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How Could the Investment Incentives Address Income Inequality in Turkey

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Abstract

Turkey still finds itself among countries with high income inequality, although it has diminished over the long term. Investment incentives have always been in place as a primary policy tool to alleviate regional disparities along with its other macroeconomic aspirations. To bring concrete recommendations on income inequality, we have examined inequality data and the related literature before dwelling on the investment incentive framework. Regional disparities, quality and attainability of education, lower labour participation and wages of women, the informality, distortion of factor revenues in favour of entrepreneurs and weak labour productivity gains are the major drivers of inequality. Accordingly, in the last episode, concrete policy implications are delivered for the investment incentive system to contribute to a fair distribution.

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1. Introduction and Brief Investment Incentive History

Classical economists have emphasized the income distribution dimension of the economic policy; according to Ricardo, economics aims to analyse the roles of the laws on the distribution of income among production factors, social classes and individuals (Paterson, 1994: 446). Income distribution has gained particular importance after the industrial revolution (Çelik, 2004: 53), which has created lucrative opportunities for entrepreneurs while oppressing wages downwards, leading to social unrest, and sparked ideological debates (Aksu, 1993: 1). The argument stands still as Sachs (2015: 11-12) defines three prevalent social concerns: extreme poverty, inequality, and social mobility (equal opportunity).

In the economic policy domain, those concerned about social justice and inequality criticize that the importance of the GDP Pie has long been overshadowed by the obsessive focus on GDP figures (Stiglitz et al., 2018: 34). Contemporary economic research is also being criticised as failing to cooperate with other social disciplines and focusing on excessive mathematical analysis instead (Piketty, 2014: 34).

As a reflection of the global liberalization wave in the 80s (Kolsuz, Yeldan, 2014), the transformation of the economic paradigm has enormously influenced developing country preferences as well as the international rules and standards. In line, Turkey has adopted a liberal export-led growth model instead of import substitution. The new vision has a high opinion on privatization, lesser governmental interference and business cost reduction policies aiming to boost international competitiveness. Since then, Turkish economic policy has focused on climbing up the value-added ladder, curbing public debt, inflation and external imbalances; particularly on the development side, preventing the income inequality and regional disparity.

As a part of the remedy, investment incentives have always been in place in response to economic and social matters in various forms since taxation and subsidies are the most effective ways to redistribute the disposable income (Shaikh, Ragab, 2007) and they are widespread components of investment policy around the world (Redonda et al., 2019). For instance, the 1979-1983 Development Plan introduced the

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term "priority regions for development" to channel productive investments along (SPO, 1979: 294). The efforts to diversify regional incentive structure continued in the 1990s and the term "industry belt" referred to underdeveloped provinces where support level was higher than average (Official Gazette, 1995).

At the beginning of the 2000s, the incentive structure remained the same. The investment tax credit is implemented with a discriminative approach within the range of 40% and 200% depending on the regional priorities, value-added capacity and amount of the capital expenditure (Official Gazette, 2001). In 2003, the differentiated investment tax credit rate was fixed at 40% (Official Gazette, 2003), while priority region provinces were updated according to the socioeconomic development classification prepared by State Planning Organization (SPO) in 2004. Incentive legislation was amended several times while regional scope persisted (Official Gazette, 2004).

The year 2006 was a turning point for the incentive legislation. 40% fixed investment tax credit is repealed considering the forthcoming general corporate tax (CT) reduction (Official Gazette, 2006). Hence, one of the best-known incentive instruments has been abolished. The years between 2006 and 2009 are relatively distinct from the other periods. With the abolishment of the investment tax credits, the incentive system has become the simplest ever. In 2006, there were only value-added tax (VAT), customs duty exemptions, and credit interest subsidies for Small and Medium Enterprises (SMEs) under the sectoral and regional limitations. Energy supports were in place for only tourism investments (Official Gazette, 2006b).

Historically, the six-legged incentive structure (customs duty and VAT exemptions, investment tax credits, CT deduction, CT delays and credit interest subsidies) remained throughout the years, although the names, scheme labels, classifications and support volumes have been varied. In 2009, the most large-handed and comprehensive incentive scheme was enacted and evolved into its ultimate form in 2012 (MOIT, 2020).

Income inequality has always been a hot topic in the economics literature, even though recent economic remarks complain about the inadequate emphasis on GDP pie rather than GDP growth and figures. Investment incentive has been an important policy tool for many years, striving to alleviate regional disparities based on tax exemption/credits and credit supports. In this study, the causes of income inequality in Turkey will be explored through related literature and available data before touching upon the current investment incentive system, including the tools and inequality dimension. Followingly, the empirical studies dwelling on the impact of the investment incentives on income inequality and regional disparities will be considered to make inferences in the last section on whether incentives have mitigated the disparities and what can be done to improve the redistribution capacity of the current scheme.

Since the focus of the study is income distribution; productivity, investment stimulation or feasibility of the incentive scheme is beyond the scope. The previous studies investigating the root causes of inequality and current inequality indicators will be both the basis and the limitation of the inference potential of the study. The regional perspective of the incentive system is acknowledged as a fundamental characteristic since it has not only lasted for so long but also reflected the regional redistributive vision of the system. Side targets of the system are also based on the regional scope. So, the inferences will be kept within the current frame.

2. Introduction and Brief Investment Incentive History

In the 1950s, the Kuznets curve was pretty famous, which claims that the income inequality would surge due to the widening gap between industrial and agricultural revenues at the beginning of industrialization. It would fade eventually as soon as development process gets close to completion. Yet, several case studies worldwide (Deininger, Squire, 1998) opposed him, even though global food deprivation and primary health issues have been abating over the centuries (Sachs, 2015: 26).

According to the study of Ak, Altintaş (2016), income distribution was initially balanced in Turkey when income grew. But afterward, it deteriorated while income was increasing and income inequality followed a "U" shape between 1986-2012, instead of a "reverse U". Dağdemir (2008) also claims that globalization led to higher income inequality in developing countries. There are pieces of evidence implying that the developing countries keep diverging (Aghion, Howitt, 2008). Shaikh, Ragab (2007) illustrated that the relative income and life standard of the first 80% percentile of the gross income pie (vast majorities) is not improving throughout the years in observed countries. Moreover, Jones, Klenow (2016) argue that most of the developing countries are significantly poorer in welfare indicators than the actual GDP figures implied due to the shorter lives and severe inequality. However, Yanar, Şahbaz (2013) illustrated that globalization had reduced the share of both the poorest segment and those with incomes below the poverty line and reduced the Gini coefficient in developing countries. McMillan et al. (2017) admit the progress, albeit it has slowed recently due to lackluster trade, insufficient jobs, greater income inequality and bulges of youth. Inequality remains to be a major economic and social concern.

