

## RESEARCH ARTICLE

## Assesment of Reducing Informal Economy Program Within Turkey's Tenth Development Plan (2014-2018)

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### Abstract

The Tenth Development Plan, covering the 2014-2018 period, will be a milestone in advancing society to high prosperity levels, in line with the 2023 targets. Priority Transformation Programs are designed for critical reform areas which; are important for achieving 2023 targets and the objectives of Tenth Development Plan; could provide solutions for the main structural problems; may contribute to the transformation process; is usually in more than one ministerial area of responsibility; require effective coordination and responsibility sharing among institutions. Within the 25 primary transformation program, Reducing Informal Economy is placed as the ninth priority. Reducing informal economy will contribute to improvement of macroeconomic factors such as economic stability, income distribution and employment, to rising productivity and competitiveness levels as well as increasing public revenues in the medium to long run. Program Targets; Reducing the ratio of informal economy to GDP by five percentage points and Reducing the informal employment rate in non-agricultural sectors by five percentage points. In this paper, we will be firstly providing information about primary transformation program action points from The Tenth Development Plan, covering the period of 2014-2018, then an assesment will be discussed about its targets, performance indicators and program components of Reducing informal economy within that program.

**Keywords:** *Macroeconomi, Macroeconomic targets, Informal economy, Tenth development plan.*

JEL Classifications: E60, E61, E26, E66

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### Introduction

The informal economy, which consists of all commerce on which applicable taxes are being evaded, leads to misleading macroeconomic indicators and thus the application of irrational economic policies. During the 1960's, the informal economy began to be discussed as an important economic and social issue in western economies and in the U.S.A. In the 1980's it became a problem discussed in all economies worldwide [1].

When the literature for informal economy is analyzed, some basic definitions are observed. According to Schneider [2], informal economy consists of all the economic activities that cannot be measured due to the absence of any official statistics, although they contribute to the value

addition and, therefore, must be considered within the national income calculation. Tanzi [3] define informal economy as market based goods and service production, being legal or illegal, that cannot be included within official GDP calculations. Bagachwa [4] thinks that informal economy can be classified under three groups: Informal sector, parallel economy and black market economy. According to Bagachwa, informal sector refers to very small-scale units producing and distributing goods and services and consisting of both employed workers and independent self-employed persons in both rural and urban areas. They are informal in the sense that they are mostly unregistered, unrecorded in official statistics; and participants have little or no access to organized markets, to credit

institutions, to formal education and training or to many public services. Parallel market activities are alternative of legal market activities. [5].

### Defining The Informal Economy

The informal economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following four reasons:

- To avoid payment of income, value added or other taxes,
- To avoid payment of social security contributions,

- To avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc.,
- To avoid complying with certain administrative obligations, such as completing statistical questionnaires or other administrative forms.

Thus, I will not deal with typically illegal informal economic activities that fit the characteristics of classical crimes like burglary, robbery, drug dealing, etc. I also exclude the informal household economy which consists of all household services and production [6].

Table 1: A Taxonomy of types of informal economic activities

| Type of Activity          | Monetary Transactions                                                                                                              |                                            | Non Monetary Transactions                                                                                     |                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Illegal Activities</b> | <u>Trade with stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling; fraud; etc.</u>                     |                                            | <u>Barter of drugs, stolen goods, smuggling etc. Produce or growing drugs for own use. Theft for own use.</u> |                                                  |
|                           | <b>Tax Evasion</b>                                                                                                                 | <b>Tax Avoidance</b>                       | <b>Tax Evasion</b>                                                                                            | <b>Tax Avoidance</b>                             |
| <b>Legal Activities</b>   | <u>Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods</u> | <u>Employee discounts, fringe benefits</u> | <u>Barter of legal services and goods</u>                                                                     | <u>All do-it-yourself work and neighbor help</u> |

Source: Rolf Mirus and Roger S. Smith (1997, p.5) and with additional remarks by Schneider and Enste [7]

### Methods to Estimate the Size of the Informal Economy

Although the issue of the shadow economy has been investigated for a long time, the discussion regarding the “appropriate” methodology to assess its scope has not come to an end yet. There are three methods of assessment [6].

- Direct procedures using the micro level and aiming at determining the size of the shadow economy. An example of this method are surveys.
- Indirect procedures that make use of macroeconomic indicators proxying the development of the shadow economy over time.

