

Development of Turkish Trade Statistics

Bülent TUNGUL

SESRIC Statistical Cooperation Programme
Workshop on External Trade Statistics

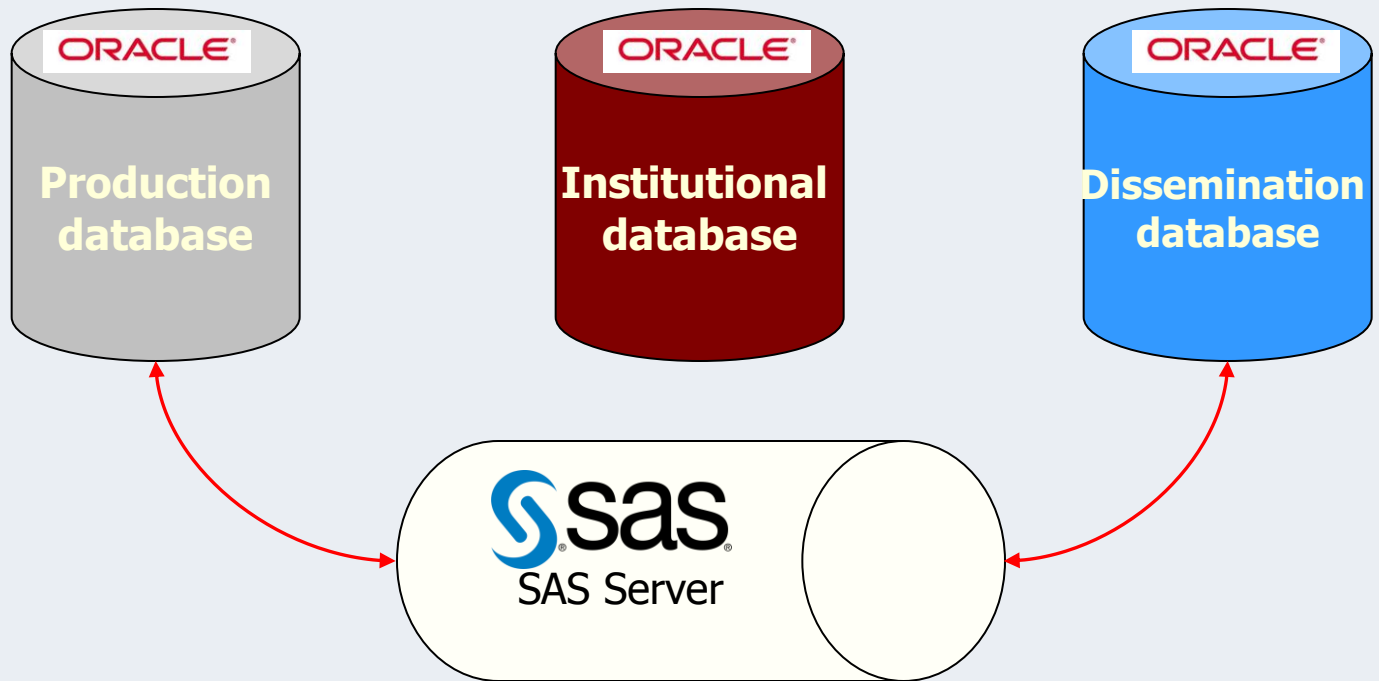
6-8 January 2013
Kuwait

Why SAS?