2.1 Gini Coefficients and S80/S20 Ratios

In this section, several available inequality figures will be mentioned to illustrate the current status and find out the roots and types of inequalities in Turkey. Filiztekin, Çelik (2010) compiled various historical Gini coefficient calculations (Table.1) for Turkey to elucidate the long-term trend. Gini coefficient has diminished over the years in Turkey, but it is still high enough to be classified as inequal. Ercan (1999: 114) claims that unjust capital allocation is the primary driver of the high inequality in the 60s and 70s.

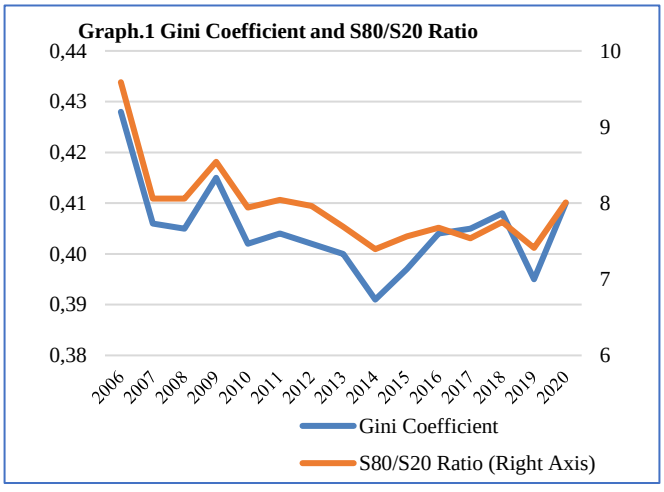
Table 1. Gini coefficient

Table.1	Gini Coefficient
1963	0,55
1968	0,56
1973	0,51
1978	0,51
1983	0,52
1986	0,5
1987	0,43
1994	0,49
2002	0,46
2003	0,43

Source: Filiztekin, Çelik (2010)

In Graph.1, the Turkish Statistical Institute (TSI) Gini coefficient and S80/S20 ratio are showni. Gini coefficient contracted between 2002-2007 and fluctuated around 0.42 from 2006 to 2018 while S80/S20 somewhat decreased further albeit at a slow pace, yet both figures are relatively high2.

Figure 1. Gini coefficient and S80/S20 ratio



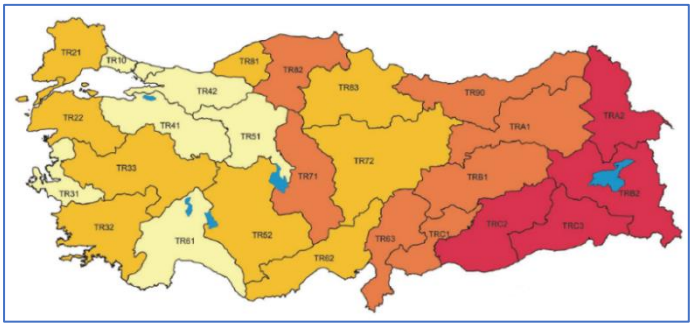
Source: TSI (2021)

The recovery in the 2002-2007 period might have stemmed from the supply-side improvements in interest rates and inflation (Selim et al., 2014: 58). The lowest percentile of income groups also improved during 2002-2007. On the other hand, the post-2007 growth was demand-driven instead, limiting the inequality progress (Selim et al., 2014: 72). Authors argue that the structural reforms and macroeconomic policies backed by the IMF stand-by agreement in the post-2001 economic crisis have enhanced the potential growth and it was the underlying reason for the inequality improvement. Moreover, the significant decrease in interest income, obviously originating from the falling inflation and interest rates, accompanied by increased labour and pension incomes along with transfer incomes, has contributed to rebalancing (Selim et al.: 81, 88-89). Bakis (2014) also states that total factor productivity growth was remarkable between 2002-2006, complying with the increasing employee gains in agriculture, manufacturing and services, but it slowed significantly between 2007-2011. Authors argue that the difference probably stemmed from the reallocation of the hidden unemployed labour away from agriculture in 2002-2006, rather than an intrinsic productivity gain.

2.2 Regional Inequality

Regional inequality is a chronic bottleneck for the Turkish economy. Strategy and Budget Office (SBO) (2013) has developed a socioeconomic development index for all provinces in Turkey considering the elements such as demography, education, health, accessibility, finance, competitiveness and life quality. Relative development levels are shown in Map.1; darker regions imply lesser development levels and the disparity is crystal clear. The poverty level is almost three times higher in rural areas than in urban sites (TSI, 2020).

Figure 2. Socio-economic development level in Turkey



Source: SBO (2013)

The income level of the largest cities stands out, while the disparity widens in eastern regions. According to Tekeli (1972: 96), regional disparity dates back to the Ottoman Empire era when western provinces could integrate into international trade and enjoyed more favourable infrastructure and larger populations. Dinler (2008: 167-168) underlines that the challenging geographic and climatic conditions were other impeding factors for the eastern provinces.

Özcan, Özlale (2012) calculated the income share of the poor households among the total population and concluded that the southeastern region has the highest poverty share with 34,7%, while eastern Anatolia followed with 25%. Mıhçı (2012) compares United Nations Development Programme indices for the years 1970 and 2000 and indicates that, although the least developed regions have improved in time, their relatively handicapped position did not change one bit, even occasionally deteriorated. Besides, Erlat (2005) finds no interregional income convergence between 1975 and 2001. Gezici and Hewings (2004) indicates that interregional inequality even exacerbated between 1980 and 1997.

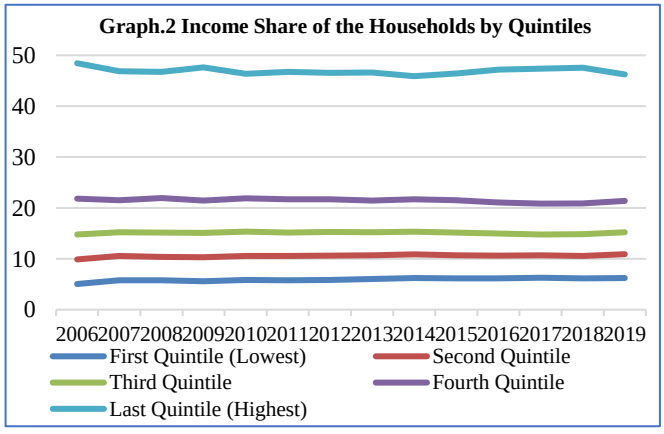
Dağdemir, Acaroğlu (2011) applied a regression analysis and stated that capital stock, labour volume, human capital and urbanization are the determinants of the disparity among provinces. The regional disparity has stemmed from historical and geographical fragmentation, which is not easy to tackle. Yet, the liberalization and global integration steps did not seem to alleviate the problem alone.

2.3 Households Income Share and Education

According to Graph.2, the quintiles' income share has not changed a bit over the years, besides the absence of regional convergence.

Another interesting point is that the number of pieces of evidence suggests that national income inequality originated from intra-regional rather than inter-regional inequalities (Selim et al., 2014: 138).

