



# TÜRKİYEDE ŞİRKETLER KESİMİNİN ANATOMİSİ – NE ÖĞRENDİK VE NEDEN ÖNEMLİ?

Rauf Gönenç  
OECD Türkiye Masası  
TÜSİAD REKABET FORUMU  
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## Dunyada da gundeme gelen bir yaklasim

*Amerikan Merkez Bankasi'nin 2016'da duzenledigi 'Krizden Sonra Makroekonomik Arastirma' Konferansinda Baskan Janet Yellen'in su sozleri:*

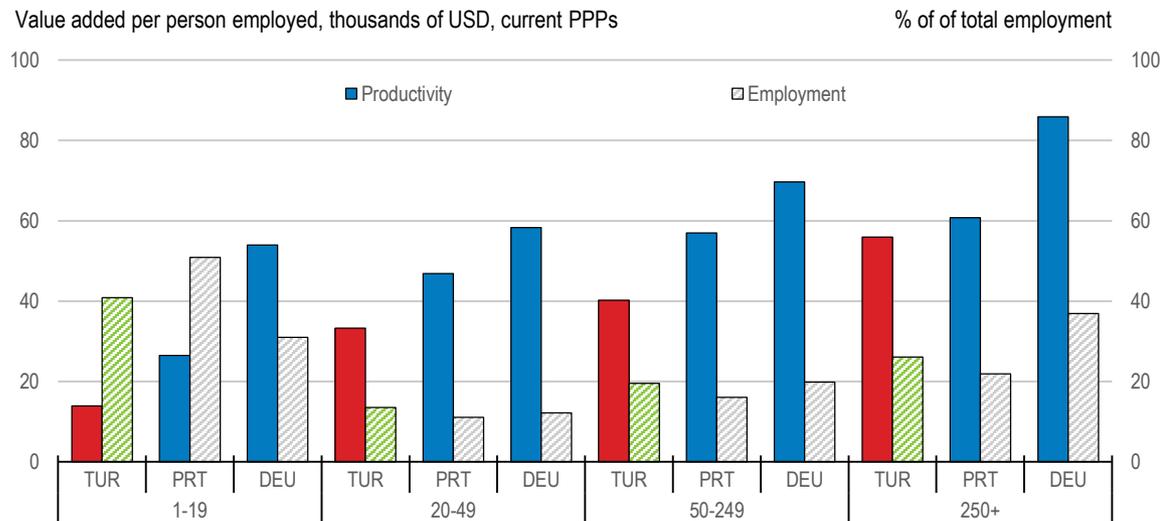
"Economists' understanding of how monetary and fiscal policy affect the economy might benefit from the recognition that households and firms are heterogeneous. For example, in simple textbook models, central banks operate largely through the effect of real interest rates on consumption and investment. Once heterogeneity is taken into account, other important channels emerge. Spending by many households and firms appears to be quite sensitive to changes in labor income, business sales, or the value of collateral that in turn affects their access to credit-conditions. Studying monetary models with heterogeneous agents could help us."

*MIT Ekonomisti John Van Reenen'in, birkac hafta once dunya merkez bankalarinin Jackson Hole'deki yillik sempozyumunda Merkez Bankalari Baskanlari toplantisinda yaptigi sunumdan:*

"A rich understanding of economic outcomes requires taking into account the large differences between firms. These stem in large part from heterogeneous productivity rooted in managerial and technological capabilities...Analyzing the macro-economy requires getting "under the hood" and understanding [this] vast diversity of firm experience...Today we are lucky to live in a world of large-scale (frequently near population) data on firms. These come from national statistical agencies. Increasingly, researchers have been granted confidential access to such [micro] data. Liberalisation of access and rapid increases in computer power have enormously enhanced our capacity to interrogate these sources."



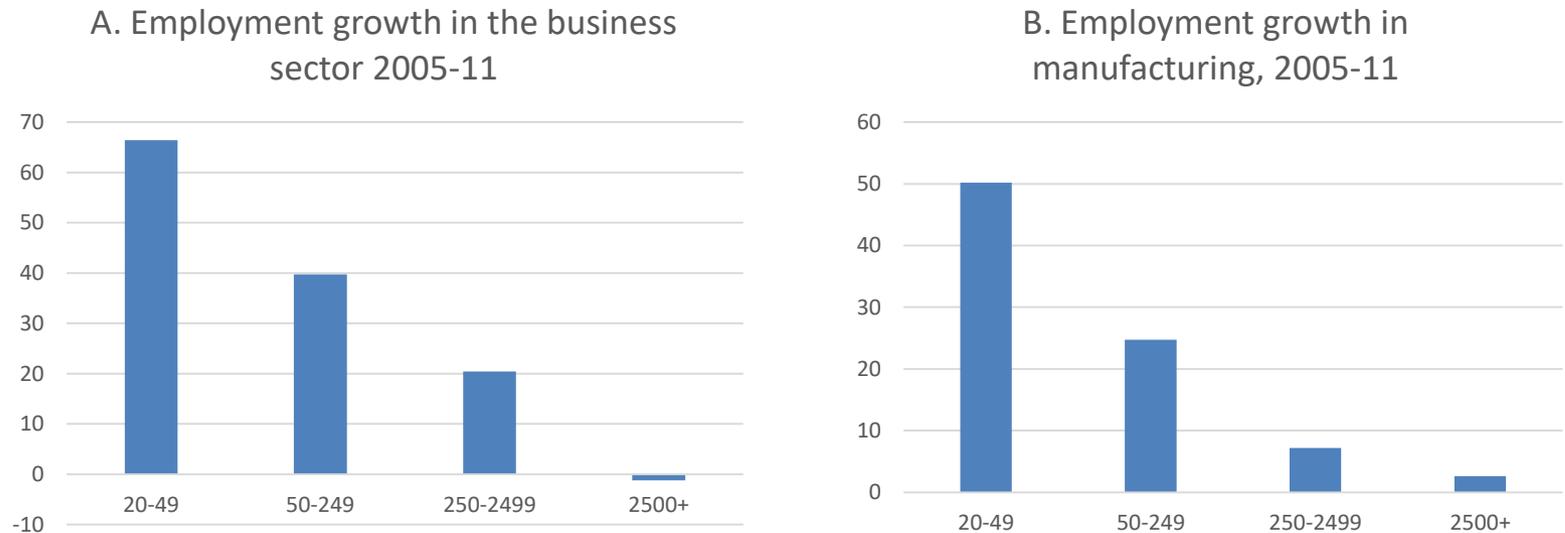
# Figure 1. Employment and labour productivity by firm size (business economy)



Source: OECD (2017).