- Mainframe system had been used until 2005
- More analysis on the data
- Easy to reach the data
- Easy dissemination (reports)
- Save time
- Easy to learn
- Using SQL in addition to SAS language
- User friendly
- Easy connection to other databases



“ Architecture? ”



Program developed

**Two main projects were developed in SAS
by Turkstat**

- **SASVUP** (For data processing)
- **SASDAGITIM** (For data dissemination)

Data Processing

SASVUP



Enterprise Guide - D:\My Documents\My SAS Files\SASYPUP_08052012_ANAHTAR.seg - [1.2:Parametre Geçir]

File Edit View Insert Format Tools Data Analysis Graph Code Window Help

EGDefault

SASYPUP_08052012_ANAHTAR

- ADIM-1 :OracleBağlantı & Parametre Geçir
 - 1.1:OracleBağlantı
 - 1.2:Parametre Geçir
- ADIM-2: Veri Transferi & Kod Hataları
 - 2.1: Gümrük Desen
 - 2.2: DELETE Boş Kayıt
 - 2.3: Mükerrer Kayıtların Tespiti-Kendi İçinde
 - 2.4: Mükerrer Kayıtların Silinmesi From TMP_GUMF
 - 2.5: INSERT TO TMP_GUMRUK_ALL Mükerrerlik İç
 - 2.6: DT_CARIVERI ile Mükerrerlik Kontrolu
 - 2.7: Mükerrer Kayıtların Tespiti-Tablolar Arası
 - 2.8: Mükerrer Kayıtların Silinmesi-Tablolar Arası
 - 2.9:CREATE Tmp_DIEVERI
 - 2.10: İptal Edilen Beyannameler
 - 2.11: KodDönüşümü
 - 2.12: Yeni Alan & Default Değerler
 - 2.13: Kod Geçerlilik Kontrolu
 - 2.14: Hatalı Kodların Ayırılması
 - 2.15: RAPOR- Hatalı Kodların Raporlanması
 - 2.16: RAPOR- Gelen Veriler & Kayıt Sayısı
 - 2.17: RAPOR- Dönüşüm Yapılan Kodların Raporları
- ADIM-3: DogruKodUpdate & Kod Geçerlilik
 - 3.1: Dogru Kod Update On TMP_KODHATA
 - 3.2: Hatalı Kod Re-Import
- ADIM-4: Analiz Tablolarının Raporlanması
 - 4.1: Dolar & Euro & YTL Hesabı
 - 4.2: Analiz Tabloları Raporlama
 - 4.3: Analiz Tabloları_Zaman Dizisi
 - 4.4: Uçak Analizi
 - 4.5: Tamir&Bakım Analizi
- ADIM-5: Analiz Tablosundaki Hataların Düzeltme
 - 5.1: Otomatik_Analiz Tablosundaki Hataların Düze
 - 5.1: Düzensiz_Analiz Tablosundaki Hataların Düze
- ADIM-6: Güven Aralığı&Hataların Ayıklanması
 - 6.1: Güven Aralığından Geçirme &HataTürleri
 - 6.2: Rapor: MIKTARHATALARI
 - 6.3: Hatalı/Tüm Kayıtların Ayırılması
 - 6.4: RAPOR_KAYIT KONTROL
 - 6.5: Yeni Firma Analizi
 - 6.6: REDRESE TMP_DIEVERI Analiz

```

/*Parametreleri Giriniz*/

%LET AY=05;          /*Giriniz: İlgili Ay Kodunu 01, 02, 03 .. şeklinde giriniz*/
%LET PARÇA=1;       /*Giriniz: Buraya Ayın Hangi Parçası Olduğunu Giriniz*/
%LET DOSYASAY=1;
%LET DOSYAADI1=tuik_ana_05062012.lst;          /*1. Dosyanın Adını Giriniz. Dosya Bir tane ge
%LET DOSYAADI2=gumdata_tuik3_09102010.lst;      /*2. Dosyanın Adını Giriniz*/
%LET DOSYAADI3=die3-040108.lst;                /*3. Dosyanın Adını Giriniz*/
%LET DOSYAADI4=die4-040108.lst;                /*4. Dosyanın Adını Giriniz*/
%LET DOSYAADI_IPTAL=tuik iptal_05062012.lst; /* İptal Dosyasının Adını Giriniz*/

%LET YIL=2012;
%LET ONCEKIYIL=2011;
%LET TUMHATALI=0;          /*Miktar Kontrolu için Tüm Kayıtların dökümü için 0, Sadece Hatal
%LET TUMPARÇA=1;          /*PARÇA:0, BİRLEŞİMİŞ:1 :Yeniden Güven Aralığından geçirirken Birl

%LET DOSYAOZETBEYAN=die-ozby-2007.lst;
/*Aşağıdaki Parametreler Default (Değişmeyen) Parametrelerdir*/
%LET SASPATH=E:\User Raw Data Files\DST\;
%LET S=S\;
%LET LIBSAS=DSTVUP; /*Burada SAS ta çalışılan Library Adı*/
%LET LIBORA=URETIM; /*Burada Oracle da çalışılan Library Adı*/
%let TARİH=%SYSFUNC(today(), dcmmyy8.);
%LET KAYIT=KAYITDESENLERİ;
%LET GUMRUKFILE=DSTVUP.TMP_GUMRUK;
%LET GUMRUKFILEANT=DSTVUP.TMP_GUMRUK_ANT;
%LET GUMRUKFILERED=DSTVUP.TMP_GUMRUK_RED;
%LET OZETBEYAN=DSTVUP.TMP_OZETBEYAN;
%LET GUMRUKALL=DSTVUP.TMP_GUMRUK_ALL;
%LET DIEFILE=DSTVUP.TMP_DIEVERI;
%LET DIEALL=DSTVUP.TMP_DIEVERI_ALL;
%LET GUMRUKMUK=DSTVUP.TMP_GUMRUKMUK_ALL;
%LET MUKKENDI=DSTVUP.TMP_MUKERRER_KENDI;
%LET MUKDIGER=DSTVUP.TMP_MUKERRER_DIGER;
%LET MUKORACLE=DSTVUP.TMP_MUKERRER_ORAC;
%LET CARIFILE=VB1.DT_CARIVERI;
%LET IPTALLER=TMP IPTALLER;