- Statistical models that use statistical tools to estimate the shadow economy as an “unobserved” or “latent” variable; e.g. the MIMIC (Multiple Indicator, Multiple Causes) Method.

### The Main Causes of Informal Economy

In the economic literature, the most important causes of informal economy are increase of the tax burden and social security contributions, increased regulation in the official economy especially in labor markets, forced reduction of weekly working hours, earlier retirement and the declining of tax morale. The increase of tax burden and social security contributions is the most important factor behind the increasing underground economic activities. As it is

known, taxes affect labor-leisure choices of economic agents and also encourage labor supply towards to underground or untaxed

sector of economy. As the difference between total cost of labor for employers in the official economy and after tax earnings of labor increases, we expect increasing informal economic activities [5].

The intensity of regulations is also cause of informal economy. The increase of the numbers of laws, regulations and licenses requirements are evidence of increase of the intensity of regulations and decrease of freedom of choice of economic agents. Generally, the regulations can increase legal burden of employers and employers can transfer their burden onto employees' wages and so it can create an incentive for employees to work in the informal economy. High regulation can also cause employers to stay in the informal part of economy to avoid higher and nontransferable legal burden. Many studies in the literature reveal positive relation among informal economy and intensity of regulation [8]. The principal causes behind the existence of informal economy can be summarized as follows [9].

- Economic causes (unjust distribution of income, inflation, tax system, unemployment)
- Fiscal causes (high tax rates, deficiency in auditing, insufficient accounting services)
- Legal causes (complicated and unclear laws, frequent change in regulation, degeneration in unitary structure)

- Administrative causes (organization of tax authority, technical structure, personnel profile and auditing mechanism)
- Social and psychological causes (tax ethics, taxpayer psychology and historical causes)
- Political causes

### Estimating the Size of Underground Informal in Turkey

Earlier studies present evidence to suggest that participation in the informal economy in Turkey became widespread in the 1970s and 1980s for several reasons. However, with the liberalization of the economy beginning in 1987, profits in the informal economy were eroded as controls on trade, foreign exchange, and prices were removed.

The incentive to engage in informal activity should have been expected to reduce as the supply of commodities increased in official markets [1].

Many researchers, academics and policy makers are interested in informal economy and its measurement in Turkey. The measurement of the informal economy has been the subject of intense debate in the literature. Some authors have used the direct method to assess the informal economy while others have attempted an indirect method, known as the non-monetary approach and monetary approach, respectively. As the table shows, the estimated size of the shadow economy ranges from 3 percent to 178 percent depending on the time period investigated and the methodology used. Table 2 below summarizes the measurement efforts that have been conducted by various authors.

**Table 2: The Size of the informal economy in turkey from various studies**

| Author(s)                  | Period    | Underground Economy as percent of 'Official' GDP | Methodology                 |
|----------------------------|-----------|--------------------------------------------------|-----------------------------|
| Kasnakoğlu (1993)          | 1968-1990 | 4 - 35                                           | Currency Ratio              |
| Temel et al. (1994)        | 1975-1992 | 6 - 20                                           | Currency Demand Approach    |
| Yayla(1995)                | 1968-1993 | 0 - 42                                           | Currency Demand Approach    |
| Öğünç-Yılmaz (2000)        | 1971-1999 | 11 - 22                                          | Currency Demand Approach    |
| Cetintas-Vergil (2003)     | 1971-2000 | 17 - 31                                          | Currency Demand Approach    |
| Savaşan (2003)             | 1970-1998 | 10 - 45                                          | MIMIC Randomized Response   |
| Us (2004)                  | 1987-2003 | 3 - 12                                           | Currency Demand Approach    |
| Dorukkaya(2005)            | 1998-2004 | 29 - 37                                          | Tax Evasion Rate            |
| Baldemir et al. (2005)     | 1980-2003 | 11 - 28                                          | MIMIC Randomized Response   |
| Yılmaz (2006)              | 1970-2004 | 0 - 178                                          | Simple Currency Ratio       |
| Akalın - Kesikoğlu (2007)  | 1975-2005 | 0 - 47                                           | Monetary Approach           |
| Karanfil- Özkaya (2007)    | 1973-2003 | 12 - 30                                          | Kalman Filter               |
| Savaşan-Altundemir (2007)  | 1970-1998 | 10 - 45                                          | MIMIC Model                 |
| Savaşan - Schneider (2007) | 1999-2005 | 31                                               | DYMIMIC Estimation Approach |
| Dayutyan (2008)            | 2005      | 21                                               | Expenditure-based Approach  |
| Karagöz-Erkus (2009)       | 1970-2005 | 86 - 73                                          | Tax Evasion Rate            |
| Erdinc(2012)               | 2002-2010 | 51                                               | Currency Demand Approach    |

