Turkey: Venture capital now!

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April 28th, 2011
Istanbul
Framework

- Turkey’s international position
- Trends of diversification
  - Export products
  - Location of industry
  - Export markets
- Major risks
  - Falling export sophistication
  - Stagnating high-tech
  - Low human capital
- Why PE / VC now?
Turkey is in the heart of a strategic region

Turkey’s economic transformation & entrepreneurship
In 1990s, Turkey was an important industrial economy...

Export indicators of the countries in the region (1996)

Country’s share in total manufacturing exports of the region (%)

Source: UN Comtrade data
Today Turkey is the largest manufacturer in the region

Export indicators of the countries in the region (2008)

Country’s share in total manufacturing exports of the region (%)
Diversification Trend 1: Export industries

Number of product groups with above $500 million exports
HS4 classification, 2 digit, 1999-2009

Source: UN COMTRADE
Level of diversification is striking in the region

Number of product groups with above $500 million exports (HS4 classification, 2 digit, 2008)

Turkey: 39
Russia: 28
Ukraine: 21
Romania: 20
United Arab Emirates: 17
Greece: 16
Israel: 15
Saudi Arabia: 13
Kazakhstan: 11
Egypt: 11
Tunisia: 9
Morocco: 8
Bulgaria: 8
Iran: 6
Croatia: 5
Jordan: 4
Serbia: 3
Qatar: 3
Kuwait: 1
Algeria: 1
Iraq: 1
Syria: 1
Azerbaijan: 1
Turkmenistan: 1
Armenia: 1
Bosnia-Herzegovina: 0
Georgia: 0

Source: UN Comtrade data
Diversification Trend 2: Location of the industrial base

Geographical distribution of the largest 1000 industrial firms in Turkey, 1999 and 2009

Source: Istanbul Chamber of Industry
## Emergence of a new middle class

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2006</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile Sales (in thousands)</td>
<td>359</td>
<td>622</td>
<td>494</td>
</tr>
<tr>
<td>White Good Sales (in millions)</td>
<td>3</td>
<td>5.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Airline Passengers (in millions)</td>
<td>34</td>
<td>59</td>
<td>75</td>
</tr>
<tr>
<td>Mobile Phone Network Subscribers (in millions)</td>
<td>26.6</td>
<td>51.4</td>
<td>64</td>
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<tr>
<td># of People Getting House Loans (thousands)</td>
<td>43</td>
<td>268</td>
<td>237</td>
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<tr>
<td>Consumer Credit + Credit Cards (billion TL)</td>
<td>12.8</td>
<td>67.7</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: ODD, TURKBESD, DHYMI, TBB
Diversification Trend 3: Export markets

Source: COMTRADE, TEPAV analysis
Germany: Melander Family
Weekly food consumption: $500.07
Egypt: Ahmed Family
Weekly food consumption: $68.53
Chad: Aboubakar Family
Weekly food consumption: $1.23
Risk 1: Export market diversification is leading to lower levels of export sophistication

Export Sophistication Index (EXPY) Turkey and selected countries (1995-2009)

Source: COMTRADE, TEPAV analysis
Turkey is not a star performer in terms of diversity & ubiquity
With no improvement in sophistication in the last three decades

Source: Harvard CID, UN COMTRADE, TEPAV calculations
Risk 2: Turkey is doing well in mid-tech, but Turkey has a long way to go in high-tech

Technological composition of exports of Korea and Turkey (1990-2009)

Source: UN COMTRADE database, TEPAV calculations (Based on UNIDO classification of products by level of technology)
Risk 3: Turkey hardly has enough human capital for large-scale transformation to high-tech.

Level of education and high technology exports (2008)

*UNDP Education Index is based on the adult literacy rate and the combined gross enrollment ratio for primary, secondary and tertiary schools.

Sources: HDR, WDI. UNDP, and TEPAV Calculations.
Turkey’s major risk: middle income trap...