```

DST

- Libraries
 - WORK
 - URETIM
 - VB2
 - VB1
 - EUROTR
 - GUVENORA
 - ISKAYIT
 - ISKAYIT3
 - ISKAYIT2
 - ISKAYIT1
 - DSTVUP
 - DST
 - ENDEKS
 - EGTASK
 - SASHELP
 - MAPS
 - SASUSER
- Cubes
- Files

Task Name	Status	Queue Position	Server

For Help, press F1

Ln 1, Col 1 NUM

Oracle Connection / Parameters

```
libname VB1 oracle user=xxxx pass='xxxx' path=kurumbd2 schema=dturet
libname VB2 oracle user=xxxx pass=xxxxx path=kurumbd2 schema=dt updat
libname Uretim all (VB1 VB2);
```

```
/*Parametreleri Giriniz*/

%LET AY=05;          /*Giriniz: İlgili Ay Kod
%LET PARCA=1;       /*Giriniz: Buraya Ayın H
%LET DOSYASAY=1;
%LET DOSYAADI1=tuik_ana_05062012.lst;    /
%LET DOSYAADI2=gumdata_tuik3_09102010.lst;
%LET DOSYAADI3=die3-040108.lst;        /
%LET DOSYAADI4=die4-040108.lst;        /
%LET DOSYAADI_IPTAL=tuik iptal_05062012.lst;

%LET YIL=2012;
%LET ONCEKIYIL=2011;
%LET TUMHATALI=0;      /*Miktar Kontrolu iç
%LET TUMPARCA=1;      /*PARÇA:0, BİRLEŞMİŞ

%LET DOSYAOZETBEYAN=die-ozby-2007.lst;
/*Aşağıdaki Parametreler Default (Değişmeyen
%LET SASPATH=E:\User Raw Data Files\DST\;
%LET S=S\;
%LET LIBSAS=DSTVUP; /*Burada SAS ta çalışıla
%LET LIBORA=URETIM; /*Burada Oracle da çalış
%let TARİH=%SYSFUNC(today(), ddmmyy8.);
%LET KAYIT=KAYITDESENLERI;
%LET GUMRUKFILE=DSTVUP.TMP_GUMRUK;
%LET GUMRUKFILEANT=DSTVUP.TMP_GUMRUK_ANT;
%LET GUMRUKFILERED=DSTVUP.TMP_GUMRUK_RED;
```

