

An Assessment on the Relationship Between Informal Economy and Educational Level in Turkey*

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ABSTRACT: The informal economy is an obscure concept but it contains several economic transactions. It is a very difficult task to measure its size and dimensions, however economists have developed reliable methods to predict the size and impact of informal economy in a given country or economic region. Studies in Turkey and abroad indicate that informal economy in this country is considerably large and sprawling. Existence of informal economy is a significant problem in any country since it negatively affects the national economic system. So far, policies deployed to deal with the negative outcomes of informal economy in Turkey mainly focused on tax policies and wages. On the other hand, increased educational attainment and provision of contemporary educational programs should be considered as better means to reduce the size and negative impact of informal economy. However, before using education to solve problems related to informal economy, the educational system needs to be restructured along with other restructuring efforts in economy, politics and legal systems. Increased educational attainment should also contribute to resolution of such social problems as economic growth and unfair income distribution in the country.

Keywords: Informal economy; education; informal employment

JEL Classifications: E24; E26; H52

1. Introduction

The informal economy covers a wide range of activities and it is called different names. It is hard to measure the informal economy. In Turkey, however, it is well known that the informal economy is very high. In terms of its reasons, it is classified four groups as economic, financial, political and administrative, moral and psychological. Reasons of informal economy and their effects vary from country to country. For Turkey, magnitude of reasons varies too. It is claimed negative and positive opinions about its effects. But its negative effects are more and more plausible. Education can be proposed as the factor that finishes the reasons of informal economy.

In Turkey, the basic educational indicators, especially in the last period exhibit a positive image. Increasing in investments in education, literacy rate, teacher and graduated rates and quality in education can be seen in Turkey. This situation is promising for Turkey which has young population; because education has both personal and social benefits. In terms of benefits, education reduces inequality in income distribution, fertility and crime rates and unemployment; meanwhile it provides economic growth. Benefits of education are in association with the many reasons of informal economy. On the other hand, employment in informal economy and number of active people in underground economy reduces with the increase in education level. Aim of this study is to see how increased educational attainment and quality could solve the informal economy problem is explained with consideration given to country specific conditions.

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2. Definition of the Informal Economy

The identification of the informal economy is difficult due to the fact that the scope of informal is very extensive and multi-dimensional. In other words, it is difficult to make a general definition included all the informal economy activities. In addition, the scope and structure of the informal economy differentiate according to perception of researchers and different economic systems (Yilmaz, 2004:16). According to the issue emphasized, it is used different names to identify the informal economy (Us, 2006:97). So, we can't say there is a general and exhaustive definition (Isik and Acar, 2003:118-119). There are a lot of definitions in literature but the most commonly used definition of informal economy is "all currently unregistered economic activities, which contributed to the officially calculated Gross National Product" (Hassan, 2011:4). According to another definition, "those economic activities and the income derived from them that circumvent or otherwise avoid government regulation, taxation or observation" (Schneider, 2008, p.90).

When informal economy is defined the following definitions are typically used (MINFIN):

- **Fiscal Definition:** It confines the informal sector to activities which contravene tax regulations and fail to be reported by financial authorities. Examples of such activities are the hiding of sales by a company from the fiscal authorities, the false bookkeeping or the scale of undervalued real estate.
- **Market Definition:** It focuses on the difference between payable and non-payable services. From this perspective, the informal sector covers unregistered activities and undeclared labor but against additional payment. Such activities are considered to be parallel to declared labor but outside its cope.
- **Legal Definition:** It encompasses all activities conducted in contravention of the law. Its scope covers the trade in stolen vehicles and goods, drug trafficking, corruption practices and money laundering.
- **Statistical Definition:** It discerns those activities which should be reported in official statistics but they are not. The portion of the economy on which statistical data is completely lacking is viewed as hidden and it is not subject of statistical studies. Its scope includes the economy which is characterized by unwillingness to be put under observation, as well as that part of the formal economy which cannot be studies due to the lack of relevant data".

3. Reasons of Informal Economy

Due to the fact that every country has typical economic and social structure, reasons of informal economy have different impacts on economy in different countries. In developed countries, reasons of informal economy depend on factors as tax structure and labor market regulations but in underdeveloped countries in addition to these factors, demographic ones as population growth and urbanization affect informal economy. In Turkey, in terms of its reasons, it is classified four groups as economic, financial, political, administrative and social.