Figure 3. Income share of the households by quintiles



Source: TSI (2021)

Educational attainment is a crucial factor behind the income differences among households. High school and university enrolment are effective on lifecycle earnings in Turkey (Duygan, Güner, 2006). Ağır, Kar (2010) states that the SPO education sector development index has a significant impact on GDP per capita of the provinces, as Kar, Taban (2003) confirms the positive effect of education and social security expenditures on GDP growth. Enhanced educational attainment would improve the qualification of labour and chance to find a job, strengthen and expand the middle class and mitigates social exclusion. In this regard, removing impediments to starting education, improving both the quantity and quality of the facilities and bearing the educational expenses would help (Eroğlu, Belen, 2019). Mıhçı (2012) reveals that educational attainment has improved significantly, but none of the southeastern provinces converged towards national averages.

Education also positively impacts the shadow economy, which undoubtedly plays a role in lower labour earnings (Duman, 2011). In Turkey, the informal economy holds about ¼ of total economic activity, which is higher than the EU average (Güler, Toparlak, 2018). Loayza (2018) claims that 70% of employment and 30% of economic activity is informal in a typical developing country which implies the share of informal unemployment in Turkey might be more extensive than informal economic activity.

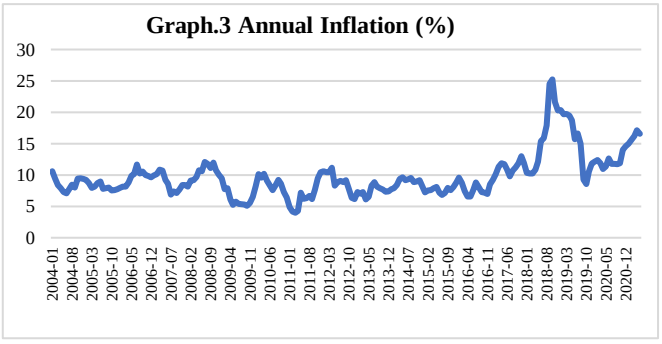
Education helps on being formally employed alongside its income-generating effects (Galiani, Weinschelbaum, 2012). Chen (2012) confirms education's supportive formalizing impact on labour and entrepreneurs.

The refugee influx from Syria also contributed to the informality dominance in Turkey. Unclear status and absence of work permits exert pressure on refugees to work informally with lower wages due to not having minimum wage contracts and severance payments (Korkmaz, 2018), as also observed in the EU (Hazans, 2011).

Policies focusing on education might contribute to inequality objectives through productivity gains and formality.

2.4 Inflation and Inequality

Figure 4. Annual inflation (%)



Source: CBRT (2021)

One of the primary reasons for the inequality is persistently high inflation (Kuştepeli, Halaç, 2004) and Turkey has been struggled with high inflation rates for a long time till the 2000s when the fiscal discipline and central bank independence were paid off and inflation has declined gradually yet it is still higher than the advanced (1.7%) and developing economy (4.7%) averages (IMF, 2019) (Graph.3). At first glance, inflation is known as a monetary policy issue, but Bartik (1991) states that unemployment and inflation are interdependent issues and regional investment volumes influence national inflation rates, thus affecting income distribution. When investments are channelled towards the regions with high unemployment, upward wage pressure would be limited. If an investment took place in an area with low employment, it could have pushed the wages upwards and exacerbated the inflationary pressure. Within the income distribution perspective framework, fostering investments in underdeveloped regions is vital for generating income and employment for the locals and also essential to curb inflation.

2.5 Inequality Among Production Factors

Yeldan et al. (2013) calculate the contribution of capital, labour and factor productivity to GDP growth between 1980-2010. They find that contribution of capital is 58%, the share of labour is 23%, while factor productivity accounts for 19% in total. The contribution of capital increased by 16% over three decades while the contribution of labour shrank by 20%. According to Kolsuz, Yeldan (2014), the GDP elasticity of manufacturing employment has declined from 0.49 between 1980-2000 to 0.39 in the post-2002 period. The rate of decline is sharper in the services sector, from 0.76 to 0.47 in the same consecutive periods.

2.5.1 Employee vs. Employer Gains

The annual income gap keeps on diverging between employers and employees as Graph.4 illustrates. Labour revenues get 33.6% share while gross company operating surplus (including capital consumption and net company surplus) gets 67% on average. In advanced countries, labour share reaches up to 70% (Yumuşak, Bilen 2000, s. 79).

Figure 5. Mean annual income by employment type (TL)

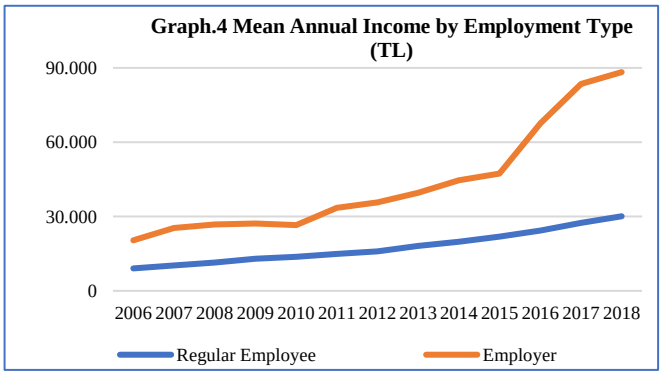
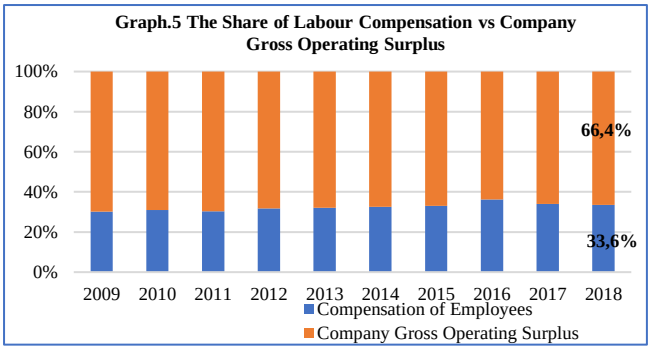


