

FIDIC-EFCA 2012 Survey of the Consulting Engineering Industry

Europe (mainly EU27)

Peter Boswell

Bricad Associates, Switzerland

Brussels, 31 May 2013

survey.peterboswell.net

Contents

1. Demand for consulting engineering services from investment
2. Comparing demand with turnover from surveys
3. Comparing demand with use from Supply-Use Tables
4. Conclusions and further work
 - General
 - Key figures
 - Issues for further work

Part 1

Demand for consulting
engineering services

Survey of national Member
Association

INVESTMENTS

2008 System of National Accounts

Non-financial assets

- Produced assets
 - **Fixed assets**
 - Inventories and Valuables
 - Non-produced assets
 - Natural resources, leases, licences
- Financial assets

Used for production for more than 1 year (GFCF)

- Construction
- Equipment
- Weapons systems
- Cultivated assets
- IP

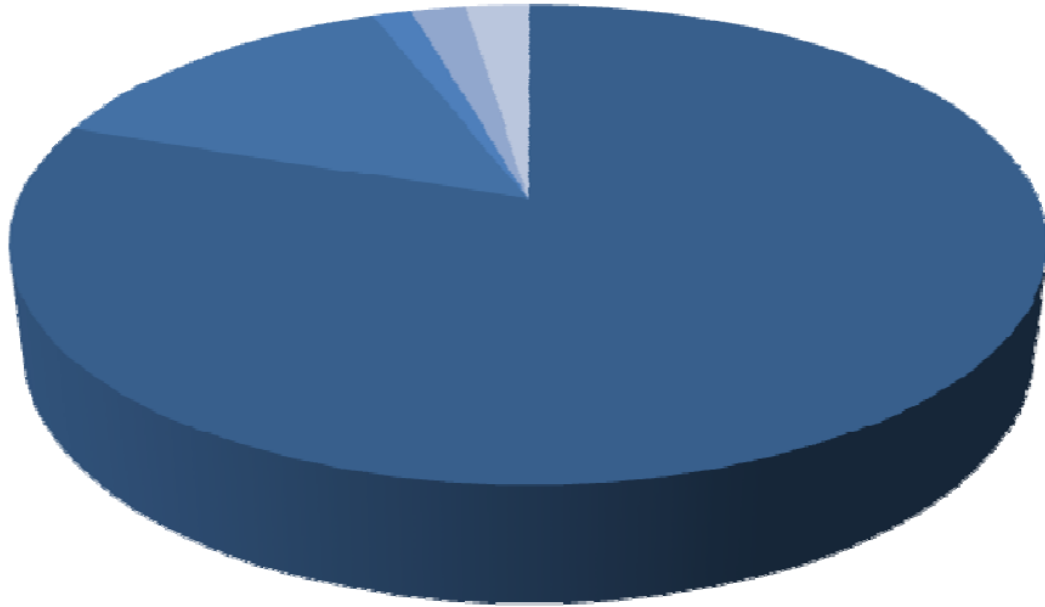
DEMAND FOR CE SERVICES

CE industry	Other industries	
Market	Market	In-house

1 - Demand from investment

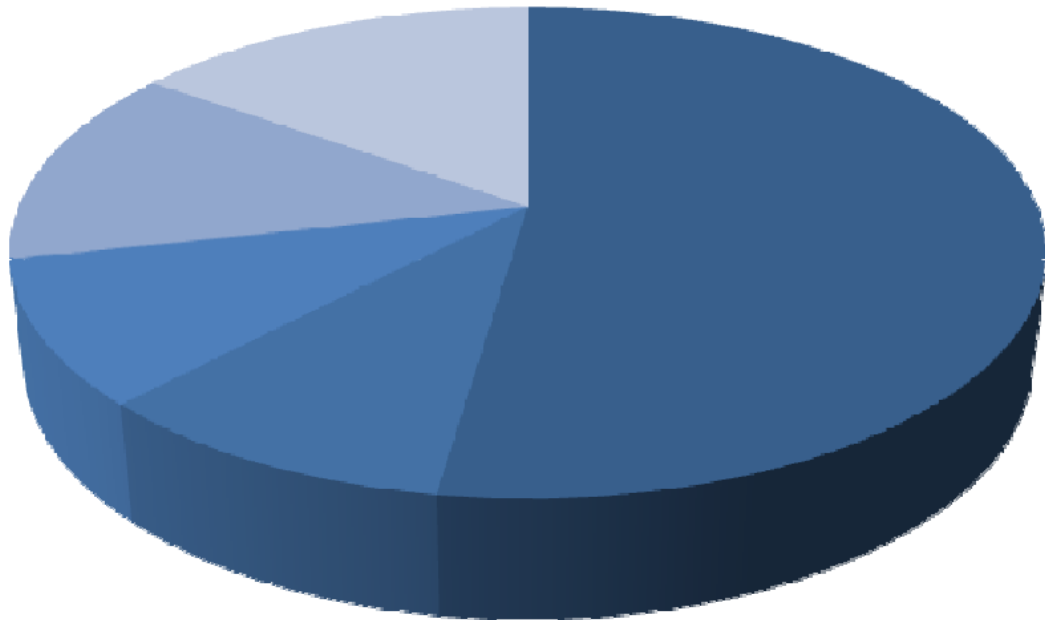
	Construction		Equipment	Weapons	Cultivated Assets	IP		
	New Build	M&R				R&D	Mineral	Own-account design
GFCF	National Accounts	Industry turnover	National Accounts	1%	Small; ignore	4%	Small; ignore	30% of M71.1 supply producer prices, Supply - Use Tables
Require CE services	100%	Typical 56% New Build	Typical 58%	50%	-	70%	-	80%
CE fees	5% survey		10% survey	20%	-	80%	-	80%