Economic reasons that lead to informal economy are specific to Turkey. Since 1970, there is high inflationary trend in Turkey and so it increases informal economy (DPT, 2001a:4). Because of high inflation, producer and consumer's fictive profit is taxed and therefore they choose activities in informal economy (Rakici, 2011:355). On the other hand, employment is very large in agricultural and service sector and these sectors are very complex to be controlled (Isik and Acar, 2003:120). And people lose their jobs because of economic crisis choose informal sector to earn income (Sarili, 2002:42; Rakici, 2011:355). In Turkey there are a great number of small scale enterprises and these don't have proper recording and documenting (Rakici, 20011:355). And so controlling them by inspectors is very hard, so they are convenient for informal economic activities (DPT, 2001a:3). In developing countries generating employment is very slowly and seeking job is expensive, thus in these countries unqualified and undereducated labor force works in informal sector and earn less (Cetintas and Vergil, 2003:18; Akturk, 2005a:298-299; Aydemir, 1995: 57). Unemployment is another factor which causes informal economy in Turkey (Ozlele, 2008:6). Due to technology and population growth, people migrate from rural areas to urban areas and they can't get a job because of skill inconsistencies. Inequality of income distribution causes informal economy too. In countries where income distribution is unequal and income is insufficient, the size of informal economy increases enormously (Ay, 2006:61). As a result of unequal income distribution, people have little income

choose informal sector with the intention to earn much (DPT, 2001a:3). Besides, fast population growth and urbanization makes unskilled people choose informal sector (DPT, 2001a:3; Us, 2006:98). Lastly, globalization changes competition environment in Turkey and firms employ cheap labor in informal economy (Tandircioglu, 2002:5; Isik and Acar, 2003:120).

Financial reasons that lead to informal economy in Turkey arises from high tax and social security burden. Due to a lot of people work in informal economy, tax base remain limited and people work in formal economy pays too much tax (Acar and Turkis, 2001:180; Cetintas, 2003:8). In Turkey tax equity isn't constituted properly and there is a big proportion of tax revenue composes of indirect taxes revenue (Sugozu, 2010:166; Ozlale, 2008:6). As a consequence of that people try to evade tax and don't believe the tax equity. Many tax exemptions make tax payers hide their incomes and not to go over the limits of the exemptions because of that informal economy raises (Sarili, 2002:40). On the other hand, tax and social security amnesty granted frequently raise amnesty expectation and reduce tax compliance (Savasan, 2006:42; Karakoc, 2004:99). Tax auditing is not effective and sufficient due to the fact that tax auditing entities have authority chaos. Therefore, efficiency of the tax auditing and penalties reduces in Turkey. Taxpayers can't understand and follow the tax law due to complex tax legislation and frequent tax law amendment. So, financial reasons are effective in increasing the informal economy.

Political and administrative reasons are among main problems raise the informal economy (DPT, 2001a:6). In Turkey, malpractice and excessive red tape makes the informal economy attractive (Cetintas, 2003:10; Toptas, 1998:75-76; Guloglu et al., 2003: 85). In Turkey, a firm spends twenty percent of its time to carry out the processes which the state wants (Cetintas, 2003:10). Firms which wanted to avoid from excessive red tapes choose informal economy to work. Precarious decisions of political parties about tax make taxpayers choose the informal economy in order to protect their benefits (Kildis, 2000:198; Sugozu, 2010: 191).

Social reasons of the in the informal economy show that moral fiber and tax perception doesn't decrease the informal economy (Ulgen and Ozturk, 2007:13; Toptas, 1998:50). On the other hand, in Turkey, there is no concordance about taxes between state and taxpayers (Aydemir, 1995:47) and taxpayers think that government expenditures aren't efficient (GIB, 2009:30). These reasons we mentioned reduce tax compliance and increase the informal economy.