Figure 6. The share of labour compensation vs company gross operating surplus



2.5.2 Sectoral Employment Performance by Gender

Figure 7. Agriculture employment/GDP

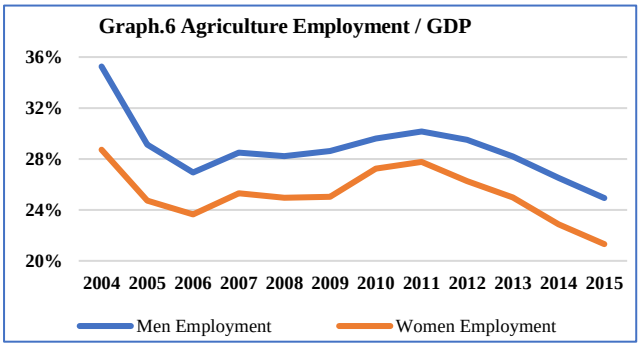


Figure 8. Manufacture employment/GDP

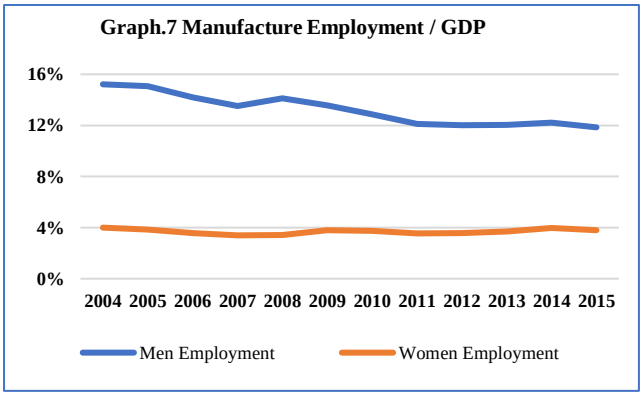
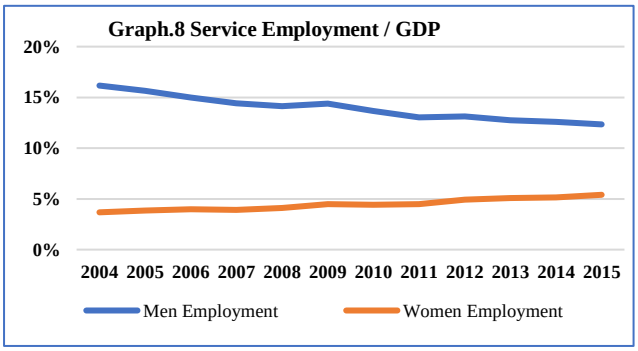


Figure 9. Service employment/GDP



Source: TSI, SBO (2020)

In Graphs 6, 7 and 8, absolute sectoral employment numbers are divided by sectoral real GDP volumes to see the employment creation performance of sectoral production by gender. Employment generation capacity is on a downward trend and the men employment slows harder than women's, most probably because of the base effect. The trend is sharper in agriculture due to reallocation towards industry, while women's gains are prominent in services. Besides, the share of women's employment is lower than men's; the gap is closing, albeit slowly (TSI, 2020).

From 2006-to 2018, women earned 25% less than men on average (TSI, 2020). The gap is 13% in OECD countries and women had to work almost half an hour longer in both paid and unpaid work (OECD, 2020: 17). Patriarchal dynamics of the society might be the core reason for lower women's earnings, of which Galiani, Weinschelbaum, (2012) illustrate similar patterns from Latin America that spouses are more likely to be employed informally instead of heads of households. Gender income inequality is also correlated to the weak labour participation of women (Şahin, 2012). In terms of literacy and income per capita, gender inequality persists (Mıhçı, 2012).

2.6 Incapable Debt Markets and Externalities

Imperfect debt markets are another obstacle to income equality (Kaelbe, Thomas, 1991: 67). Akerlof (1978) exemplifies a local lending relationship in India where overshooting interest rates was the leading factor in landlessness because the official local lender grants loans only to those (1) whom are easy to enforce his contract with or (2) those he has personal knowledge of their character. The author infers that this may cause other local lenders to end up doing business with "bad" debtors (lemons in the article's terminology), thus probably making a loss due to the asymmetric information. Because insufficient information makes other lenders to charge higher interest rates to other debtors, which causes good debtors to sweep away from the market and would result in lower reimbursement rates and revenues. The author addresses the importance of guarantees to alleviate informational asymmetry, thus keeping good "cars" or, in the financial market, good borrowers in the market.

Gale (1991) argues that the adverse selection can lead to higher lending rates, while Stiglitz, Weiss (1981) also underline that credit markets would eventually become rationed since banks would not be eager to lend to risky borrowers to avoid insolvency risks. Overall, it hinders the financial sector from providing equal opportunities for companies, individual entrepreneurs or bright students. Besides, shallow financial markets exclude young, small and no-name companies in developing countries. In Turkey, manufacturing companies and SMEs are found to be financially constrained (Yeşiltaş, 2009; Çetenak, Vural, 2015) which indicates another layer of fragmentation in terms of inequality.

3. Current Investment Incentive Scheme

In 2009, historically, the most aggressive and comprehensive incentive legislation was enacted with three different sub-schemes called general, regional and large investment schemes. In 2012, the legislation was amended a little bit with a macroeconomic perspective and the strategic investment scheme was introduced, while the large investment scheme was also replaced with the priority investment scheme later on. This legislation is still in force and subject to our study. In this chapter, the framework of the incentive scheme will be investigated to understand how the system could address inequality better. The current incentive system has four sub-schemes and all of which have various types of support measures as can be seen in Table 2.

Table 2. Current incentive system

Support Measures	Regional Scheme	Priority Scheme	Strategic Scheme	General Scheme
Vat Exemption	✓	✓	✓	✓
Customs Duty Exemption	✓	✓	✓	✓
Tax Deduction	✓	✓	✓	
Social Security Premium Support (Employer)	✓	✓	✓	
Income Tax Withholding Support*	✓	✓	✓	✓
Social Security Premium Support (Employee)*	✓	✓	✓	
Interest Subsidy**	✓	✓	✓	
Land Allocation	✓	✓	✓	
VAT Refund***			✓	

* For investments in the 6th region.
** Only for investments in Regions 3, 4, 5 or 6.
*** Only applicable for construction costs of Strategic Investments worth above TL 500 million

Source: MOIT (2020)

3.1 Sub-Schemes

3.1.1 Regional Schemes

In the regional scheme, six different regions are classified according to the socioeconomic development level prepared by SPO. Investors can enjoy the

instruments of their region of presence depending on the sector of activity and minimum capital requirements.

Table 3. Provinces by regions as of 2021

1st	2nd	3rd	4th	5th	6th
Ankara	Aydın	Adana	Afyonkarahisar	Bayburt	Adıyaman
Antalya	Balıkesir	Burdur	Aksaray	Çankırı	Ağrı
Bursa	Bilecik	Düzce	Amasya	Erzurum	Ardahan
Eskişehir	Bolu	Gaziantep	Artvin	Giresun	Batman
İstanbul	Çanakkale	Karaman	Bartın	Gümüşhane	Bingöl
İzmir	Denizli	Kırıkkale	Çorum	Kahramanmaraş	Bitlis
Kocaeli	Edirne	Kütahya	Elâzığ	Kilis	Diyarbakır
Muğla	Isparta	Mersin	Erzincan	Niğde	Hakkâri
Tekirdağ	Karabük	Samsun	Hatay	Ordu	Iğdır
	Kayseri	Trabzon	Kastamonu	Osmaniye	Kars
	Kırklareli	Rize	Kırşehir	Sinop	Mardin
	Konya	Uşak	Malatya	Tokat	Muş
	Manisa	Zonguldak	Nevşehir	Tunceli	Siirt
	Sakarya		Sivas	Yozgat	Şanlıurfa
	Yalova				Şırnak
					Van

Source: MOIT (2021: 23-25)

Region's support level/duration increases in underdeveloped regions while minimum capital requirements diminish (Appendix-1).