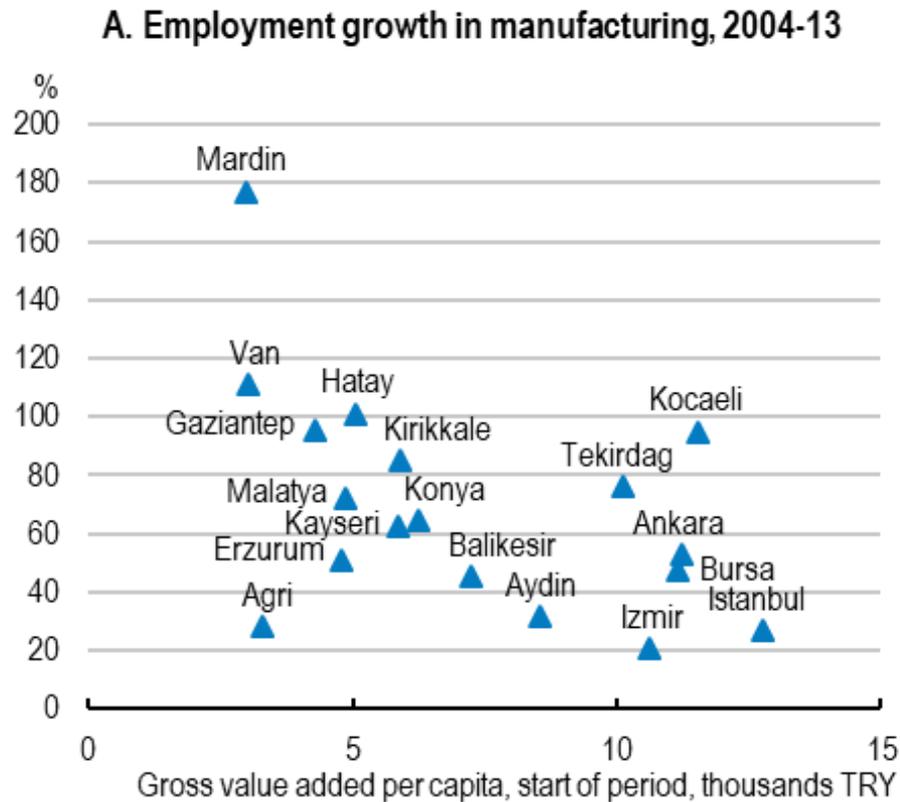
## Figure 2. Small and medium sized firms have been the main engines of employment growth



Source: Turkstat, Annual Industry and Services Statistics (AISS) Database.



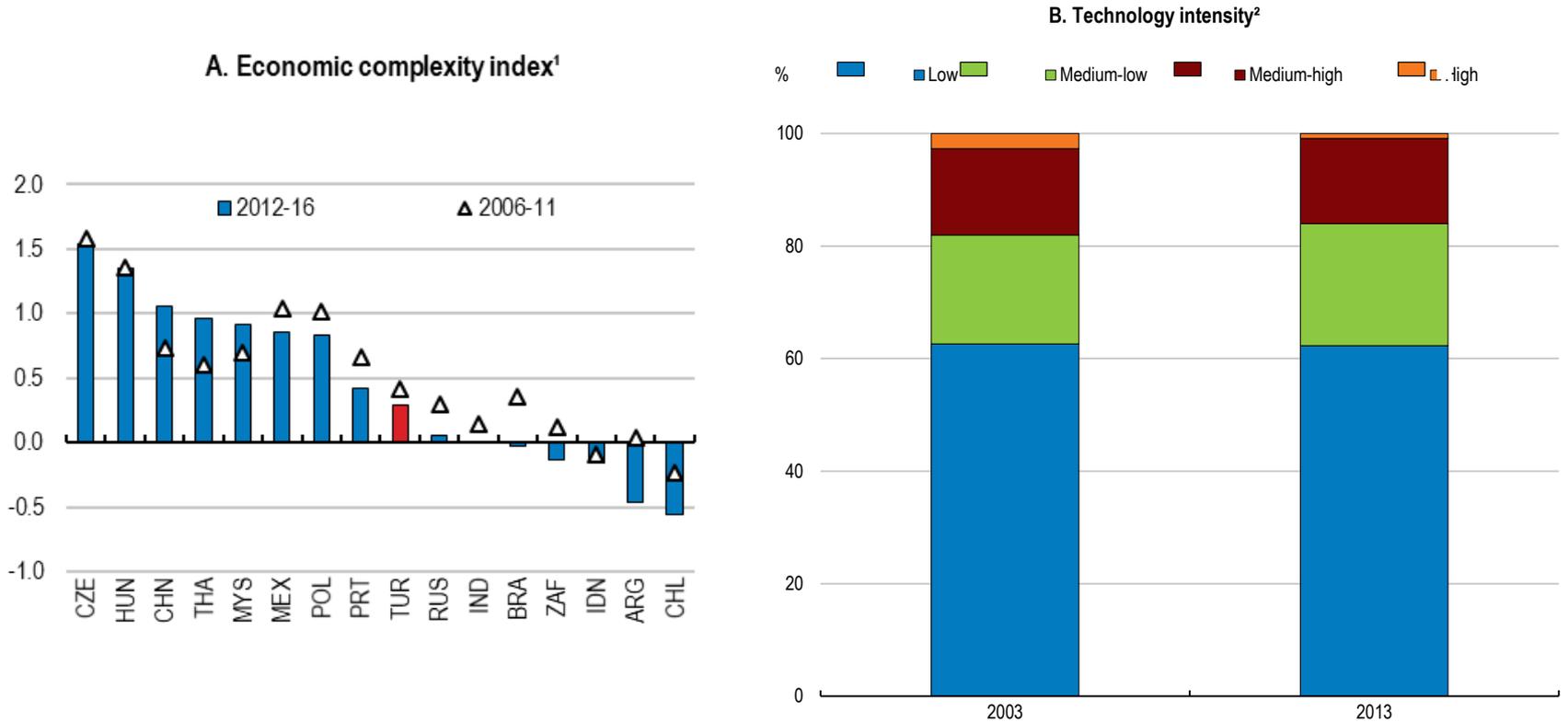
## Figure 3. Manufacturing has expanded on a broad base



Source: Turkstat.