4. Literature Review

Informal economy analyzed by a lot of researchers and tried to find a solution. But solutions are frequently about taxes or economic conditions. Surely, informal economy is relevant with these factors. But to date educational solution has been ignored mostly or mentioned shortly. But in Turkey some literature shows that educational level reduces the size of informal economy. Some studies examine informal employment as a part of informal economy for Turkey and other countries. Akturk (2005a:298-299) emphasizes that in developing countries, mostly undereducated labor work in unskilled jobs due to the fact that there is not sufficient potentiality of creating employment. On the other hand he show that as educational level decreases in rural area among women, size of informal economy raises approximately ninety percent and in urban area the educated people don't choose the informal sector in Turkey. Similarly, Sisman (1999:78-79) emphasizes that in developing countries undereducated and unskilled people are obliged to work in informal sector. Sarili (2002:40-48) remarks that unskilled labors are expensive for employers and therefore the size of informal economy is high in Turkey. Yuzbasioglu (2010:44), remarks that there is a cause-effect relationship between education and enformal employment and show that as educational level raises informal employment decreases. This finding is confirmed by Guloglu et al. (2003:55). McKeever (1998:1209) came to the conclusion in his study which he conducted in South Africa, that especially people who are not white, women and people who have low educational level were employed more frequently in informal economy. In other studies which were done in South Africa, while Nattrass (1987) deduced that 88% of those who were employed informally were women and that they were unqualified and were working in jobs which required no qualifications, Beavon and Rogerson (1986) came to the conclusion in their studies that tha majority who were employed informally were less educated (McKeever, 1998:1219).

Some studies emphasize the demographic and social factors affect informal sectors and education. Akturk (2005b:291) remarks that there is not sufficient employment in Turkey and especially in urban areas. But immigrants who are undereducated are going on migrating from rural to urban areas and they choose informal sector necessarily. Similarly Us (2006:98) shows that the social and demographic structure of Turkey raise the informal employment. On the other hand Ulgen and Ozturk (2007:18) remarks that educational policy is not sufficient and reformer, therefore education can't effective in addressing the needs of labor market. Toptas (1998:82) and Yurdakul (2008:220) suggest that education which provides skill and practice will get the informal employment under control. Other studies examined illegal economy and showed that education is not effective in decreasing the illegal sector activities precisely in Turkey (See Ozsoylu, 1999). Guloglu et al. (2008:31) remarks that children who work in informal sector don't have education and therefore they can work in illegal sector more easily. About tax moral Saracoglu (2008:19), remarks that tax compliance can increase or decrease as educational level increase. Celikkaya and Gurbuz (2008:31) examined tax compliance in Eskişehir and found that with increment of educational level, increment of favorableness about tax amnesty and its effect on informal economy is seen.

5. Education and Informal Economy

Informal economy is in relation with many factors. These factors which it is in relation with can be seen clearly in the reasons of informal economy. The factors which are in question can be listed as economic, social, ethical and political. Besides being affected by these factors, informal economy also affects certain factors. Moreover, informal economy can feed upon itself (Aydemir, 1995: 59) one of the factors which are mentioned is education. The level of education affects informal economy either directly or indirectly. For direct impact, together with the increment of the level of education, an employment in informal economy and a decrement in the number of people who operate in the underground economy through perpetration is seen, as for indirect impact, it is probable to mention about the effects of unemployment, distribution of income, tax incomes, tax ethics, the factors of population increment which are all the reasons of informal economy. Since, together with education, the distribution of income recovers, in regard to the economic growth tax incomes and the tax compliance increases, the increment of population in relation to fertility decreases and unemployment decreases together with the level of education. But, in defiance of the international literature, the effect of education on unemployment isn't quite powerful in Turkey as well. Hence, education affects informal economy through informal employment and underground economy.

The relationship between the level of education and informal economy is dual. While, the decrement of informal economy as the level of education rises and the decrement of the activities of underground economy through the decrement of crime rates can enable the dimension of informal economy to decrease, the existence of informal economy can cause the level of education to decrease especially because of children abandoning their education and doing informal activities. Hence, while education can decrease informal economy, the existence of informal economy can cause the level of education to decrease depending on the number of children which take place in informal economy. Because, child labor force is used densely (Ekin, 1995: 83). In informal education where children are employed, no occupation is given place. Furthermore, it is easy to push children, who haven't received enough education, to crimes (Guloglu et al., 2003: 60-73). Hence, the existence of informal economy affects the factor of education through decreasing the level of education on one hand, and on the other, it gets affected by education which is preferred less by educated people.