Source: Compiled by Erdinc from various authors studies [1]

In this study, our calculations Erdinç [1] following the monetary approach, it shows that the ratio of the informal economy to nominal GDP changes from 30 percent to 70 percent with an average of 51 percent in the 2002-2010 period. Empirical evidence strongly suggests that causality runs from the informal economy to recorded GDP and that the informal economy stimulates official activities in Turkey since income obtained from unrecorded activities is mostly spent on activities that have been included in the official part of the GDP.

### Priority Transformation Programs

As a result of its high inflation rates and a couple of severe economic crises experienced, Turkey has been characterized by economic instability during the last thirty years. After the most harmful banking sector driven crises of 2001 with the almost 140 percent annual inflation rate and -12 percent annual economic growth rate, Turkey has carried out some structural reforms within a heterodox stabilization program [1].

Priority Transformation Programs are designed for critical reform areas which; are important for achieving 2023 targets and the objectives of Tenth Development Plan; could provide solutions for the main structural problems; may contribute to the transformation process; is usually in more than one ministerial area of responsibility; require effective coordination and responsibility sharing among institutions.

Number of Priority Transformation Programs was limited to keep the program portfolio manageable and the results measurable. The programs were designed with both sectoral and cross-sectoral perspectives; and to serve as guidelines, they include targets and scope, objectives, performance indicators and components. Also, for the programs, central implementation mechanisms and intervention tools were designed; organizations responsible for the components and coordination were identified. Show that Table. 3: The Priority Transformation Programs.

**Table 3: Priority transformation programs**

|                                                                                               |                                                                                              |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <u>Program For Enhancing Productivity In Manufacturing</u>                                    | <u>Program For Enhancing Efficiency Of Water Use In Agriculture</u>                          |
| <u>Program For Reducing Import Dependency</u>                                                 | <u>Healthcare Related Industries Structural Transformation Program</u>                       |
| <u>Program For Increasing Domestic Savings And Avoiding Waste</u>                             | <u>Healt Tourism Improvement Program</u>                                                     |
| <u>Istanbul International Financial Center Program</u>                                        | <u>Transformation Program From Transformation To Logistics</u>                               |
| <u>Rationalization Of Public Expenditures Program</u>                                         | <u>Basic And Occupational Skills Development Program</u>                                     |
| <u>Public Revenue Quality Enhancement Program</u>                                             | <u>Attracting Qualified Human Resources Program</u>                                          |
| <u>Business And Investment Climate Improvement Program</u>                                    | <u>Healthy Life And Mobility Program</u>                                                     |
| <u>Program For Improving Labor Market Effectiveness</u>                                       | <u>Family And Dynamic Population Structure Conservation Program</u>                          |
| <u>Program For Reducing Informal Economy</u>                                                  | <u>Institutional Capacity Improvement Program At Local Level</u>                             |
| <u>Statistical Infrastructure Development Program</u>                                         | <u>Competitiveness And Social Cohesion Enhancing Urban Regeneration Program</u>              |
| <u>Program For Commercialization In Priority Technology Areas</u>                             | <u>Program For Improving The Infrastructure Of International Cooperation For Development</u> |
| <u>Program For Technnology Development And Domestic Production Through Public Procurement</u> |                                                                                              |
| <u>Domestic Resource Based Energy Production Program</u>                                      |                                                                                              |
| <u>Energy Efficiency Improvement Program</u>                                                  |                                                                                              |

Source: Onuncu Kalkınma Planı (2014 - 2018) Koordinatör Gelir İdaresi Başkanlığı Kayıt Dışı Ekonominin Azaltılması Programı Eylem Planı

Program details, sub-components, implementation activities and projects, budget requirements and legislative infrastructure will be turned into action

plans with joint participation and contribution of coordinator and responsible institutions for the components after the adoption of the Plan at the Grand National

Assembly of Turkey. Principles and procedures of final design and implementation will be determined by a resolution of the High Planning Council.

The Ministry of Development is responsible for the coordination of preparation, implementation, monitoring and evaluation of action plans.

High Planning Council is the authority with the right of revision of the programs if needed, considering the implementation results. These programs will be considered as priority in all public organizations and institutions in terms of legislation, administrative decisions and financing needs.