Figure 4. Lower technology activities have grown more rapidly

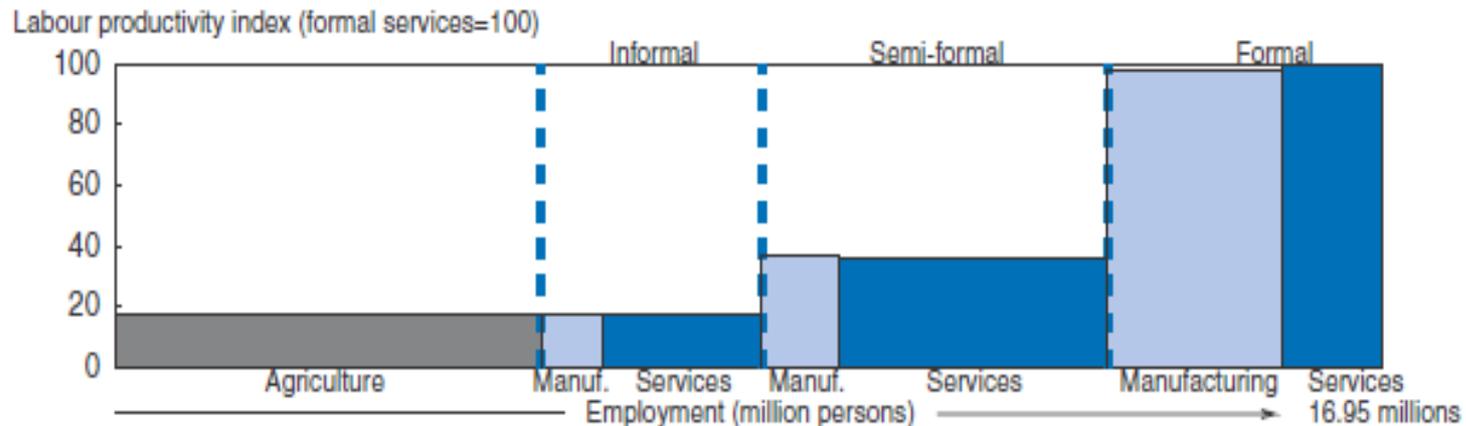


Source: A) Economic Complexity Index, M.I.T. ; B) Percentage distribution of total manufacturing employment, Turkstat.



## Figure 5. Informal, semi-formal and formal segments

Figure 2.6. Labour productivity and degree of formalisation in selected sectors



Note: 2010 Turkstat data was used to calculate the proportion of informal workers across enterprise size classes. Three sectors are distinguished on this basis: i) the "informal sector" (where firms employ a majority of informal workers – around 65% on average), ii) the "semi-formal sector" (where enterprises employ a sizeable share of informal workers – around 20% on average), and iii) the "formal sector" (where only a minority of informal workers are employed – around 5% on average). The labour productivity level of each sector was estimated as a weighted average of labour productivity in constituent size classes. Certain sectors raising particularly severe productivity measurement problems, including the government sector, and a small number of large service sector enterprises were excluded.

Source: OECD estimates based on Turkstat data.

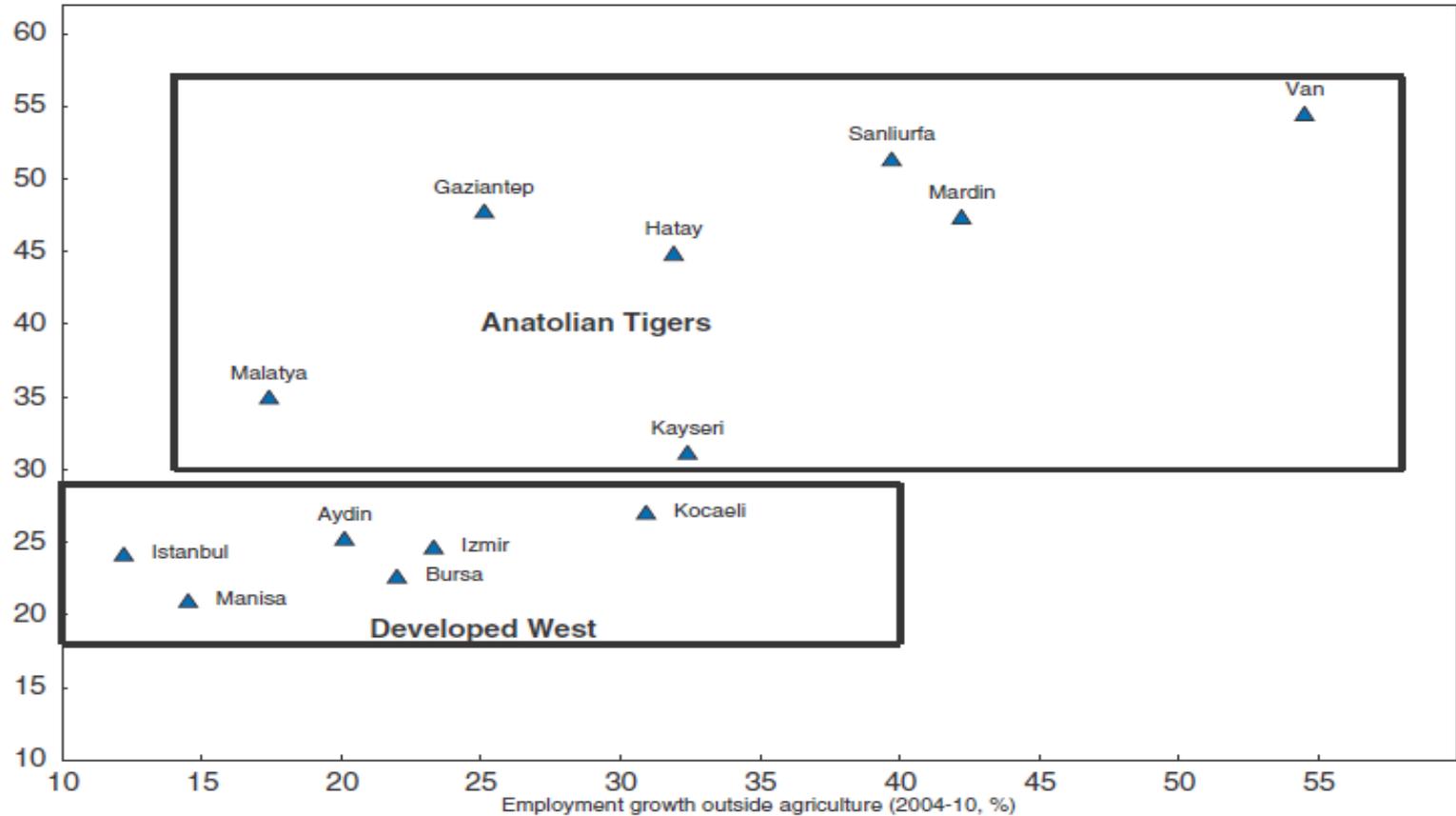
StatLink  <http://dx.doi.org/10.1787/888932659597>