Education is a key factor in decreasing the dimension of informal economy when the indirect and direct relation between education and informal economy is taken into consideration. Informal economy can be taken under control through educating the labor force enabling it to become more professionalized and hence through decreasing the unqualified labor force (Yurdakul, 2008: 220).

5.1. Education and Informal Employment

There isn't a definite cause-effect relationship between the level of education and informal employment. Informal employment is seen more frequently in places where the level of education is low (Yuzbasioglu, 2010: 44). The fall of Education and the level of quality is one of the important reasons for informal employment (Guloglu et al., 2003: 55). Besides lack of education, the fact that people have deficiency in the subject of consciousness of social security is an important factor in

informal working (Yereli and Karadeniz, 2004:113). Hence, the possibility of finding a place for themselves in the recorded sector for the region whose education level is low decreases. The unqualified workforce who couldn't find enough work possibilities in the recorded sector searches an employment possibility in the unrecorded sector and for this reason unrecorded economy generally consists of unqualified people. Being unconscious about social security, the low level of education prevents unqualified people to become selective. On the other hand, because of the taxes and social security premiums, unqualified workforce is a high cost value for the employer and this is another factor for why informal employment rises (Sarili, 2002:40). According to the tax auditing staff, the personnel being mentioned which doesn't have enough education and professional consciousness reasons the informal employment in our country to grow vastly (Guloglu et al., 2003:86).

The relationship between educational level and informal employment gets affected from the development level of countries and hence from such factors as the use of technology, socio-economic structure etc. In developing countries, where creating new employment facilities is limited, causes workforce which generally consists of low educational level and which isn't employed in formal sectors, to be employed in informal sectors where certain jobs are done such as working in non-institutionalized houses, creating custom manufacturing, hawking, bagel selling, water selling all of which are easy to enter and exit from the market, which don't need any professionalism or education and don't need an extensive amount of stock (Akturk, 2005a:298-299). On the other hand, in regard to the fast changing conditions of the developing countries, the social politics not being noticed much or the problems which are faced with the financing of these politics structure the problem. As a result, in order for the people who have no qualifications to meet their needs in developing countries, their only choice is the working possibilities in informal economic facilities (Sisman, 1999:78-79).

Technological development necessitates the change of the production structure and the need for new characteristics in workforce. The fast changing technology, information economy, globalization and the increasing international rivalry increased the need for qualified workforce (Basesgioglu, 2007:6). Especially in the industry sector, because of the technological development instead of the production based on labor, productions based on machines are used. This condition caused the unqualified workforce to become unemployed. Hence, the workforce who became unemployed tended to move towards informal activities because of sustenance doubts (Sarili, 2002:42). The situation of education not being able to give answers to new needs is especially a crucial problem for Turkey. The deficiencies in our countries education politics is a big concern to the employment market. The relativist lowness of the educational level, made it harder for the working population to answer the fast changing needs of the economy. Hence, the reason for which human sources don't meet the needs for specifications of the contemporary economy became one of the major factors which nurtured informality (Ulgen and Ozturk, 2007:18).

A country's socio-economy and demographic structure can also indicate the greatness of the relationship between education and informal economy. It is seen that it is the informal economy actions which come into being in the consequence of employment not being able to meet the vastly increasing population and as a result of the fast immigration development from village to town and unplanned urbanization (Us, 2006:98). The situation in Turkey can be briefly mentioned like this as well. Since the first years of it Republic, Turkey owns a speed of approximately 2,5% of population increment. The fast increment of the population and the immigration from village to towns which has been increasing since the 1950's has created a labor market whose characteristics are some of the factors which cause the development of informal economy. Even though employment opportunities are not facilitated for the present unemployed in towns, a vast amount of unqualified workforce which pile up in towns together with population increment and immigration created the result for the labor owners to work with less payment and without owning social security (Akturk, 2005b:291; Guloglu et al., 2003:67). As a result, together with our country's socio-economic and demographic structure, the level of education is another factor which also fosters informal economy.

