategy

Moving Forward

- ◆ Yerevan IT Park
- ◆ Gyumri Technocity
- ◆ IT Investment Fund
- ◆ R&D, Training and Certification Centers
- ◆ Replication of the Armenian model worldwide

Innovation System Actors

- ◆ Local, large companies and SMEs
- ◆ MNCs
- ◆ University research institutes` spin-offs or start-ups
- ◆ Universities
- ◆ Public research institutions
- ◆ Government

Innovation System Institutional Framework and Policies

- ◆ Fiscal and Financial R&D incentives
- ◆ Intellectual property protection
- ◆ Financial system regulation
- ◆ Educational policy
- ◆ Science and technology policy
- ◆ Government procurement policy

Innovation System Infrastructure

- ◆ Technoparks, business incubators
- ◆ Technology transfer agencies
- ◆ Business service providers
- ◆ Innovation support funds (pre-seed, seed)

Domestic Corporate-Led Strategy

- ◆ MNC (Low)
- ◆ Local companies (High)
- ◆ Spin-offs, start-ups (Average)
- ◆ Universities (High)
- ◆ Research Institutes (High)
- ◆ Government (Average)
- ◆ R&D Incentives (High)
- ◆ IPR (Average)
- ◆ Financial System regulation (Average)
- ◆ Education Policy (High)
- ◆ Science and technology policy (High)
- ◆ Government procurement policy (Low)
- ◆ Techno parks, business incubators (High)
- ◆ Technology transfer agencies (Low)
- ◆ BSP (Low)
- ◆ Risk funding (Low)

MNC Led or R&D Hub Strategy

- ◆ MNC (High)
- ◆ Local companies (Low)
- ◆ Spin-offs, start-ups (Low)
- ◆ Universities (High)
- ◆ Research Institutes (Average)
- ◆ Government (Average)
- ◆ R&D Incentives (High)
- ◆ IPR (Average)
- ◆ Financial System regulation (Average)
- ◆ Education Policy (High)
- ◆ Science and technology policy (High)
- ◆ Government procurement policy (Low)
- ◆ Techno parks, business incubators (High)
- ◆ Technology transfer agencies (Low)
- ◆ BSP (Low)
- ◆ Risk funding (Low)

Government Led Strategy

- ◆ MNC (Low)
- ◆ Local companies (Average)
- ◆ Spin-offs, start-ups (Low)
- ◆ Universities (High)
- ◆ Research Institutes (High)
- ◆ Government (High)
- ◆ R&D Incentives (High)
- ◆ IPR (Average)
- ◆ Financial System regulation (Average)
- ◆ Education Policy (High)
- ◆ Science and technology policy (Low)
- ◆ Government procurement policy (High)
- ◆ Techno parks, business incubators (High)
- ◆ Technology transfer agencies (Low)
- ◆ BSP (Low)
- ◆ Risk funding (Low)

Environment Led Strategy

- ◆ MNC (Low)
- ◆ Local companies (Average)
- ◆ Spin-offs, start-ups (High)
- ◆ Universities (High)
- ◆ Research Institutes (High)
- ◆ Government (Average)
- ◆ R&D Incentives (High)
- ◆ IPR (High)
- ◆ Financial System regulation (Average)
- ◆ Education Policy (High)
- ◆ Science and technology policy (High)
- ◆ Government procurement policy (Average)
- ◆ Techno parks, business incubators (High)
- ◆ Technology transfer agencies (High)
- ◆ BSP (High)
- ◆ Risk funding (High)

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- ◆ Thank You
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