Data Transfer & Code Errors

- Transfer of data
- Auto correction of certain codes
- Transformation of Codes
- New statistical column (SPC, flags for incorrect transactions, etc)
- Validity checks of all Codes
- Checks for duplicate records
- Report on data received
- Report on code errors
- Report on auto corrections/transformations

GÜMRÜKTEN GELEN VERİ-(Boş Kayıtlar Silinmiş ve Mükerrer Olmayan)
Ay:05 :Parça: 1 05JUN2012 : 12:43 : DSTVUP.TMP_DIEVERI051

		İHRACAT/İTHALAT					
		H			T		
		KAYIT SAYISI	ISTDOLARCUST	DMUKDOLAR	KAYIT SAYISI	ISTDOLARCUST	DMUKDOLAR
		Sum	Sum	Sum	Sum	Sum	Sum
INTACYIL	INTACAY						
2011	5	1	60,343	59,743	.	.	.
2012	5	669,821	13,714,646,720	13,900,245,087	700,985	20,986,541,733	20,986,541,733
TOPLAM		669,822	13,714,707,063	13,900,304,830	700,985	20,986,541,733	20,986,541,733

G TIP HATALARI

Ay:05, Parça:1, 05JUN2012, 12:43, DSTVUP.TMP_DIEVERI051

Obs	INTACYIL	INDEXYIL	HATA_TURU	ORJINAL_KOD	HATALI_KOD	DOGRU_KOD	SAYI
1	2012	05	G TIP HATASI	853120500011	853120500011	.	2
2	2012	12	G TIP HATASI	390720290000	390720290000	.	4
3	2012	12	G TIP HATASI	392490900000	392490900000	.	1
4	2012	12	G TIP HATASI	691390990000	691390990000	.	1

G TIP KODU OTOMATİK DÖNÜŞÜMLER

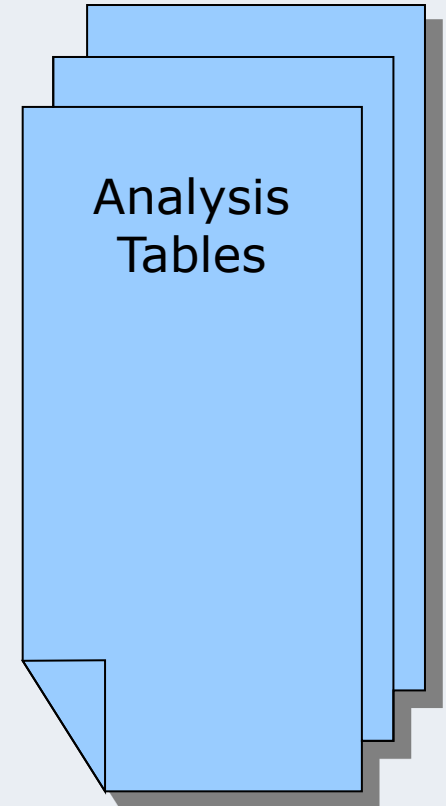
Ay: 05 Parça: 1 05JUN2012 : 12:43 : DSTVUP.TMP_DIEVERI051

Obs	INTACYIL	INTACAY	G TIP_TRS	DG TIP	SAYI
1	2012	5	10210100000	10221100000	6
2	2012	5	10290290000	10229290000	2
3	2012	5	10290490000	10229490000	23
4	2012	5	10290510000	10229510019	1
5	2012	5	10511110000	10511110000	17
6	2012	5	10511010000	10511010000	2