## Economy Program for Reducing Informal

### Objective and Scope of the Program

Despite the measures taken in recent years, informal economy is still one of the important problem areas. Reducing informal

economy will contribute to improvement of macroeconomic factors such as economic stability, income distribution and employment, to rising productivity and competitiveness levels as well as increasing public revenues in the medium to long run. This program aims to reduce informal economy. In addition, this program will contribute to more effective implementation of the Action Plan of Strategy for Fight Against Informal Economy. Although strengthening formal sectors and promoting entries into formal system are important issues, considering that other programs in the Tenth Development Plan will directly or indirectly contribute to these issues, this program will not include them.

### Program Targets

- Reducing the ratio of informal economy to GDP by five percentage points
- Reducing the informal employment rate in non-agricultural sectors by five percentage points

**Table 4: Reduction targets for informal economy**

| NO | NAME DISPLAY                                                                                 | CURRENT STATE | 2014      | 2015        | 2016        | 2017        |
|----|----------------------------------------------------------------------------------------------|---------------|-----------|-------------|-------------|-------------|
| 1  | <u>The ratio of informal economy in GDP</u>                                                  | %26,5         | %26       | %25         | %24         | %23         |
| 2  | <u>The ratio of non-agricultural informal employment in non-agricultural sectors workers</u> | %22           | %22       | %20         | %19         | %18         |
| 3  | <u>Number of active registered taxpayers</u>                                                 | 4,9 Million   | 5 Million | 5,1 Million | 5,2 Million | 5,3 Million |

Source: Onuncu Kalkınma Planı (2014 - 2018) Koordinatör Gelir İdaresi Başkanlığı Kayıt Dışı Ekonominin Azaltılması Programı Eylem Planı

### Performance Indicators

- Ratio of informal economy to GDP
- Ratio of informal employment in nonagricultural sectors to employment in nonagricultural sectors
- Annual rate of change in the number of audits

- Number of informal employees detected via audits
- Amount of tax base differences detected via audits
- Level of satisfaction with public services

### Program Components

**Component-1: Measuring the Volume and Effects of Informal Economy**

- Enhancing the current standard methods used to measure volume of informal economy via considering the conditions specific to Turkey.
- Measuring the effects of problems caused by informal economy.

### ***Component-2: Improving the Efficacy of Audits and Sanctions***

- Enhancing the quality and quantity of audits by developing the auditing capacity of public institutions.
- More widespread utilization of the risk analysis models, data mining and information technologies to improve the efficacy of audits.
- Increasing the sanctions targeting the groups conducting informal economic activities.

### ***Component-3: Enhancing Coordination and Data Sharing Among Institutions***

- Sharing the audit reports and data in the administrative records among public institutions.
- Developing joint databases and auditing practices among public institutions.
- Making the required legal arrangements with the cooperation of public institutions about the current arrangements leading to informality.

### ***Component-4: Assuring Social Consensus for the Combat Against Informality***

- Achieving active participation of related segments of society into combat against informality.
- Enhancing the social awareness about the adverse effects of the informality by public institutions and NGOs.

### ***Component-5: Effective Combating Against Smuggling***

- Measuring the economic volume of smuggling with more emphasis on the smuggling of fuel, alcoholic beverages and tobacco products

- Strengthening the efficacy of audits by enhancing the administrative and technical capacity to combat smuggling
- Enhancing coordination among institutions

### **Coordinator and Responsible Organizations/Institutions**

General Coordinator: Revenue Administration  
Organizations/Institutions Responsible for Components

Component-1: Ministry of Development

Component-2: Revenue Administration

Component-3: Revenue Administration

Component-4: Revenue Administration

Component-5: Ministry of Customs and Trade

### **Conclusion**

Despite the measures taken in recent years and the milestones, informal economy still continues to be one of the major problem areas in terms of our country's economy. Reduction of informal economy will contribute to; economic stability in the medium and long term, improvement of several macro economic factors such as the distribution of income and employment, raise the level of productivity and competitiveness of the economy and also an increase in public revenues.

The Priority Transformation Programs which are designed to address main problem areas in both 2023 vision and in terms of achieving the Tenth Development Plan targets; They are contributing to the critical reforms which require effective inter-agency coordination usually in more than one ministerial area of responsibility. Achieving the Tenth Development Plan target with these programs -prepared with a sectoral and intersectoral approach- which are expected to be completed within five years, will also contribute considerably reducing the informal economy [10-24].

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