As it can be seen from Table 1, out of the total education levels, as the education levels come closer to higher education levels, informal working decreases. The highest number in informal working belongs to males who are elementary school graduates with a percentage of 50%. The least belongs to the higher education graduate males with a percentage of 2%. Both with male and female, the highest number of informal working both with males and females are primary school graduates.

Again, both with male and female the lowest number of informal working are associate, bachelors, master's degree and doctorate degree graduates. In informal employees, those who are illiterate or are literate but don't have a diploma have a smaller number of informal employee rates excluding associates, bachelors, master's degree and doctorate degree graduates. Formal employee rate increases together with the education level. In formal employees, are associate, bachelors, master's degree and doctorate degree women graduates are the group with the largest rate which are 44%. The education groups with the smallest rate of formal employee number are those who are illiterate or literate but don't have a diploma.

Table 1. The educational status of formal-informal employees (2006) %

Status of Education	Formal Employees		Informal Employees	
	Male	Female	Male	Female
Those who are illiterate or is literate but doesn't have a diploma	0,01	0,01	0,10	0,18
Primary school graduates	0,32	0,14	0,50	0,45
Elementary school, middle school or an equivalent graduate	0,15	0,08	0,22	0,16
High school and equivalent graduate	0,31	0,31	0,16	0,17
Associate, bachelors, master's degree or doctorate degree graduates	0,21	0,44	0,02	0,04
Total	100	100	100	100

Source: San (2009:456)

During the years between 2002 and 2006, in informal employees, together with the increment of the level of education informal employment decreases. Between the years of 2002-2006 informality among those who are illiterate is more than 91%. With middle school graduates the informal employment rate is 29%. While the informal employment rate is 25% with associate graduates, among university graduates this rate falls to 8% (Yuzbasioglu, 2010:44).

When the data and Table 1 is taken into consideration, it can be seen that educational level is a valve which prevents informal employment. Hence, the increment in education level brings together a decrement in informality. This situation can be evaluated as a positive condition. Because, in a period which schooling and higher education graduates are in an increment, knowing the fact that the increment in the level of education decreases informal employment strengthens the view of educational investment and the quality increment in education will decrease the informal employment in the future. In other words, an education which is to be given in order to increase workforce professionalism can enable informal economy to be under control through decreasing unqualified workforce (Toptas, 1998:82; Yurdakul, 2008:220). Furthermore, since small and medium sized managements in Turkey have a high rate in the total number of employment, precautions towards the professionalism of those who work in these managements can be taken in order to keep them under records (Sarili 2002:48). As a result, together with the informing and awareness raising campaign named 'Humlan' which is used in Sweden to decrease informal employment, the aim of the project is decreasing unemployment through increasing education and employment (TISK, 2003:30). Similarly, through increasing vocational education and employment, decreasing informal economy in our country can be provided.

5.2. Education and Underground Economy

Informal economy is composed of two types of activities as criminal and non-criminal activities. Criminal activities are mentioned with names as underground economy, black economy, underground economy, twilight economy, moon light economy (Bagirzade, 2012: 199-206). Including criminal activities crime economy, which we call, underground economy, consists of market channel and supply and demand but also, producing and/or marketing secretly the goods which is forbidden or taken into controlled to be produced or marketing because of health, security, morality etc. issues. According to another approach, underground economy activities are all illegal but profitable activities which fulfill the blanks in the government administration operated via organized crime syndicate (Ozsoylu, 1999:1).

Not having an occupation as a result of being uneducated, people are driven to gain unjustified benefit by illegal activities (Altug, 1999:197). Uneducated people can also commit illegal activities, can occupy underground economy. On the other hand, being employed illegally, children's chances of being educated are taken from their hands. It becomes fairly easy for those children to be pushed to crime (Guloglu et al., 2003:60). The factor that is to be emphasized in Turkey is that as a society, we don't have enough education level and our education system cannot deter from committing a crime. In such an atmosphere, necessary constraints to prevent underground activities are disappeared (Ozsoylu, 1999:34).