Analysis tables for preliminary checks

- **Calculation of Statistical Value in € and TL**
 - Using daily exchange rates,
 - calculating the Turkish Liras and Euro

- **Reporting analysis tables**
 - Time series analysis tables
 - Analysis tables for current month



Credibility Checks/ Detailed Tables

- Credibility checks
- Flag for error types
- Decompose implausible / all transactions

Unit value per KG (UV_{kg})

$$\text{Min}(UV_{kg}) \leq \text{Median of } (UV_{kg}) \leq \text{Max}(UV_{kg})$$

Unit value per unit (UV_{Unit})

$$\text{Min}(UV_{Unit}) \leq \text{Median of } (UV_{Unit}) \leq \text{Max}(UV_{Unit})$$

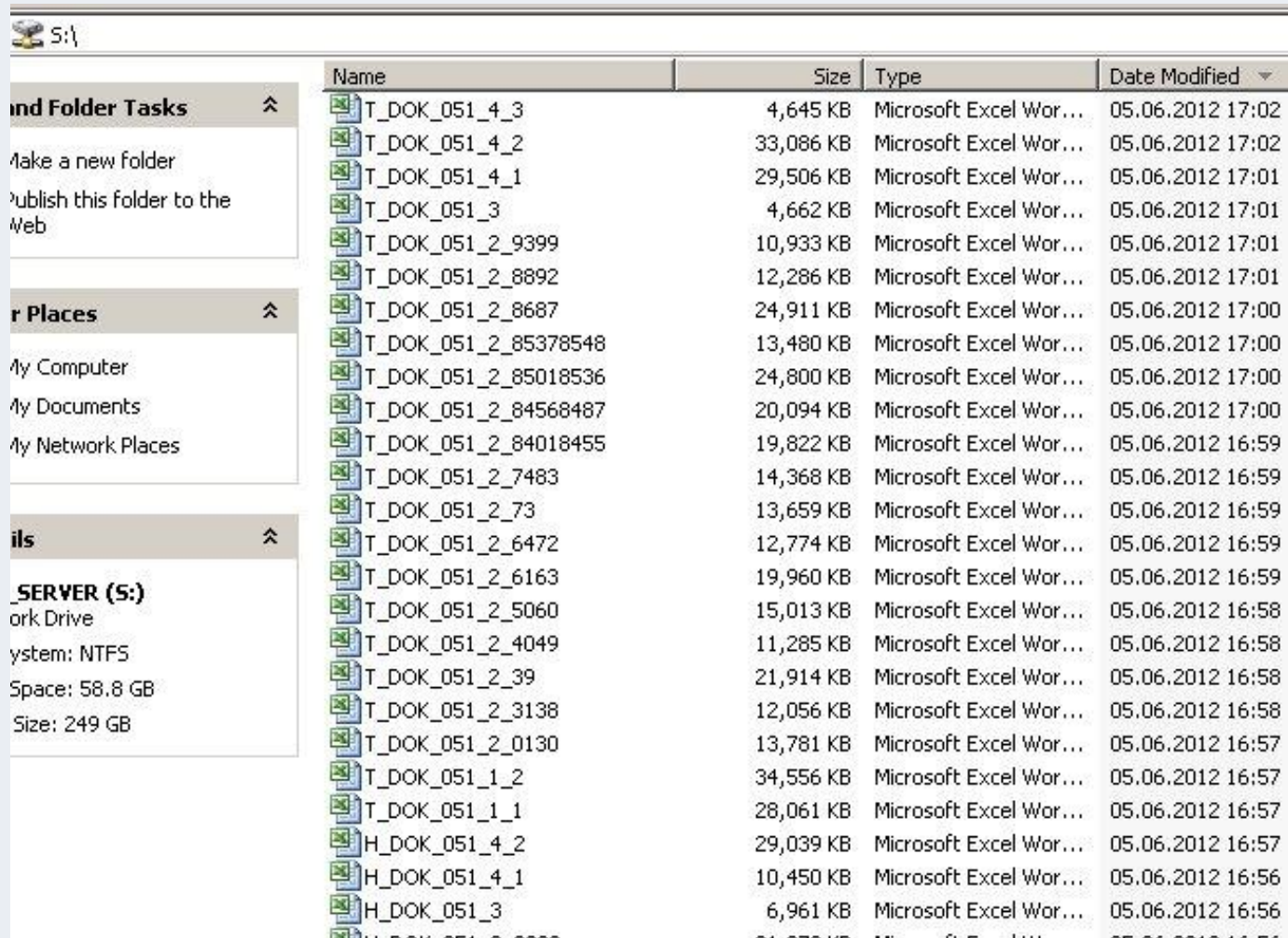
KG per unit (KG_{Unit})