Source: OECD Secretariat estimations



# Figure 6. Business firms' growth and informal employment in different regions (2004-2010)

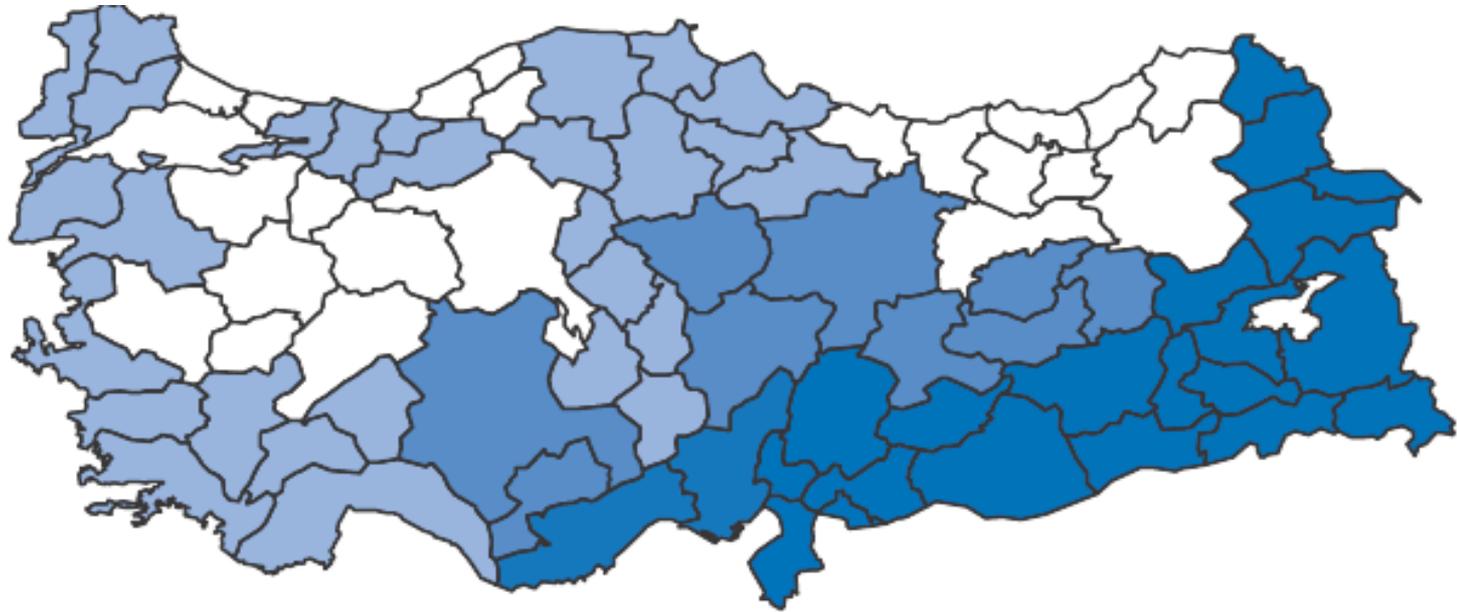
Share of informal employment outside agriculture (2010, %)



Source: Turkstat.



Figure 7. The share of informal employment outside agriculture varied between 20-45%

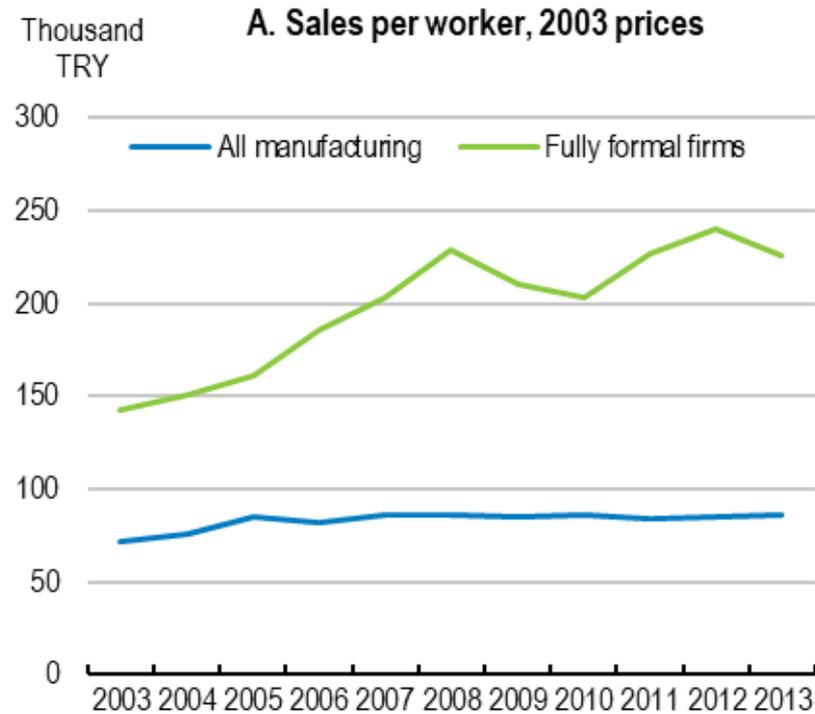


1. Share of workers not registered with the Social Security Institution, including unregistered self-employed workers.

Source: Turkish Statistical Institute..



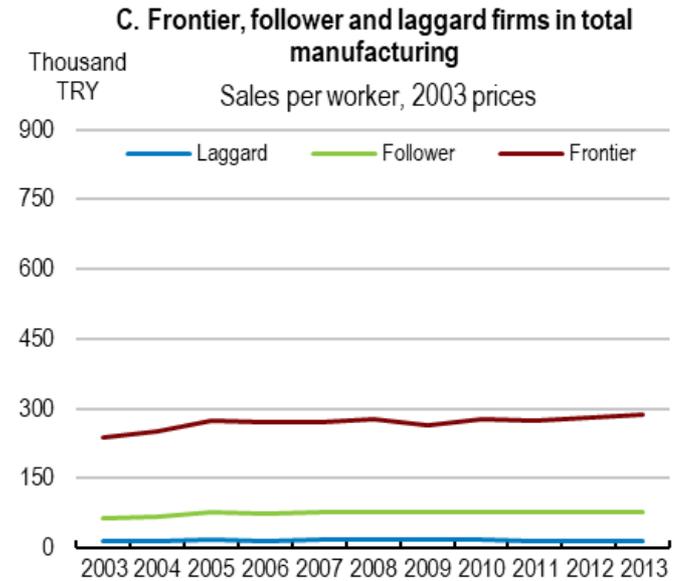
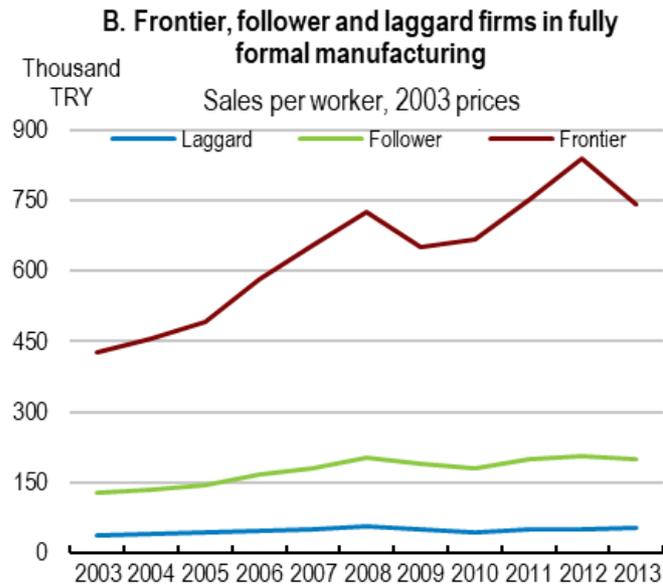
## Figure 8. Formal firms achieve higher productivity growth