Table 4. Regional scheme support tools and levels

Incentive Measures			REGIONS					
			I	II	III	IV	V	VI
VAT Exemption			YES	YES	YES	YES	YES	YES
Customs Duty Exemption			YES	YES	YES	YES	YES	YES
Corporate Tax Deduction*	Investment Contribution Rate* (%)	Out of Industry Zones	15	20	25	30	40	50
		In Industry Zones	20	25	30	40	50	55
	Corporate Tax (%) Deduction Rate		50	55	60	70	80	90
Social Security Premium Support (Employer's Share)	Support Period	Out of Industry Zones	2 years	3 years	5 years	6 years	7 years	10 years
		In Industry Zones	3 years	5 years	6 years	7 years	10 years	12 years
Social Security Premium Support (Employe's Share)			-	-	-	-	-	10
Income Tax Witholding Support			-	-	-	-	-	10
Interest Subsidy (%)		TL Denominated	-	-	3	4	5	7
		FX Denominated			1	1	2	2
Investment Site Allocation			YES	YES	YES	YES	YES	YES

*Projects under the manufacturing sector (US-97 code from 15 to 37) between 01/01/2017 and 31/12/2022, each region shall get additional 15 points of investment contribution rate and deduction rate shall apply as 100%.

Source: MOIT (2020)

3.1.2 Priority Scheme

In the priority scheme, according to their socioeconomic value-added capacity, specific sectors enjoy the privileges of 5th region instruments and support levels, no matter where the actual investment takes place. The list of priority sectors can be found in Appendix-2.

Table 5. Priority scheme support tools and levels

Incentive Measures		TERMS & SUPPORTS*
VAT Exemption		YES
Customs Duty Exemption		YES
Corporate Tax Deduction*	Investment Contribution Rate (%)	40**
	Corporate Tax (%) Deduction Rate	80**
Social Security Premium Support (Employer's Share)		7 years
Interest Subsidy (%)	TL Denominated	5
	FX Denominated	1
Investment Site Allocation		YES

*All regions enjoy 5th region terms, yet 6th region investments enjoy their own terms.
**Projects under the manufacturing sector (US-97 code from15 to 37) between 01/01/2017 and 31/12/2022, each region shall get an additional 15 points of investment contribution rate and deduction rate shall apply as 100%.

Source: MOIT (2020)

3.1.3 Strategic and Thrust Scheme

Table 6. Strategic and thrust scheme support tools and levels

Incentive Measures		TERMS & SUPPORTS*
VAT Exemption		YES
Customs Duty Exemption		YES
Corporate Tax Deduction*	Investment Contribution Rate (%)	50
	Corporate Tax (%) Deduction Rate	90
Social Security Premium Support (Employer's Share)		7 years (10 years for 6th region)
Social Security Premium Support (Employee's Share)		10 years (only for the investments in 6th region and projects under Technology Focused Industry Thrust Program TFITP)
Income Tax Witholding Support**		10 years (only for investments in the Region 6; under the TFITP: 7 years in high-tech products, 5 years for the rest in 1st-5th regions)
Interest Subsidy (%)	TL Denominated	5 (10 points for high tech investments under Industry Thrust Program, 8 points for the rest of the Thrust program)
	FX Denominated	2
Investment Site Allocation		YES

*Projects under the manufacturing sector (US-97 code from 15 to 37) between 01/01/2017 and 31/12/2022, each region shall get additional 15 points of investment contribution rate and the CTD rate shall apply as 100%
** For strategic investments under TFIMP, the system covers up to 500 employees in high-tech projects and 300 employees in other projects.

Source: MOIT (2020)

In the strategic scheme, producing particular intermediate and final products with high import dependence is targeted to improve international competitiveness and reduce the import bill. It has specific criteria to be fulfilled[3]. Technology Focused Industry Thrust Program (TFITP) is also combined with the strategic scheme and it has similar goals, particularly on high value-added manufacturing investments (Official Gazette, 2019).

3.1.4 General Scheme

The general scheme covers the projects that do not fall under the abovementioned schemes regardless of the region, provided that certain capacity and minimum investment amount are met. It has no selective preference; traditional low-value-added production sectors and specific non-tradable services sectors are excluded (MOIT, 2021: 27-29). Incentive tools are explained below.

3.2 Quasi-Tax Supports

Quasi-tax supports apply to due tax liabilities of the investor and include a certain share or full amount of exemption of tax claims so that production costs are reduced and/or net operating surplus is increased.

3.2.1 VAT Exemption

Value-added tax (VAT) is exempted on acquisition or leasing of investment goods, software and intangible rights for projects with incentive certificates. The aim is to alleviate the initial cost pressure on investors.

3.2.2 Customs Duty Exemption

When a customs duty is applied to certain equipment under the National Import Regime, it becomes exempt from purchasing or leasing the imported investment machine and equipment under a project with an incentive certificate. If an additional customs duty applies for specific equipment under a particular Decree, it also becomes exempted (MOIT, 2021: 4-5).

3.2.3 Corporate Tax Deduction (CTD)

This tool is a certain amount of deduction on accrued CT liability of the investor. Two constraints need to be known under the application of the CTD. The first one is the CTD rate which is used to calculate the exact deduction amount. The second one is the investment contribution rate which refers to the maximum amount of refund that a company could receive. In other words, the total amount of CT refund by no means exceeds the assigned investment contribution ratio of the total fixed investment amount, even if the nominal equivalent of CTD allows for that.

If the calculated CTD[4] amount does not reach the investment contribution amount within a year, then the rest of the claims could be carried over to the following year.

The incentive implementation process is worth mentioning to clarify the expected benefit of quasi-tax incentives. Investors apply for an incentive certificate before they start actual investment activity. They are required to submit all documents and information asked for each sub-scheme. Applications are then available for evaluation by Directorate experts and executives. Approved applications obtain incentive certificates and become able to start capital expenditure, enjoying VAT and customs duty exemptions throughout the investment period. All exemption procedures operate through an electronic incentive system and the system interacts with databases of the Ministry of Trade and the Ministry of Finance for VAT and customs duty exemptions. Tax deduction and employment support only become available when the Directorate specialists complete on-site expert inspection of the complete investment. As soon as an on-site inspection takes place, experts confirm that the project complies with the related legislation and terms, companies become eligible to get employment supports and CTD. If a company fails to do so, it might be given additional time to fulfil its commitments; otherwise, they face sanctions for obtaining redundant exemptions (MOIT, 2021: 9).

With the provision of passage (c) of the second paragraph of Article 32 / A of the CT Law, companies are able to benefit from CTD for their profits originated from other economic activities during their investment period (Official Gazette, 2006).

3.2.4 VAT Refund

VAT refund is solely available for investment projects carried out under the strategic scheme, with an investment amount over TL 500 million. VAT cost of construction expenses of investors (not machine and equipment) in the manufacturing industry (US 97 code: 15-37) would be paid back. Ordinarily, construction expenses are not exempted from VAT and customs duty. It is only being added to the aggregated investment expenditure amount, increasing the amount of CTD support (MOIT, 2021: 5).