GFCF requiring services

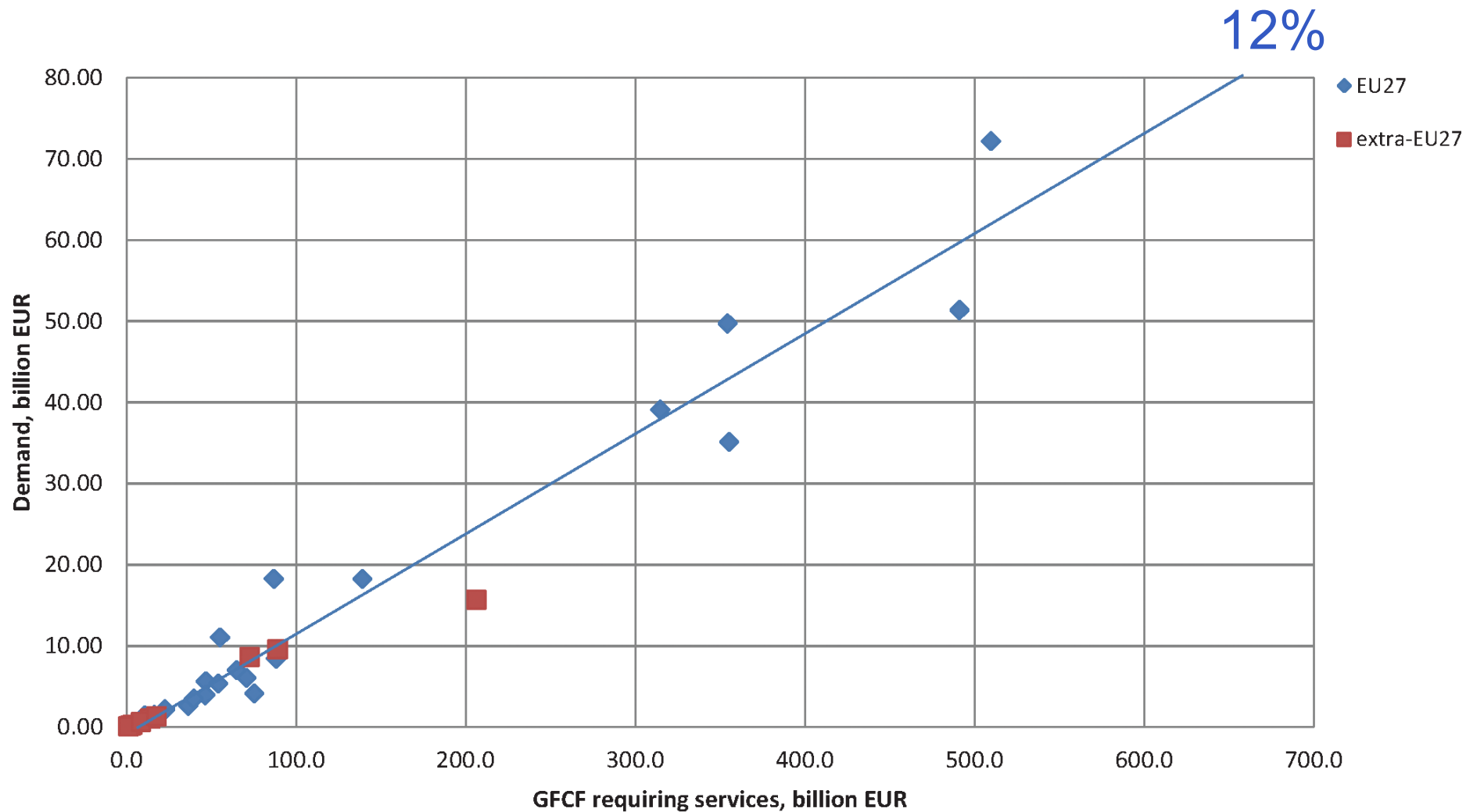


- Construction
- Equipment
- Weapon systems
- R&D
- Own-account design

Demand for services

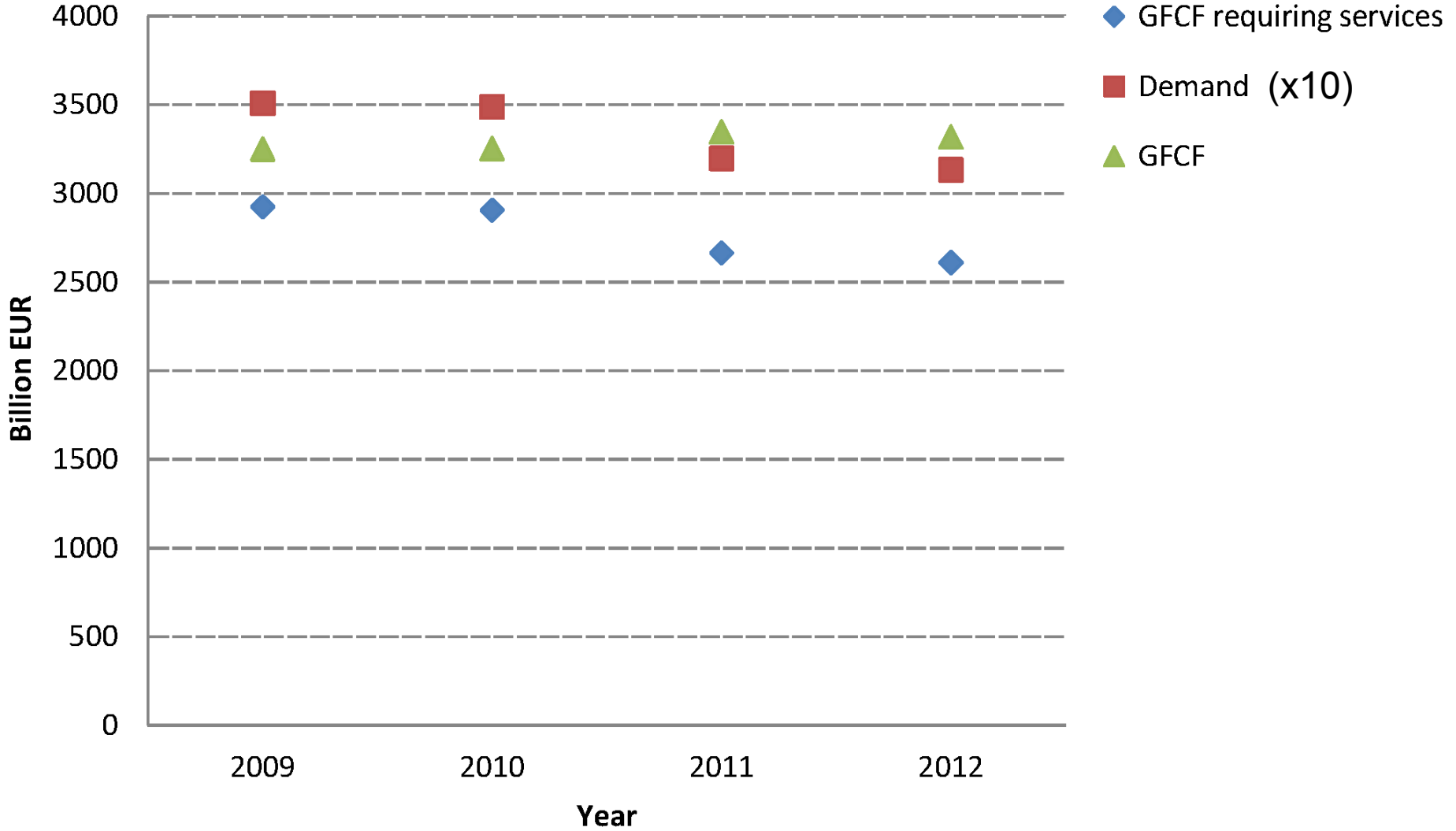


- Construction
- Equipment
- Weapon systems
- R&D
- Own-account design



EU27 and Extra-EU27 countries, 2009

1 - Demand from investment



EU27

Part 2

Comparing demand with turnover

Eurostat and Member
Association surveys

Comparing demand and turnover (EU27, 2009)

	bEUR
Demand	351
Turnover (enterprises)	321

	2009	2010	2011	2012
Demand	100	99.4	91.1	89.3
Turnover (enterprises)	100	100.6		
M71 - architecture, engineering, testing (units)	100	98.81	102.6	105.5

Part 3

Comparing demand with use

Check: does the demand makes sense
(Use = Demand)?