Source: OECD Secretariat on the basis of Turkstat and CBRT data.



## Figure 9. Productivity dynamics are more vibrant in the formal sector



Source: OECD Secretariat on the basis of Turkstat and CBRT data



Figure 10. Formal sector firms have grown rapidly in Anatolian Tiger regions

Transition probabilities between size groups

A. Formal business sector, Turkey						B. Formal business sector, Anatolian Tiger regions					
Firm status in 2005	Firm status in 2011					Firm status in 2005	Firm status in 2011				
	Mi	S	Me	L	VL		Mi	S	Me	L	VL
Mi	0.65	0.30	0.04	0	0	Mi	0.33	0.67	0	0	0
S	0.12	0.61	0.25	0.03	0	S	0.04	0.49	0.47	0	0
Me	0.04	0.15	0.63	0.18	0	Me	0.02	0.08	0.64	0.26	0
L	0	0.02	0.12	0.84	0.03	L	0	0	0.04	0.89	0.04
VL	0	0	0	0.22	0.78	VL	0	0	0	0.50	0.50

Mi = Micro, 0-9 workers; S = Small, 10 – 49 workers; Me = Medium-sized, 50 - 249 workers; L = large, 250-2499 workers; VL = Very large, over 2 500 workers.

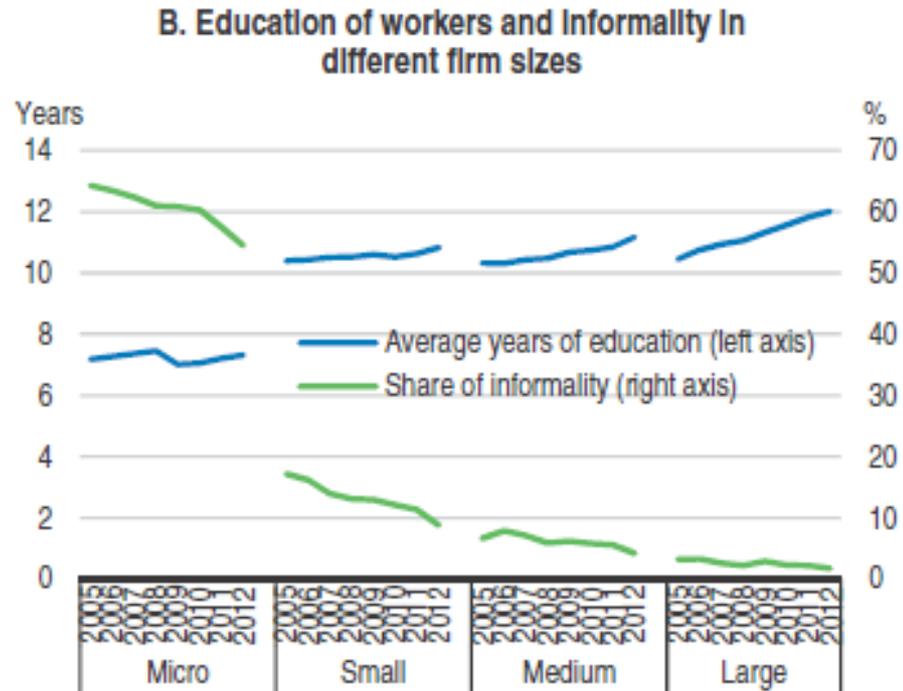
Source: Note: Transition probabilities across columns do not always add up to 1 because of rounding effects.

Source: Central Bank Balance Sheet Database

Source: OECD Secretariat on the basis of CBRT data.



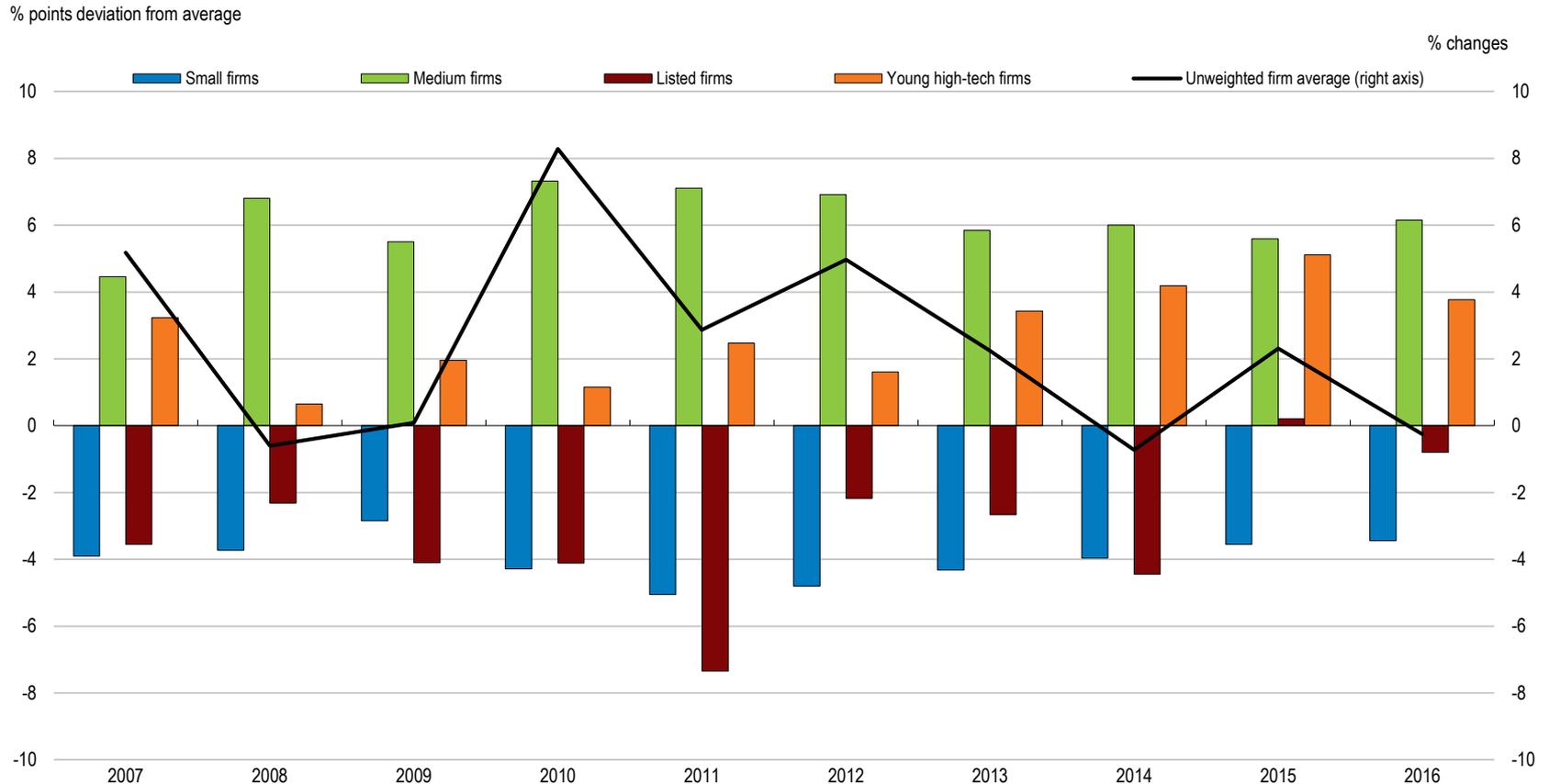
Figure 11. Skill and formality divergences between firm sizes (2005-2012)