3.3 Employment Supports

One of the most repeatedly declared criticisms of investment incentives is its distortive effects on factor endowments due to the capital-focused incentive designs around the world. In Turkey, the employment premium burden was 35.9% which overshoots OECD and EU average (Akdeve, Karagöl, 2013) before the current incentive legislation. However, thanks to the disparity and unemployment vision, the system can be called generous in its employment support, particularly for the 6th region. Employment supports also apply in 1-5th regions, with varying durations depending on their development level.

3.3.1 Social Security Premium Employer's Share Support

Within the scope of this support, investors are exempt from their own social security premium share for every single newly hired employee. This tool only covers the minimum wage equivalent premium, even if the actual wage is higher and only applies to new employees hired under the investment project. In order to assign the generated employment number under a project, the Directorate specialists refer to the previously registered employment number of the company.

3.3.2 Income Tax Withholding Support

Like the premium support, income tax withholding support refunds the minimum wage equivalent to withheld income tax of newly hired employees on their gross salary. This tool only applies to projects in the 6th region, (MOIT, 2021: 7-9) Attraction Centres Program and strategic scheme investments under TFITP (Official Gazette, 2019).

3.3.3 Social Security Premium Employee's Share Support

This tool has the same application principles as the employer's share premium support. Distinctly, it exempts the employee's share and is only applicable for investments carried out in the 6th region, under Attraction Centre Program or strategic scheme within TFITP (MOIT, 2021: 8).

3.4 Other Supports

3.4.1 Interest Subsidies

For investments in the 3rd, 4th, 5th and 6th regions, fixed points of interest payments are paid back to the investors depending on the region of investment (Table.4). Likewise, in the CTD investment contribution rate procedure, only the loans up to 70% of the total capital expenditure are subject to the interest subsidy. In other words, if the investment is entirely financed through loans, the interest payments of 30% of the loan are not subject to the tool (MOIT, 2021: 5).[1]

3.4.2 Investment Site Allocation

If a suitable land or plot is found, the site can be allocated to the investor company within the procedures and principles of the Ministry of Environment and Urbanization as a right of easement. (MOIT, 2021: 9)

4. Impact of Investment Incentives on Inequality and the Disparities

Since investment incentives are a long-lasting policy tool in Turkey, several studies in the literature investigate its impact in response to the underdevelopment and regional disparities. As mentioned above, the incentive system was amended many times and took its current form with a leap in 2012. In this regard, the study findings will be mentioned in chronological order not to rule out the probable effects of amended legislations.

Sarı, Güven (2007) stated that the disparity between priority and other regions was exacerbated in 1979-1998 despite the priority regions approach. Likewise, Güven (2007) applied the Theil Index to investigate convergence among provinces and found that the disparity was even widened between 1970 and 2000. Erden, Karaçay Çakmak (2004) found that investment incentives could not affect regional private investment decisions, whether positively or negatively between 1991-2000. Altınbaş et al. (2002) also concluded that the priority regions program could not mitigate the income gap among the regions. Yıldırım (2005) found convergence among regions from 1990-to 2001, yet the impact of policy variables -including the investment incentives - was insignificant. Şahin, Uysal (2011) makes similar inferences for 2002-2009, concluding that investment incentives are ineffectual on regional development. According to Demirtaş, Aksel (2018), the impact of incentive certificates prepared for international companies is positive for regional development, while local incentive certificates were ineffectual between 2004-2010. The vast majority (94%) of the incentive certificates are allocated to local companies during this period. 60% of the certificates prepared for international companies are allocated to the projects located in the 1st region, where the development level is highest, implying limited convergence capacity (MOIT, 2020a).

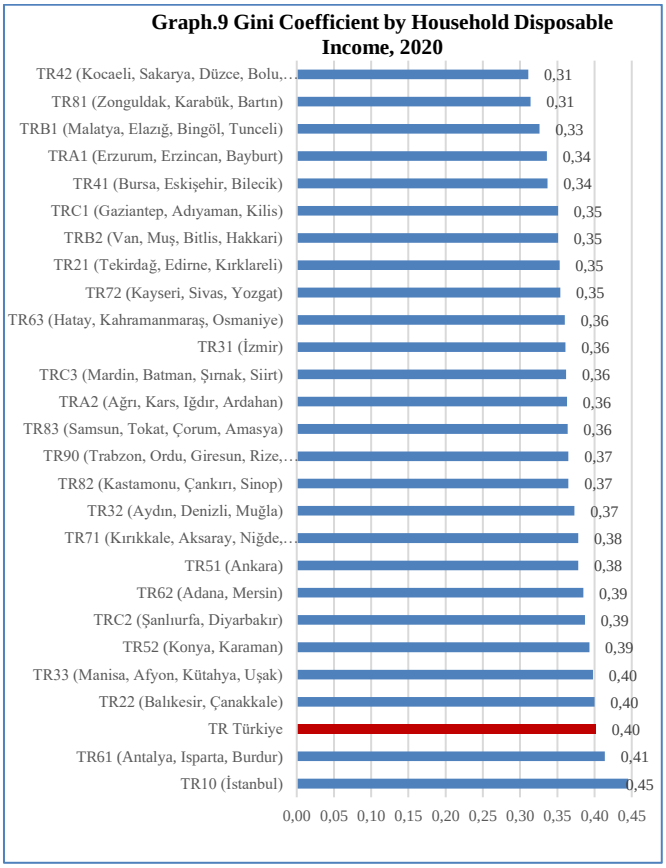
Çelik (2017) indicated another issue in the implementation of the investment incentive system that 1% of increment in the number of incentive certificates increases manufacturing investments by 0.31% in the region they apply while diverting investments by 0.29% in adjacent districts between 2003-2011. The author criticised the investment incentives for failing its macroeconomic aspirations due to the diversion effect. Yavan (2011) stated that investment incentives positively affected the income level of the provinces they applied for in the year 2010. Taşdoğan (2013) implemented a stochastic boundary analysis and found that new investment incentives are unable to make a statistically significant impact on the value-added capacity of provinces, although the time frame of the study is limited for 2012 and a new incentive system was enacted in June 2012 (Official Gazette, 2012). Saygılı (2020) stated that investment incentives have led to income convergence; however, convergence and effectiveness of the incentives are relatively weak in underdeveloped regions.

All of the studies except one (Yavan, 2011) indicate that the convergence ability of the investment incentives is weak. Since the building block of the investment system is its regional scope, the literature seemed to dwell on regional convergence rather than its national income inequality repercussions. It may have stemmed from the system's perspective or recent rigidness on national income inequality indicators may have led researchers to focus on regional disparities. Since the national income inequality mainly stems from the intra-regional or intra-group inequalities rather than inter-regional or inter-group fragmentation (Selim et al.,

[1] Data centres, call centres and certain manufacturing investment projects (National Classification 15-37) took place in Adıyaman, Ağn, Ardahan, Batman, Bayburt, Bingöl, Bitlis, Diyarbakır, Elazığ, Erzincan, Erzurum, Gümüşhane, Hakkari, Iğdır, Kars, Kilis, Malatya, Mardin, Muş, Siirt, Şanlıurfa, Şırnak, Tunceli, Van (4th, 5th and 6th region provinces) (Official Gazette, 2018).