$$\text{Min}(KG_{Unit}) \leq \text{Median of } (KG_{Unit}) \leq \text{Max}(KG_{Unit})$$

Miktar Hatalarına İlişkin İstatistik
Ay:05, Parça:1, 05JUN2012, 12:43, DSTVUP.TMP_DIEVERI051

		İhracat / İthalat			
		H		T	
		%	Sayı	%	Sayı
KOD	ACIKLAMA				
00	M1 ve M2 Normal	14.1	77321	8.8	52396
03	M1 Normal, M2 GA Kötü	0.9	4711	1.5	9039
04	M1 Normal, M2 Min'den Küçük	0.7	3574	0.4	2627
05	M1 Normal, M2 Max'dan Büyük	1.3	7233	0.9	5084
06	M1 Normal, M2 Diğer Hata	0.0	5	0.0	3
07	M1 Normal, M2 GA Yok (Olcu=0)	46.7	256145	38.6	229820
22	M1 ve M2 GA Yok	12.8	70111	5.2	31201
27	M1 GA Yok, M2 GA Yok (Olcu=0)	13.3	73275	20.9	124636
30	M1 GA Kötü M2 Normal	0.4	2077	0.8	4774

Tables to be controlled by Staff



Name	Size	Type	Date Modified
T_DOK_051_4_3	4,645 KB	Microsoft Excel Wor...	05.06.2012 17:02
T_DOK_051_4_2	33,086 KB	Microsoft Excel Wor...	05.06.2012 17:02
T_DOK_051_4_1	29,506 KB	Microsoft Excel Wor...	05.06.2012 17:01
T_DOK_051_3	4,662 KB	Microsoft Excel Wor...	05.06.2012 17:01
T_DOK_051_2_9399	10,933 KB	Microsoft Excel Wor...	05.06.2012 17:01
T_DOK_051_2_8892	12,286 KB	Microsoft Excel Wor...	05.06.2012 17:01
T_DOK_051_2_8687	24,911 KB	Microsoft Excel Wor...	05.06.2012 17:00
T_DOK_051_2_85378548	13,480 KB	Microsoft Excel Wor...	05.06.2012 17:00
T_DOK_051_2_85018536	24,800 KB	Microsoft Excel Wor...	05.06.2012 17:00
T_DOK_051_2_84568487	20,094 KB	Microsoft Excel Wor...	05.06.2012 17:00
T_DOK_051_2_84018455	19,822 KB	Microsoft Excel Wor...	05.06.2012 16:59
T_DOK_051_2_7483	14,368 KB	Microsoft Excel Wor...	05.06.2012 16:59
T_DOK_051_2_73	13,659 KB	Microsoft Excel Wor...	05.06.2012 16:59
T_DOK_051_2_6472	12,774 KB	Microsoft Excel Wor...	05.06.2012 16:59
T_DOK_051_2_6163	19,960 KB	Microsoft Excel Wor...	05.06.2012 16:59
T_DOK_051_2_5060	15,013 KB	Microsoft Excel Wor...	05.06.2012 16:58
T_DOK_051_2_4049	11,285 KB	Microsoft Excel Wor...	05.06.2012 16:58
T_DOK_051_2_39	21,914 KB	Microsoft Excel Wor...	05.06.2012 16:58
T_DOK_051_2_3138	12,056 KB	Microsoft Excel Wor...	05.06.2012 16:58
T_DOK_051_2_0130	13,781 KB	Microsoft Excel Wor...	05.06.2012 16:57
T_DOK_051_1_2	34,556 KB	Microsoft Excel Wor...	05.06.2012 16:57
T_DOK_051_1_1	28,061 KB	Microsoft Excel Wor...	05.06.2012 16:57
H_DOK_051_4_2	29,039 KB	Microsoft Excel Wor...	05.06.2012 16:57
H_DOK_051_4_1	10,450 KB	Microsoft Excel Wor...	05.06.2012 16:56
H_DOK_051_3	6,961 KB	Microsoft Excel Wor...	05.06.2012 16:56