Source: Turkstat.



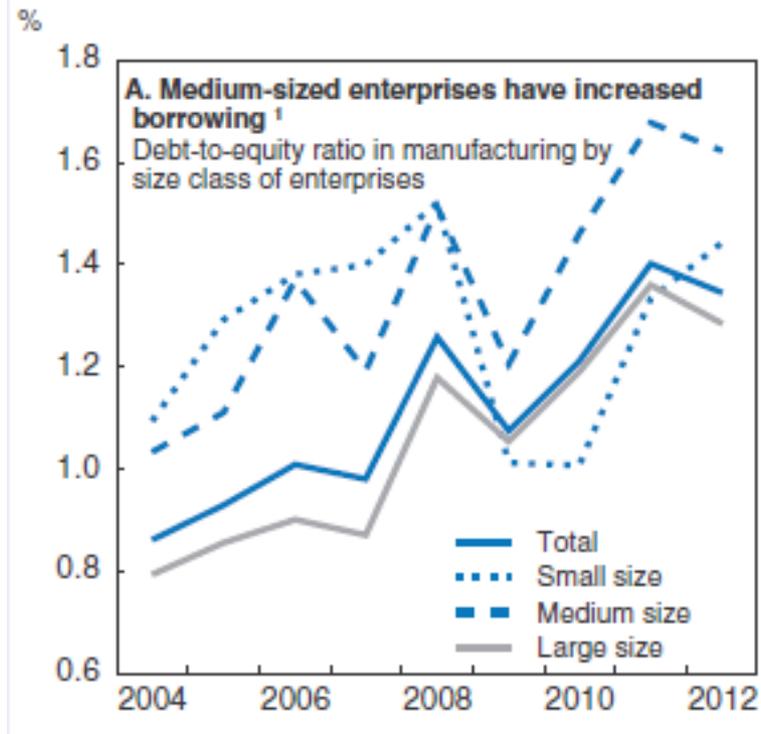
Figure 12. Medium-sized firms invested strongly between 2007-2016  
(Manufacturing, growth rate of machinery and equipment stock, real prices)



Source: OECD/CBRT dataset on the basis of Enterprise Information System (GBS).



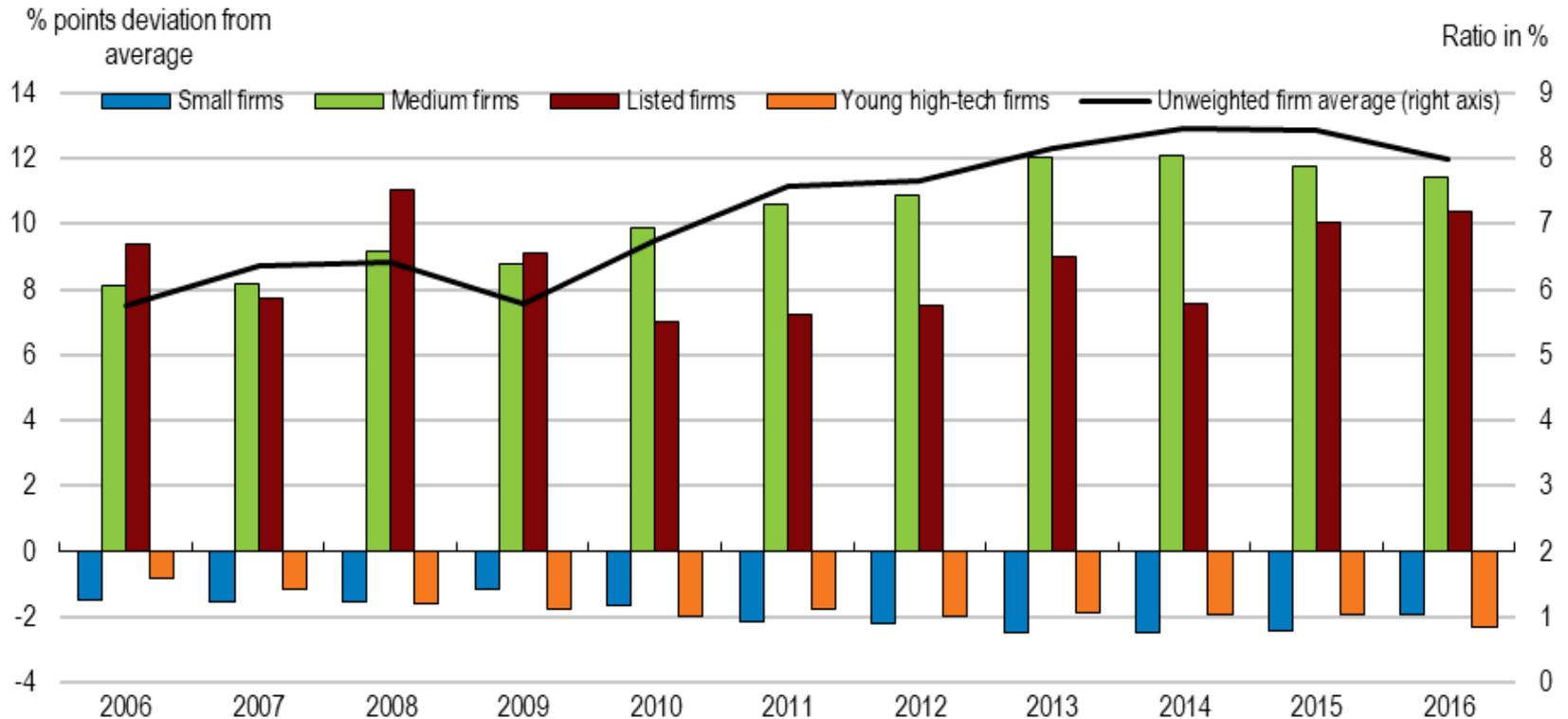
Figure 13. Medium-sized firms' leverage increased strongly...  
(Manufacturing, debt-to-equity ratio)