2011:16), both the system and research topics may have implicitly overlooked this issue.

Figure 10. Gini coefficient by household disposable income, 2020



Source: TSI, (2022)

Intra-regional Gini coefficient is relatively high in most regions, especially those with higher industrialisation and population levels. The arithmetic average of the Gini coefficient shown in the Graph.9 is also high, 0,37. Hence, considering the population level of the regions with relatively higher Gini coefficients such as İstanbul, Antalya, Konya, Ankara and Şanlıurfa, the number of households affected by income inequality might be more significant than the regional Gini coefficient average implies.

5. Findings and Policy Recommendations

Turkey is still struggling with income inequality, although the Gini coefficient improved in the long term. Indeed, it has reached a plateau in the last decade. Regional disparity is severe and relative positions of eastern regions are barely changed. Employment generation capacity of GDP is shrinking throughout the years, employee share is relatively low in gross economic pie, labour and productivity contribution to GDP is unable to catch up the contribution of capital except for 2002-2007 period, women participation and their average income is also relatively low while informal economy exerts additional pressure on inequality.

The regional scope is the backbone of the incentive system. But as can be seen in Table.6, the incentive scheme fails to channel investors toward eastern regions as it is unable to compensate for fundamental drawbacks. However, it has managed to stimulate labour-intensive projects in the 6th region, although the inter-regional relocation power of the incentives was found to be rather limited compared to the fundamental factors (Morisset, Pirnia, 2000; Blomström, Kokko 2003).

Table 7. Gini coefficient by household disposable income, 2020

Region	Number of Investment Certificates	Estimated Investment Amount (Million TL)	Estimated Employment
1st Region	18.445	511.497	666.269
2nd Region	8.854	235.121	259.504
3re Region	7.090	244.555	194.457
4th Region	5.390	98.163	160.515
5th Region	4.293	73.767	152.599
6th Region	5.508	46.408	324.890
Multiple Region Projects	139	48.089	8.547

Source: MOIT (2020)

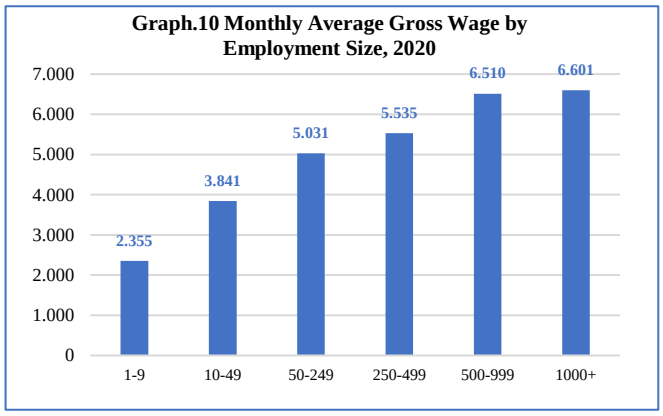
Investment incentives mainly focus on company revenues to induce capital accumulation by nature, while workers could only be addressed with social security benefits. Only employee wage targeted tool is available in the 6th region, which is also social security premium but employees share.

Considering the issues above and the current structure of the incentive system, policy implications are as follows:

- Lack of education is one of the leading causes of income inequality and it is a powerful tool to address intra-group / region inequality to elevate social mobility. Within the current system, school investments are deemed as a priority sector and acquire 5th region benefits, which are pretty generous. However, it has nothing to do with excluding the children of low-income families, although it promotes higher-quality private schools. The schools with a certain number of scholar students from poor families could be granted 6th region benefits. Because in social segments with relatively higher dependency ratios, children could easily be disengaged from educational attainment to make living. Support density and scholarship allocation can be more favourable for poor female students. The cost of the additional scholarships should not exceed the benefit of 6th region benefits for the schools to

encourage them. Schools having 5 poor scholar students enrolled, could be granted 6th region benefits; the underlying calculation takes the average cost and benefit of the investor companies[5].

Figure 11. Monthly average gross wage by employment size, 2020



Source: TSI, (2022a)

- Like the industry zone support tools, companies paying dividends to their employees during the investment term identified on the incentive certificate could be enabled to enjoy the benefits of the following region. Large companies might not prefer to pay dividends to all employees for a specific project (depending on the value of the project). Still, this tool could motivate SMEs to share profits with their employees to a certain extent. Lower average wage levels in smaller companies (Graph.10) would make this step more useful for broader wage gains through labour mobility and push wage levels up. Wage-based performance criteria might also help in formalizing employment.
- The following region tool could also help with women's employment. Companies with a certain share of women employees can become available to enjoy the following region instrument support levels depending on the sector of operation.
- Since the asymmetric information-based financial market frictions hit SMEs harder than larger enterprises, credit guarantees could be introduced instead of interest subsidies to relieve the funding stress of the financially constrained companies. The guarantees might well be cheaper on an annual basis than interest subsidy payments, as Janda (2011) suggests. The total due non-performing guarantee amount is TL 4.2 billion between 1994-2018 (CGF, 2018: 45), while one year of interest subsidy payment already amounts to TL 606 million in 2020 (Dünya, 2021).
- Informality persists. With this regard, minimum capital requirements of the schemes could be raised proportionally to ensure the formal share of expenditures is increased. Although minimum capital requirements have not been adjusted once in the past 9 years, the cumulative consumer price index increased by 2.6-fold while the domestic producer price index increased by 3-fold (CBRT, 2021). Higher capital requirements might also push for integration and efficiency in both the company and the incentive implementation processes. Additionally, anticipated formalization originated from the new criteria on women, younger employment and higher average wage would augment the ultimate effect of these renewed criterions.
- Support terms of the 3rd, 4th and 5th regions are not that advantageous compared to the 6th region and larger western cities where the investment climate is more favourable. Annual incentive certificate data (Table.6) confirms this picture. Minimum capital requirements and support level (Appendix-1) differences in-between groups of 1st, 2nd and the group of 3rd, 4th, and 5th regions could be realigned to widen the gap between these groups.
- Employment benefits not only provide additional employment opportunities in underdeveloped regions but also contribute to curbing national inflation through generating employment in regions where upward wage pressure is low[6]. Considering that the employment generating capacity of the economy has lost ground over the years, employment support is an accurate tool. It is the most distinctive aspect of the current incentive system compared to previous schemes in history.