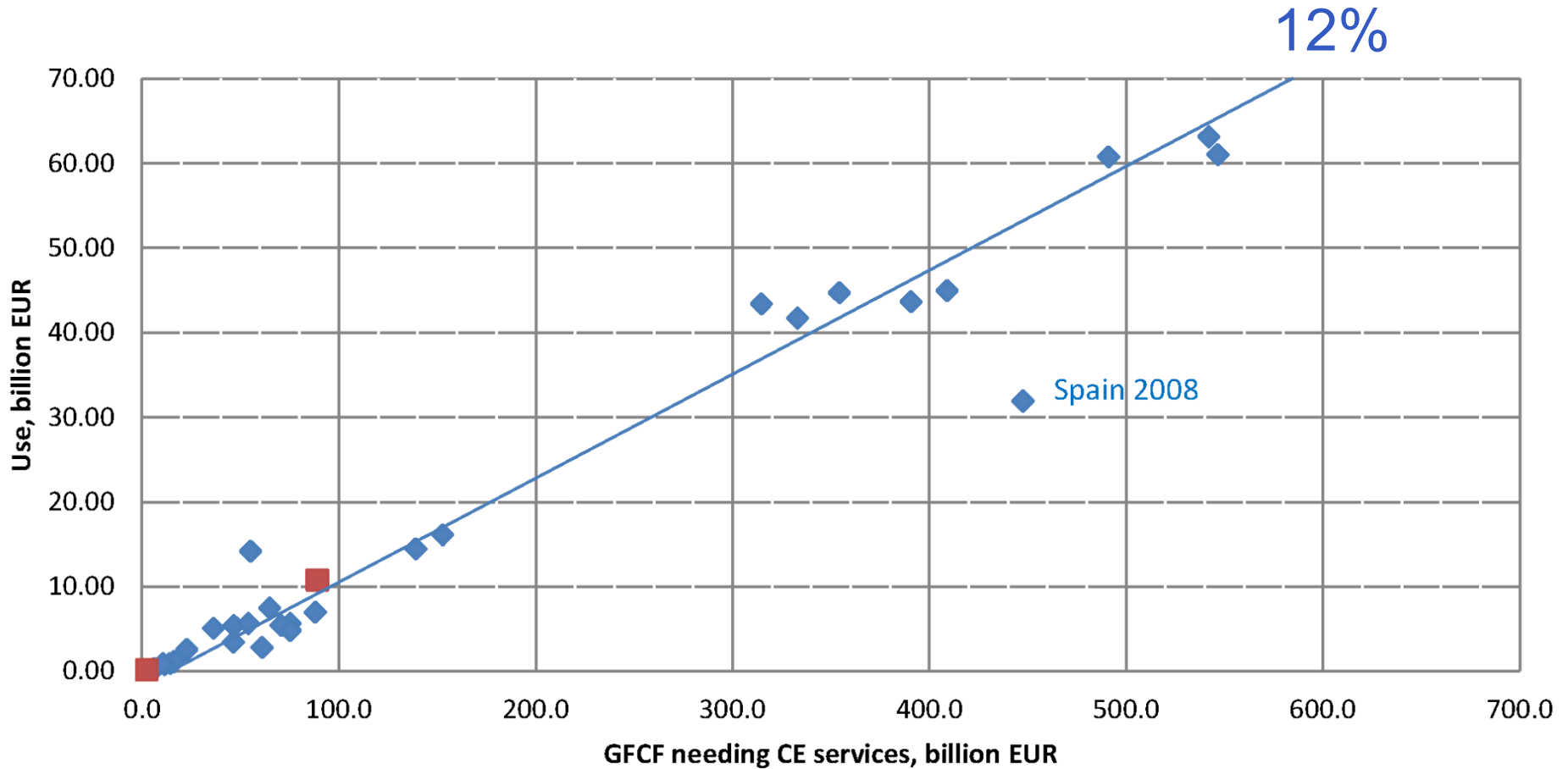
Sources

- EU Eurostat Supply-Use Tables
- EU NACE (2008) industry classification
- EU CPA (2008) Classification of Products by Activity

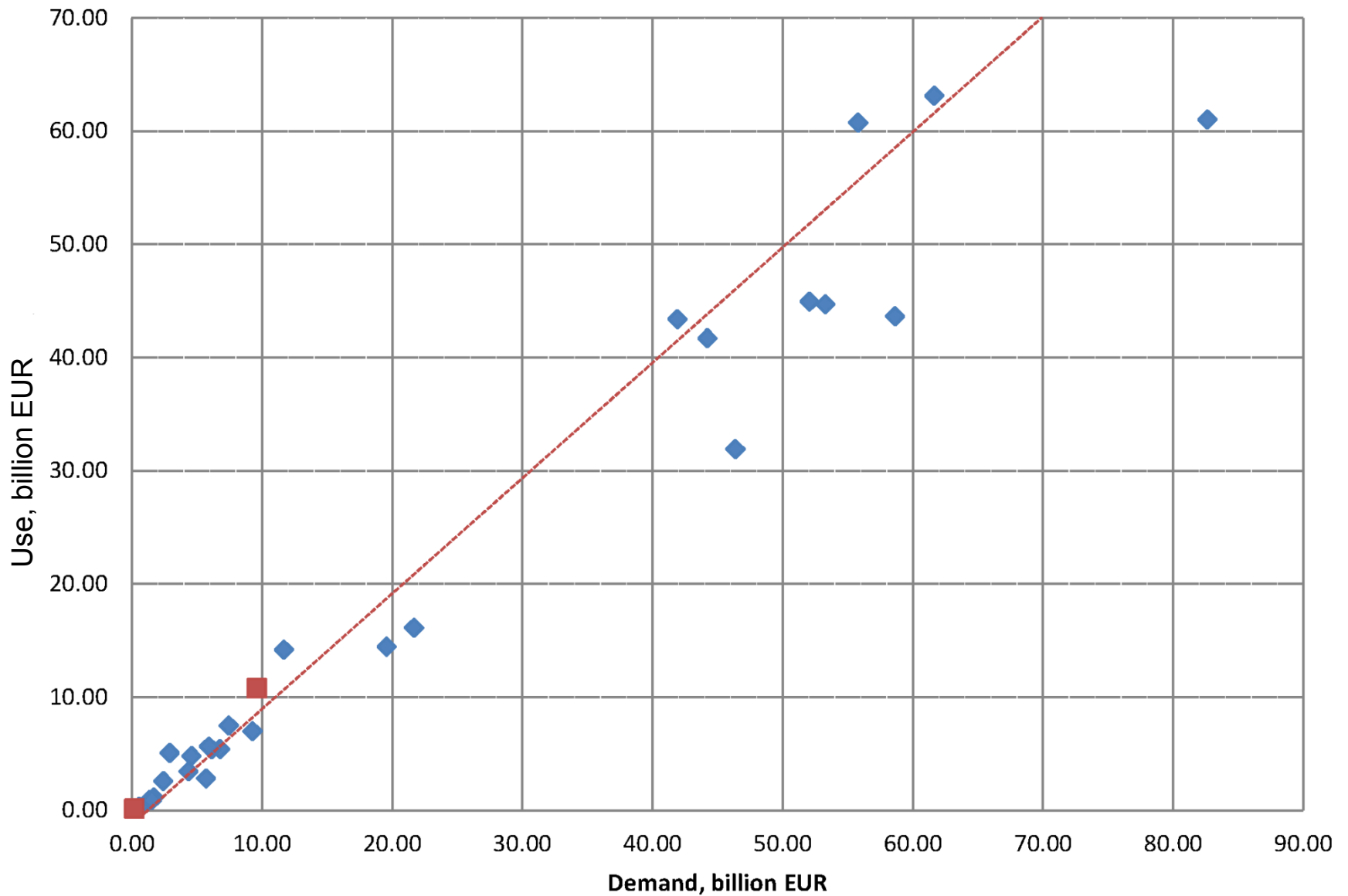
CPA product activity		Investment					
		Construction	Equipment	Weapons	IP		
					R&D	Minerals	Own-account design
M71.1 1 &12	Architecture & Engineering	x	x	x			x
M72.19	R&D related to engineering			x	x		
B09.10 & 90	Test drilling for mining support		x			x	
M74.9 &10	Industrial design for special design & advanced technical skills		x	x			x