Corrections

- Asking to Customs
- Asking to Trader
- Experience

Düzeltilen Hata İstatistikleri Raporu
Ay:03 25APR2012: 18:19 : DSTVUP.TMP_DIEVERI_ALL03


	İhracat/İthalat	
	H	T
	Sayısı	Sayısı
Hata Türü		
GTIP	521	569
Miktar_1	5198	3362
Miktar_2	4260	2223
Rejim	12	1

Dissemination

- Monthly data are published as News Release within 30-31 days after reference month
 - Hard Copy & Electronic on www.turkstat.gov.tr
- Teletext pages,
- Voice Response System,
- SMS (3737)
- Intranet database (Discoverer/SAS),
- Internet (database /excel tables),
- Foreign Trade Statistics Yearbook
 - (Hard Copy/CD-Rom)










Dissemination



**MINISTRY of
CUSTOMS and TRADE**

REPUBLIC of TURKEY TURKISH STATISTICAL INSTITUTE



Print Calendar e.mail Follow Tables Download

Press Release

FOREIGN TRADE STATISTICS, APRIL 2012


Foreign trade deficit decreased by %27,3 in April 2012

According to the provisional data, produced with the cooperation of Turkish Statistical Institute and Ministry of Customs and Trade, in April 2012; exports increased by 6,8% and reached to 12 676 Million Dollars while imports decreased by 8% and reached to 19 274 Million Dollars compared with April 2011. At the same month, foreign trade deficit decreased from 9 080 Million Dollars to 6 597 Million Dollars.

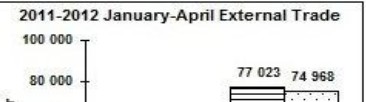
Calendar adjusted exports increased by 10,4% and imports decreased by 4,2% compared with April 2011. *Seasonally and calendar adjusted* exports increased by 6,4% while imports decreased by 0,8% compared with previous month.

In April 2012 exports coverage imports was 65,8% while it was 56,7% in April 2011.

2011-2012 April External Trade



2011-2012 January-April External Trade



Metadata Kapat

- Analytical Framework, Concepts, Definitions, and Classifications
- Scope of the Data
- Accounting Conventions
- Characteristics of Basic Data Sources
- Compilation Practices
- Other subjects

Foreign Trade Statistics Release Calendar

Foreign Trade Statistics	November 2012	28/12/2012 10:00
Foreign Trade Statistics	October 2012	30/11/2012 10:00
Foreign Trade Statistics	September 2012	31/10/2012 10:00
Foreign Trade Statistics	August 2012	28/09/2012 10:00
Foreign Trade Statistics	July 2012	31/08/2012 10:00
Foreign Trade Statistics	June 2012	31/07/2012 10:00
Foreign Trade Statistics	May 2012	29/06/2012 10:00
Foreign Trade Statistics	April 2012	31/05/2012 10:00