Source: CBRT Balance Sheets Database, OECD Institutional Investors and National Accounts Databases.



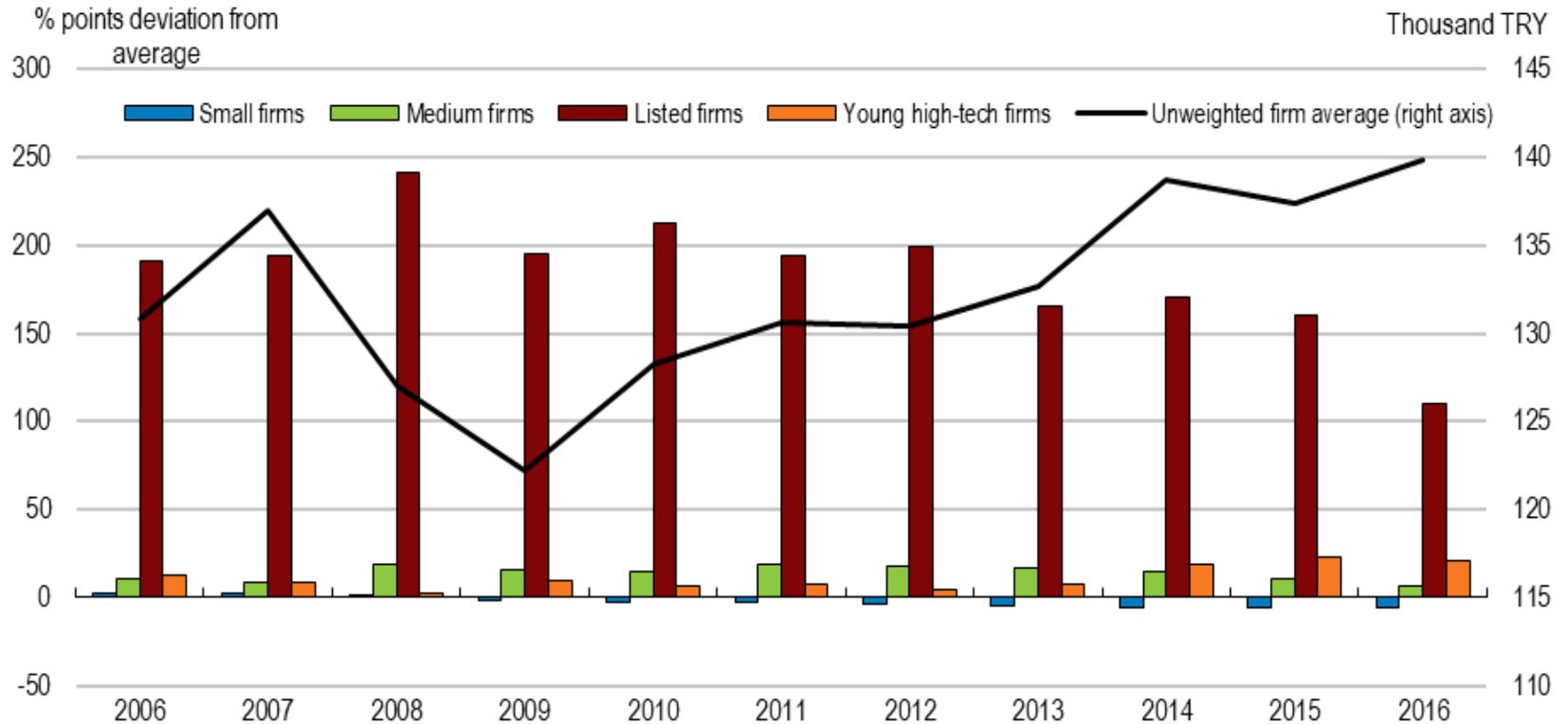
Figure 14. ...including in the most recent period  
(Manufacturing, ratio of bank liabilities to total assets)



Source: OECD/CBRT dataset on the basis of Enterprise Information Systems (EIS).



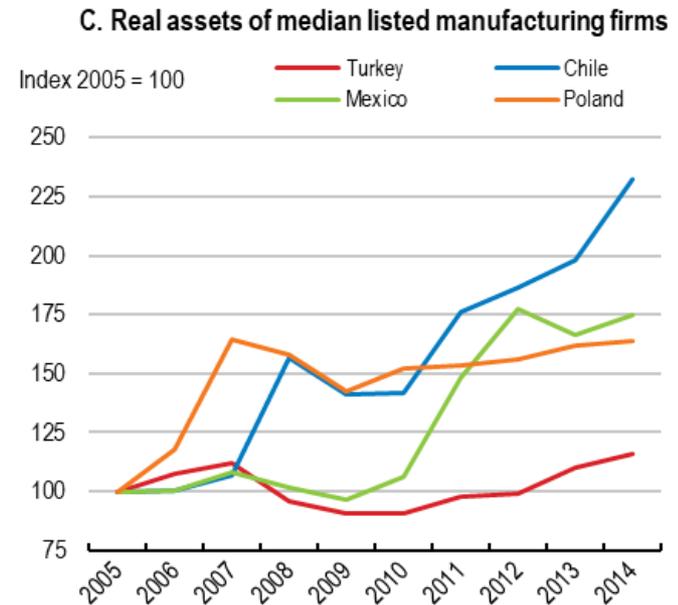
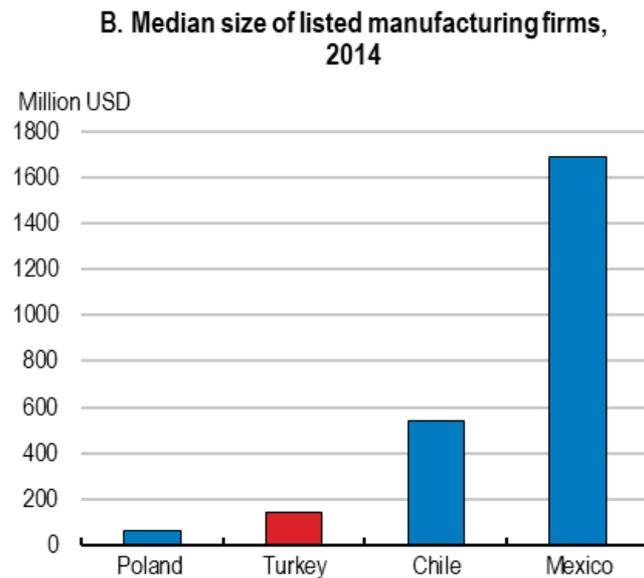
Figure 15. Stock market-listed firms are significantly more productive  
(Manufacturing, real net sales per worker in 2006 prices)