Use from Supply-Use Table (France, 2009)

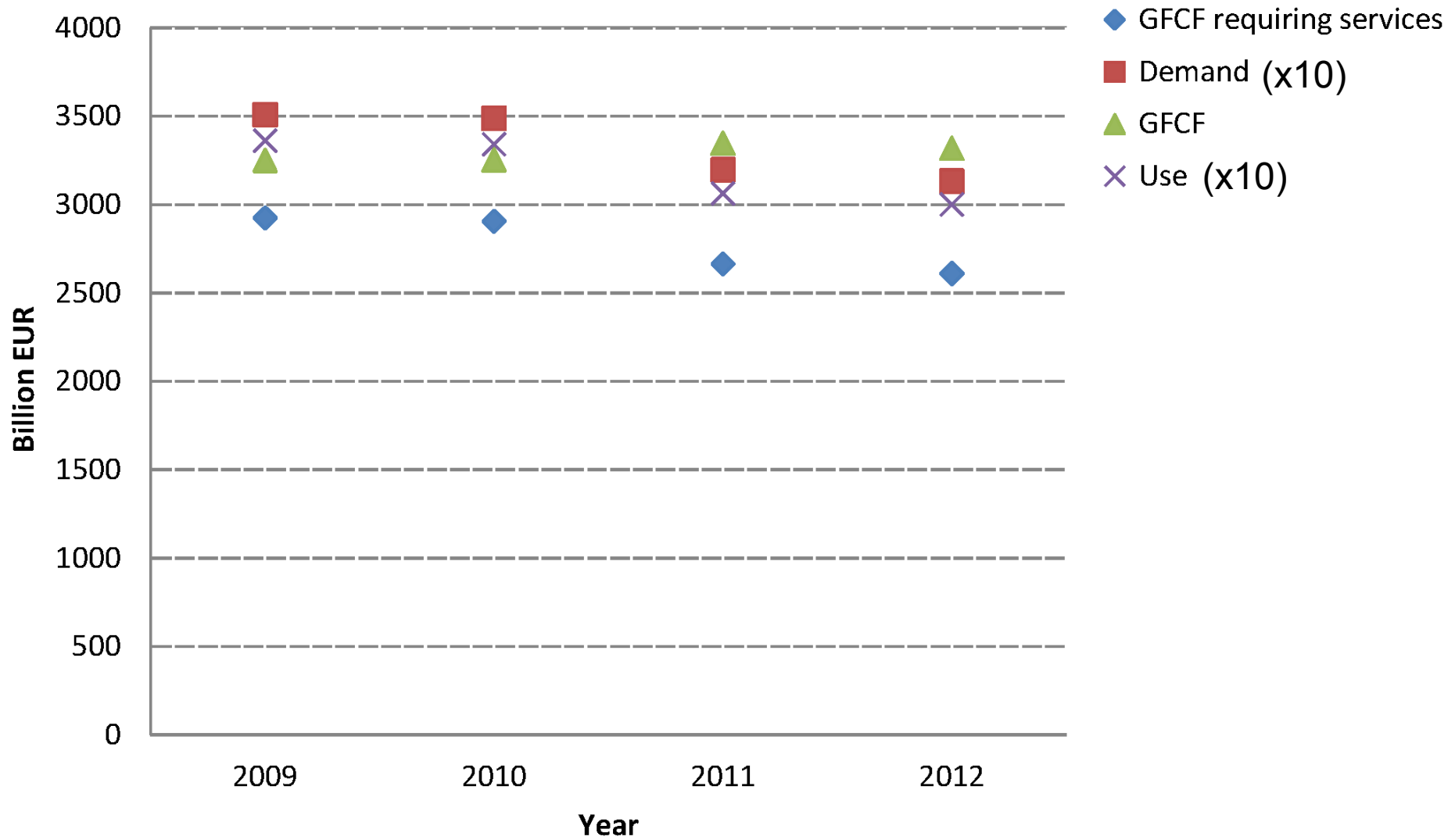
CPA product activity		bEUR
M71.1 1 &12	Architecture & Engineering	39.5
M72.19	R&D related to engineering	20.8
B09.10 & 90	Test drilling for mining support	0.32
M74.9 &10	Industrial design for special design & advanced technical skills	0.19