5.3. Reasons of Informal Economy and Relation with Education

Reasons of informal economy can be classified as economic, financial, social, moral and bureaucratic. Among these mentioned reasons, especially economic reasons are essential for our country. Because economic factors become prominent in our country in which there are a structural transformation and immigration from agricultural sector to industry and service sector with the development in technology. On the other side, economic factors are supported by social and demographic factors. As a matter of fact, in our country in which population growth rate and urbanization are high, the informal employment level is also high. Education is closely related with these mentioned economic, social and demographic factors. Related factors with educations are tax income and ethics, economic growth, unemployment, population growth and income distribution. While increases in these mentioned factors increase informal economic extent, education act as a deterrent for these factors not to increase informal economy.

5.3.1. Relation of Informal Economy, Economic Growth and Education

Informal economy has a bulk of negative impact. One of them is that informal economy's shifting the sources to less productive fields. It is not expected from informal economy to be high productive because they are happening in small and/ or medium sized enterprise with low ration of owner's equity (Yilmaz, 2006:167). Hence, sources that shifted to informal economy are used in unproductive fields and in this situation country development is delayed. Accordingly, actors in informal economy cannot convert their income into physical and financial investments (Ay, 2006:64). Moreover, existence of informal economy hinders the positive results that expected from competitive regulations (Aslanoglu and Yildiz, 2007:133).

It is only possible for a country to reach high standards of living and provide productivity growth with catching sustainable and permanent growth trend. Thus, permanent development in a country will have a reducing effect on informal economy. Indeed, informal economy in developed countries is less than developing countries. Due to the growing rates cannot raise necessity welfare and productivity in Turkey, it cannot create a reducing impact on informal economy (Yurdakul, 2008:219). Most important effect of education is on growth and development. One way of education impact on economy is via increasing labor productivity. Education enhances labor productivity indeed and provides essential externality for sustainable growth (Ozyakisir, 2011:56).

On the other hand, education by providing technological growth increases productivity so economic growth as well. Besides, countries with high level education can internalize new technology quicker (Keskin, 2011:140). By this side, education enable technological advance (Yumusak, 2008:17).

Education can also increase the growth with enhancing resources used in economy. Thus, there is mutual relationship between education and growth. While growing economies find opportunities to convey more resources to education, on the other hand, increasing education expenses contribute economic growth to the extent of improving manpower (Altundemir, 2008:52). Nevertheless, an important point is that, development can derive from canalizing resources gained from growth to education. Otherwise, there cannot be mentioned a relationship between education and economic development.

5.3.2. Relation of Informal Economy, Income Distribution and Education

Being one of the main reasons for informal economy, distortion of income distribution both increase the informal economy and existence of informal economy distorts income distribution (Rakici, 2011:357) Relation of income distribution with informal economy occurs when groups, getting low portion from income, make supply for informal employment to rise their income (DPT, 2001b:3). As well as causing small kids to work unrecorded, distortion of income distribution also

extends marginal sector, so in this sector, too, procedures are taken unrecorded causing increase in tax evasion (VDD, 2007:62-63). On the other hand, existence of informal economy spoils the income distribution. Being unable to continue its maintenance even in the absence of informal economy, market economy

While market economy couldn't provide fair income distribution even in the absence of gray market, in the existence of gray economy the result of the factors which have the same quality and quantity and entering the production period ends with the different incomes from each other creates a condition opposition for those who functions in gray economy (Yilmaz, 2006:167-168). Existence of informal economy hinders to accumulation of funds in social security system. In condition of not having enough funds in social security system, social transfers cannot be taken place to low-income groups which are to be arranged by the government and because of this life conditions of low-incomes become harder, inequality in income distribution effects social justice negatively (Ulgen and Ozturk, 2007:5). Informal employment is mostly a social problem. Uninsured employments are generally unqualified individuals, member of low-income group. Uninsured employments cannot get enough family health services, and they cannot get enough income to maintain minimum necessity of human life during old age. In a nutshell, working without insurance cause permanent inequality (Savasan, 2011:36-37).

Education affects income distribution implicitly because of relations with factors like growth and population, and it affects directly economic structure by increasing income level (Akca and Ela, 2012:247). Direct impact is mostly related with individual income. Because of being among the determiner of individuals income and being close relationship between education and productivity growth, which reflects on fees, working class who getting higher education is also expected to get higher income on condition that there is no decline in productivity (Turkmen, 2002:50).