Source: OECD/CBRT dataset on the basis of Enterprise Information Systems (EIS).



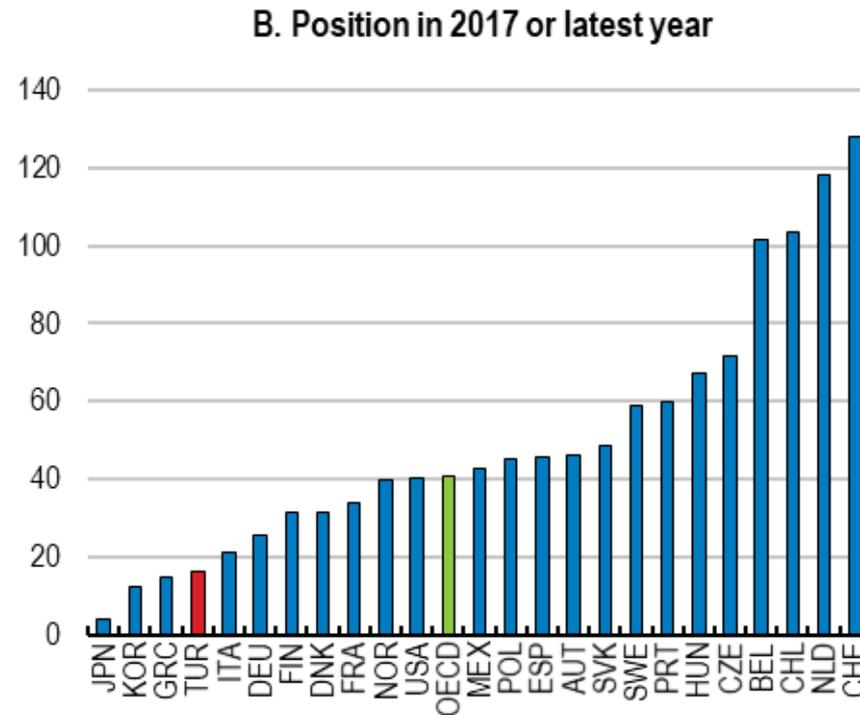
Figure 16. Turkish stock market-listed firms have invested less than international peers



Source: OECD Secretariat based on Thomson Reuters Datastream.



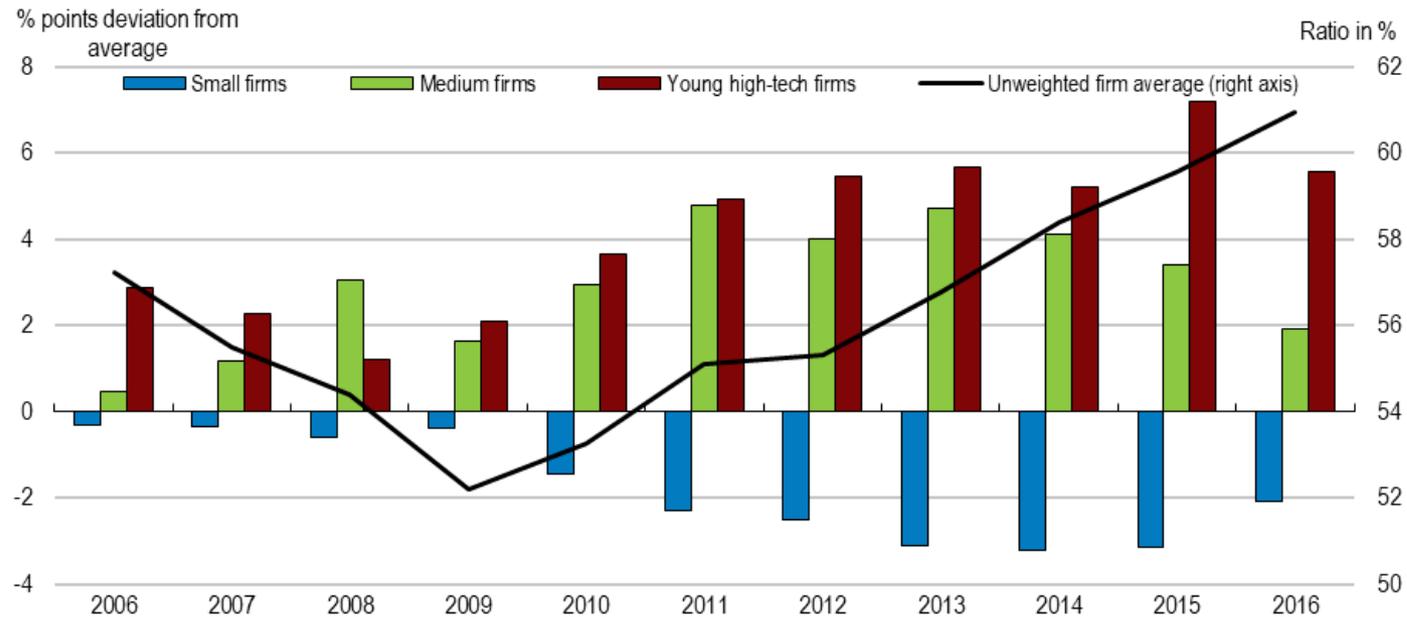
Figure 19. FDI stock remains low in international comparison  
(in percentage of GDP)



Source: OECD FDI Statistics.



Figure 20. High-technology start-ups are highly leveraged  
(Ratio of total liabilities to total assets)



Source: OECD/CBRT dataset on the basis of Enterprise Information System (GBS).