Where does Turkey stand?
- Turkey was a transition economy from efficiency-driven to innovation-driven in 2009.
- In 2010, WEF downgraded Turkey to efficiency-driven.

Upgrade to an innovation-driven economy?
- Need for a large set of reforms in a wide set of areas
- Education, judiciary, public administration, infrastructure investments

Risk: no-reform political climate
- The period ahead will be even less conducive for reforms: elections in 2011, 2012, 2013, 2014, 2015 ....
Turkey has no star industries in exports

Market share in 2009

Average annual growth rate (2005-2009)

-20% -15% -10% -5%  0%  5%  10%  15%  20%  25%

Rising sectors:
- Electrical machinery
- General Industrial Machinery
- Metal Products
- Iron-steel
- Automotive
- Other non-metal mineral products

Failing sectors:
- Telecom and Sound Equipment

Traditional sectors:
- Clothing and Accessories
- Textiles
- Fruit and Vegetables

Star sectors:
- Petroleum Products
- General Industrial Machinery
- Metal Products
- Iron-steel

Source: UN COMTRADE, TEPAV calculations
Yet we can have star companies: Private equity is a good instrument to transform companies.

Development of Private Equity in Turkey: Change in Value and Number of Investments

Source: TEPAV calculations
...in a wide range of industries

Target Industries for Private Equity Investments in Turkey (2001-2010)

<table>
<thead>
<tr>
<th>Services</th>
<th>Manufacturing</th>
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<tbody>
<tr>
<td>Airport Services</td>
<td>Entertainment</td>
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<td>Arts &amp;Ent. &amp; Recreation</td>
<td>Eyewear</td>
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<tr>
<td>Automotive</td>
<td>Factoring Services</td>
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<td>Biotech</td>
<td>Fairs and Exhibitions</td>
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<td>Broadcasting</td>
<td>Fleet Rental</td>
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<tr>
<td>Brokerage House</td>
<td>Food &amp; Beverage</td>
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<tr>
<td>Cargo Carrier</td>
<td>Furniture &amp; Carpets</td>
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<tr>
<td>Ceramic Tiles</td>
<td>Health Care</td>
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<tr>
<td>Construction</td>
<td>Household Appliances</td>
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<tr>
<td>Cosmetics Retail</td>
<td>Information and IT</td>
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<tr>
<td>Dental Hospital</td>
<td>Leasing</td>
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<tr>
<td>Edible Oil Production</td>
<td>Logistics</td>
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<tr>
<td>Electrical Accessories</td>
<td>Media</td>
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<tr>
<td>Electronics Retail</td>
<td>Medical Equipment</td>
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<tr>
<td>Electronics</td>
<td>Mineral Products</td>
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PE is becoming local: Number of deals by local PE funds is increasing

Number of PE deals in Turkey

<table>
<thead>
<tr>
<th>Year</th>
<th>International</th>
<th>Local</th>
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<tbody>
<tr>
<td>2003</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2004</td>
<td>0</td>
<td>3</td>
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<tr>
<td>2005</td>
<td>4</td>
<td>2</td>
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<td>2006</td>
<td>11</td>
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<td>2007</td>
<td>22</td>
<td>8</td>
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<td>2008</td>
<td>16</td>
<td>6</td>
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<tr>
<td>2009</td>
<td>7</td>
<td>2</td>
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<tr>
<td>2010</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: TEPAV Analysis

Turkey’s economic transformation & entrepreneurship | Slide 23
Yet there is a large gap in PE: potential for a lot of star companies

European Countries Share of Private Equity Investments in GDP (2009)

Source: EVCA
And a long way to go to improve entrepreneurship

Improvement-driven entrepreneurship in efficiency-driven economies

Source: Global Entrepreneurship Monitor, TEPAV Analysis
Early-stage investments are very low even given our level of entrepreneurship

Venture capital / GDP

Improvement-driven entrepreneurship (GEM score)

Source: Global Entrepreneurship Monitor, TEPAV Analysis