According to Table 2, there can be seen that generally formal employees gain more fees on average than informal employees. Both among formal and informal employees, males earn more than females. Even though price gap is high with formal employees in sectorial context, this gap is low with informal ones. Thus, among informal employees males get maximum 467,34 and minimum 389,99 while females get maximum 330, 12 and minimum 321,79. Among formal employees, gap rises up to 300 Turkish Liras (TL). It is seen evidently here that informal economy decomposes the income distribution. Whereas formal employees earn more, informal ones get less and income distribution is corrupted against informal employees.

Table 2. Average wage of Formal- Informal Employees (2006)

Sectors	Formal Employees		Informal employees	
	Male	Female	Male	Female
Manufacturing industry	661,72	544,62	443,98	321,79
Wholesaling, retail trade, restaurants and hotels	633,24	543,94	389,99	327,29
Financial board, insurance, occupation of immovable property, assistant service	800,72	811,17	467,34	330,12
Social services, social and individual services	944,56	915,62	402,26	324,9

Source: San (2009:458)

Viewing the income distribution from aspect of education, on table 19, it is seen that income is rising with the level of education. Annual average gross earning gap between primary and lower education level and college and higher education level is 15.000 TL in total. Thus, education is one of the important factors to arrange income distribution. That is because educational equalization must be paid attention, educational investments must be increased and not ignoring the quality while doing this. The impact of education on income growth is about tax revenue from one aspect. Educated classes rise up tax revenue to the extent that they can employ and decrease taxation pressure causing informal economy.

5.3.3. Relation of Informal Economy, Population Growth and Education

The rapid population growth in Turkey is a phenomenon that affects all the institutions and development. The population growth affects every reform movement and development attempt negatively. Rapid population growth blocks the people to get a more share of the increase in welfare and the rapid process of economic change. It makes the development attempts harder and there becomes a growing need to housing, health, education and infrastructure (Guloglu et al., 2003:61). Population growth makes us to increase the sources for investment and decrease the capacity of informal economy to get the income for those sources. The relationship between the population growth and the informal economy is mostly unemployment. As long as enough employment cannot be performed for the increasing labor depending on population growth, the size of the informal economy will increase. In this respect, the rapid population growth in Turkey and the properties of labor market formed by the migration from towns to cities since 1950 are the efficient factors for the expanding of informal economy (DPT, 2001a:3).

Education decreases population growth by decreasing fertility. This situation is the same in Turkey. We can see that with the increase of education level fertility increases. According to the studies done in Turkey, it can be seen that there is a negative relationship between the education level of woman and fertility (Akca and Ela, 2012:233). In this way, education not only causes the increase of productivity and human capital by increasing the individuals' properties but also forms an opportunity to bring up more qualified and educated people by decreasing the population growth. Because, for the decreasing population the investment amount will decrease and increasing education will increase the informal employment and guilt economy.

5.3.4. Relation of Informal Economy, Unemployment and Education

Unemployment is an important factor in the formation of informal economy especially in the developing economies (Onder, 2001-2002:244). In developing countries, in formal sectors it is restricted to form new employment opportunities and it costs much for the process of investigation of work in formal economy (Cetintas and Vergil, 2003:18) and these cause employment in informal sector that requires lower education level and less capital such as contract manufacturing, itinerant trade, hawking, selling water (Dereli, 2007:70; Akturk, 2005a:298-299).

Economic crises mostly affect less unqualified workers and small businesses. The first losers of their jobs in crises are in this group. For this reason crisis causes both the finding out job in informal sector for workers and directing of small businesses to informality (Savasan, 2011:14).

Technological developments and the change in the structure of employment labor market affect the unemployment and informal economy. Movement from agricultural sectors to industrial services, productivity increase and crises decrease employment and this causes the unemployment of unqualified migrated people and direction to informal employment. Especially in industrial sectors, owing to the technological developments labor dependent production replaced by machine dependent production. This situation causes the unemployment for the unqualified labor force. And this labor force moves to informal activities because of livelihood concerns (Sarili, 2002:42).