Dissemination on Web Static

Dynamic Search in Databases and Statistical Tables

Dynamic Search

Foreign trade statistics

Statistical Tables

- Foreign Trade By Years
- Foreign Trade By Chapters
- Foreign Trade By Countries
- Foreign Trade By Country Groups
- Foreign Trade By Classification Of Broad Economic Categories (Bec)
- Foreign Trade By Economic Activities (Isic, Rev.3)
- Foreign Trade By Standart International Trade Classification (Sitc.Rev.3)
- Foreign Trade By Currencies
- Foreign Trade By Us Dollar, Euro And Tr/New Trl
- Imports Of Crude Petroleum
- Foreign Trade By Customs
- Foreign Trade By Type Of Payment
- Foreign Trade By Mode Of Transport
- Foreign Trade By Nature Of Transaction
- Foreign Trade By Province
- Seasonally Adjusted Foreign Trade

Dissemination on WEB Dynamic

Foreign Trade Statistics

<ul style="list-style-type: none"> Total imports and Exports <li style="background-color: #e0e0e0;">Product/Product Groups- Partner Country Partner country/ Country Groups Customs Province and Region 	<p>Last current data: April 2012</p>
--	---























Product/Product Groups
 Product/Partner Country
 Partner Country/Product

Harmonized System

- BEC
- ISIC Rev.3
- ISIC Rev.4
- SITC Rev.3
- SITC Rev.4

HS2(Chapter)
 HS4
 HS6
 HS8(CN)
 HS12(Product)

Data Sets for Specific Users

 bnksec_h201104	1,506 KB	WinRAR arşivi	30.05.2012 16:21
 bnksec_t201104	833 KB	WinRAR arşivi	30.05.2012 16:21
 tarimbakan_h201104	17,637 KB	WinRAR arşivi	30.05.2012 16:21
 tarimbakan_t201104	10,652 KB	WinRAR arşivi	30.05.2012 16:20
 sabanci_h201104	16,889 KB	WinRAR arşivi	30.05.2012 16:19
 sabanci_t201104	10,308 KB	WinRAR arşivi	30.05.2012 16:18
 tarbakil201104	6,487 KB	WinRAR arşivi	30.05.2012 16:16
 data_itc201104	38,054 KB	WinRAR arşivi	30.05.2012 16:14
 oecd_h2011	11,101 KB	WinRAR arşivi	30.05.2012 16:11
 oecd_t2011	6,746 KB	WinRAR arşivi	30.05.2012 16:10
 oecdfile2_h2011	496 KB	WinRAR arşivi	30.05.2012 16:09
 oecdfile2_t2011	286 KB	WinRAR arşivi	30.05.2012 16:09
 un_x2011	8,234 KB	WinRAR arşivi	30.05.2012 16:09
 un_m2011	4,727 KB	WinRAR arşivi	30.05.2012 16:09
 data_sanbak201104	7,762 KB	WinRAR arşivi	30.05.2012 16:07
 tkdk201104	470 KB	WinRAR arşivi	30.05.2012 16:05
 dtm_h201204	118,990 KB	WinRAR arşivi	30.05.2012 16:04
 dtm_t201204	111,517 KB	WinRAR arşivi	30.05.2012 16:04
 dtm_t201104	346,968 KB	WinRAR arşivi	30.05.2012 15:45
 dtm_h201104	348,816 KB	WinRAR arşivi	30.05.2012 15:43
 CONTROLFIGURES_TR_201104	1 KB	Text Document	30.05.2012 13:12
 COMEXT_XTCOM_M_TR_2011_0004	273,122 KB	Text Document	30.05.2012 13:12

Conclusions/Recommendations

- In 2005, ETS Staff developed cooperation with IT Dep.
- We don't depend on IT Department
- Improving the data quality
- Shorten dissemination period from 60 to 30 days
- Shorten to prepare user's requests

Thank you for your attention!