EU27 and Extra-EU27 countries with SUTs, 2008/9



EU27 and Extra-EU27 countries with SUTs, 2008/9



EU27

Cross-check - In-house own-account production

	Demand, 2009		Use, 2009		Supply, 2004	
	Survey, % Demand	bEUR	Assume % M71.1 use	bEUR	Reference	bEUR
France	21.0	10.8	30	9.5	COINVEST	10.8
Sweden	10.1	1.1		2.2		6.3
Germany	23.6	9.2		8.3		10.2

Imports - Exports (all CE services) from SUTs

		Imports			Exports		
		Basic prices, bEUR	% imports	% production	Basic prices, bEUR	% imports	% production
Total EU27	2009	49.6		14.3%	50.8		14.7%
Extra- EU27	2008		70%	10.1%		75%	11.1%
Intra- EU27	2008		30%	4.2%		25%	3.6%

Part 4
**Conclusions and further
work**

General Conclusions

Have an industry model (demand is 12% of investment requiring services).

Demand is an upper limit to actual use.

Can therefore use with confidence investment to estimate demand in the many countries for which Supply-Use Tables are not available.

Key figures

Domestic demand from investment, EU27, 2009	
GFCF, Gross Fixed Capital Formation (excluding repair and maintenance)	bEUR 3250
Investment (including construction repair & maintenance) requiring consulting engineering and architecture services	bEUR 2924
Percent of investment (including construction repair & maintenance) requiring the services that is spent on the services	12%
% demand met by:	
- consulting engineering and architecture industry	51%
- other industries	26%
- in-house own-account production	23%
Distributions of the domestic investment (GFCF) / demand:	
- Construction	80.0% / 56%
- Equipment	14.0% / 11%
- Own-account design	2.4% / 16%
- Other (R&D; weapon systems)	3.6% / 17%

Classification

Enterprises not reporting different types of services, e.g., France.

Investment

Construction maintenance and repair overestimated, e.g., Spain.

Employment

Can include manpower requirements (important for maintenance and repair), e.g., South Africa

Thank you

Including:

- Bricad associates
- Jean Félix (SYNTEC)
- Davis Cramer (STD)
- Paul Ortwijn (NLEngineers)
- Gruneberg (GFCE, UK), Haskel(COINVEST, UK),
Merriwether (Services, South Africa), Delbecque (OECD, France)

[See survey.peterboswell.net](http://survey.peterboswell.net)