Supporting of informal economy of the labor market can be increased by education (Toptas, 1998:82). The increase of labor force and expertise with the increase of education is an important factor for the increasing of informal economy. But the education policy in our country does not suit the necessary properties for labor force. In our country, education is disconnected to work-life and there are two important reasons for this. The first one is that the population is not directed for the labor force demands and millions of people are educated in the fields which are not needed. The second one is that the education cannot meet the needs of work-life in content (DPT, 2001b:37-39). Because the human sources do not have the properties that a contemporary economy needs, this becomes one of the important factors that increase informality (Ulgen and Ozturk, 2007:18).

5.3.5. Relation of Informal Economy, Tax and Education

One of the important factors of informal economy is to decrease the tax income that is the main investment resource of countries. Tax and informality is a process that feed and strengthens each other. The informality of some economical activities causes the less payment or not payment of taxes and as a result tax income of countries decreases (GIB, 2009:33). Tax pushes the system to informality and with the expansion of informal parts taxes become heavier (Bilen, 2007:137).

Especially in developing countries, great sources needed for education must be obtained by countries (Arabaci, 2011:102). The reason for this is that education is individual, social and economic (Ozbaran, 2004:129). Education both increases human capital and economic growth and growing economies supply more resources for education (Altundemir, 2008:52; Ozyakisir, 2011:55). In this respect, the increase in education level increases the sources by forcing growing and increases informal employment and this increases the income of countries. And this will be an opportunity to decrease the tax load and to spread the tax to the base.

The change in education level affects the viewpoint to tax and arrangements related to tax. The increase of tax compliance with the growth in education level is an opportunity for the decrease of informal economy. Some studies done in some cities in Turkey support this view (see Celikkaya and Gurbuz, 2008; Coban and Sezgin, 2004).

Education level is important for the acceptance of taxes for taxpayers more easily and the occurring of tax applications. With the right and good quality education the viewpoint of taxpayers can be affected positively for taxes (Cicek et al., 2008:35). The positive attitude to taxes is an opportunity to correct the taxes of informal economy. Only educated tax payers can use the way of tax evasion by understanding the tax laws better. Torgler (2003) stated that educated tax payers will be slow for the conformity of taxes because the educated people can understand the tax evasion opportunities better and they will be aware of how the countries will use the taxes. Richardson (2006) stated that higher general education will cause lower tax evasion (Saracoglu, 2008:19). Therefore, increase in education level cause both tax evasion by understanding the tax rules better and tax compliance by getting more conscious about taxes. In the studies done in our country, Yeniceri (2004:922) in his study for İstanbul found that higher level educated people can use the advantages of tax opportunities more because of their high knowledge about taxes. According to the study, the thought that the country cannot use the taxes better spreads out with the growth if education level. Similarly, in the study done by Celikkaya and Gurbuz (2008:52) in Eskişehir, the growth in education level increases the question of where the countries spend the taxes. In a study done by Saracoglu (2008:31) in Turkey, in all levels of education it is stated that spending of taxes is not affective.

With the increase of education level of tax payers their viewpoint to tax regulations and taxes can change. In their studies, Celikkaya and Gurbuz stated that with the increase of education level tax amnesty can be used as an instrument for recording the informal economy. In their studies, Coban and Sezgin (2004:791) stated that by decreasing the tax rates informal economy will decrease and tax income will increase.

Because the informal economy consists of great scope, its relation with education can be seen in different areas. It is remarkable for Turkey that the people operate in informal employment and underground economy is mostly uneducated. With the increase of Schooling and the literacy rates, the decrease of population growth and the employment increase, some expectations about the decrease of informal economy in Turkey will strengthen.

6. Results and Recommendations

The size of informal economy in Turkey is extremely big and shows structural property. Uneducated people working at agricultural sectors immigrate to cities by the effects of technology and population growth and they cannot find any jobs related to their education level. To live their life, they move to informal employment or underground economy. Increasing of education level and the quality is an important factor for the decreasing of informal economy that causes a lot of problems in economy. High educated people prefer formal employment and get higher income and get rid of underground economy. Besides, the increase in education level minimizes the negative effects that cause the growth of informal economy. Education increases the tax income and the factors of economic growth, decreases unemployment and population growth and organizes income spread and tax ethics. The increase of education level in Turkey is a key element for the decrease of informal economy.

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