APPENDIX

Appendix 1. Minimum investment amounts or capacities by sectors and regions that can benefit from regional support

Sectoral Code	Sectors to Benefit from Regional Incentives	1. Region	2. Region	3. Region	4. Region	5. Region	6. Region
1	Integrated animal husbandry investments including integrated breeding livestock investments (excluding investments that do not comply with the minimum capacity requirements specified in footnote 5)	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
2	Aquaculture (including fish fry and egg production)	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
3	Food products and beverage manufacturing (excluding investment subjects specified in footnote 6)	2 Million TL	2 Million TL	1 Million TL	1 Million TL	1 Million TL	500 Thousand TL
4	Manufacture of textile products (excluding yarn and weaving investments that do not meet the conditions specified in footnote 8)	10 Million TL for textile finishing, 2 Million TL for other investments	10 Million TL for textile finishing, 2 Million TL for other investments	10 Million TL for textile finishing, 1 Million TL for other investments	10 Million TL for textile finishing, 1 Million TL for other investments	10 Million TL for textile finishing, 1 Million TL for other investments	500 Thousand TL
5	Apparel manufacturing	Not supported	Not supported	Extension and modernization inv. above 1 Million TL	Extension and modernization inv. above 1 Million TL	500 Thousand TL	500 Thousand TL
6	Tanning and processing of leather Tanning and processing of leather	1 Million TL	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
8	Manufacture of luggage, handbags, leather goods, shoes, etc.	1 Million TL	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
9	Manufacture of wood and cork products (except furniture), manufacture of straw and similar knitted items	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
10	Paper and paper products manufacturing	10 Million TL	10 Million TL	10 Million TL	10 Million TL	10 Million TL	500 Thousand TL
11	Manufacture of chemicals and products	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL

12	Manufacture of Chemical Fertilizers and Nitrogenous Components	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
13	Manufacture of pesticides and other agro-chemical products	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
14	Manufacture of chemical and herbal products used in medicine / pharmacy and medicine	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
15	Perfume, cosmetics and toiletries manufacturing	1 Million TL	1 Million TL	1 Million TL	1 Million TL	1 Million TL	500 Thousand TL
16	Explosives manufacturing	2 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL
17	Inner and outer tire manufacturing	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
18	Manufacture of non-metallic mineral products (except glass and glass products, fired clay tiles, briquettes, bricks and construction materials, cement, ready-mixed concrete and mortar)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
19	Manufacture of non-metallic mineral products (except multi-layer insulating glasses, tiles, briquettes, bricks, cement, ready-mixed concrete and mortar)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
20	Manufacture of non-metallic mineral products (except multi-layer insulating glasses, tiles, briquettes, bricks, cement, ready-mixed concrete and mortar)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
21	Flat glass, shaping and processing of flat glass (excluding multi-layer insulating glasses), hollow glass and fiberglass manufacturing	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
22	Flat glass, shaping and processing of flat glass (excluding multi-layer insulating glasses), hollow glass, glass fiber and glass production of electrical insulators and ceramic insulation materials	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
23	Flat glass, shaping and processing of flat glass (excluding multi-layer insulating glasses), hollow glass, glass fiber and glass production of electrical insulators and ceramic insulation materials	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL

24	Manufacture of concrete products for construction purposes	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
25	Manufacture of non-metallic mineral products; manufacture of concrete products for construction purposes, lime, plaster	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
26	Manufacture of concrete products for construction and heat or sound insulating articles and mixtures	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
27	Base metal industry other than iron and steel, metal casting industry	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
28	Metal ware	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
29	Manufacture of central heating radiators and boilers, manufacturing of steam boilers (except central heating boilers)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
30	Machinery and equipment manufacturing	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
31	Industrial mold	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
32	Manufacture of office, accounting and data processing machines	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
33	Manufacture of electrical machinery and equipment	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
34	Manufacture of radio, television, communication equipment and devices	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
35	Medical instruments, precision and optical instruments manufacturing	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
36	Motor vehicles and sub-industry	50 Million TL for motor land vehicles, 4 Million TL for sub- industry	50 Million TL for motor land vehicles, 3 Million TL for sub- industry	50 Million TL for motor land vehicles, 2 Million TL for sub- industry	50 Million TL for motor land vehicles, 1 Million TL for sub- industry	50 Million TL for motor land vehicles, 1 Million TL for sub- industry	500 Thousand TL
37	Maintenance and repair of aircraft and engines	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
38	Motorcycle and bicycle production	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
39	Furniture manufacturing (except those made of metal and plastic only)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL

40	Furniture manufacturing (except those made of metal and plastic only)	4 Million TL	3 Million TL	2 Million TL	1 Million TL	1 Million TL	500 Thousand TL
41	Hotels	3 stars or more	3 stars or more	3 stars or more	3 stars or more	3 stars or more	500 Thousand TL
42	Student dormitories	100 students	100 students	100 students	100 students	100 students	500 Thousand TL
43	Cold storage services	1.000 square meters	1.000 square meters	1.000 square meters	500 square meters	500 square meters	500 square meters
44	Licensed warehousing	2 Million TL	2 Million TL	1 Million TL	1 Million TL	1 Million TL	500 Thousand TL
45	Education services (including pre-school education services, adult excluding education and other educational activities)	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
46	Hospital investment, nursing home	Hospital: 1 Million TL Nursing Home: 100 people	Hospital: 1 Million TL Nursing Home: 100 people	Hospital: 500 thousand TL Nursing Home: 100 people	Hospital: 500 thousand TL Nursing Home: 100 people	Hospital: 500 thousand TL Nursing Home: 100 people	500 Thousand TL
47	Intelligent multifunctional technical textile	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
48	Waste recovery or disposal facilities	1 Million TL	1 Million TL	500 Thousand TL	500 Thousand TL	500 Thousand TL	500 Thousand TL
49	Coal gas production (synthesis gas)	50 Million TL	50 Million TL	50 Million TL	50 Million TL	50 Million TL	500 Thousand TL
50	Greenhouse cultivation	40 decare	40 decare	20 decare	10 decare	10 decare	5 decare

Appendix 2

▪ Tourism investments in Cultural and Touristic Preservation and Development Regions and thermal tourism investments,
▪ Mining investments,
▪ Railroad, maritime and airline transportation investments,
▪ Defence industry investments,
▪ Test facilities, wind tunnel and similar investments made for automotive, space or defence industries,
▪ Nursery, Preschool, Primary, Middle and High School and education investments for the use, repair and maintenance of air vehicles
▪ Investments made to manufacture the products and parts designed and developed as an outcome of the R&D Projects supported by the Ministry of Science, Industry and Technology, TUBITAK and KOSGEB,
▪ International fairground investments with a minimum covered area of 50.000 m2,
▪ Motorized land vehicles key industry investments with a minimum investment amount of 300 million TL, automotive engine manufacturing investments with a minimum amount of 75 million TL and transmission components/parts and automotive electronics manufacturing investments with a minimum amount of 20 million TL,
▪ Investments made to generate electricity from coal,
▪ Investments made to generate electricity through waste heat recovery in a facility,
▪ Energy efficiency investments made in existing manufacturing facilities,
▪ Liquefied natural gas (LNG) investments and underground gas storage investments with a minimum amount of 50 million TL,
▪ Investments of carbon fiber or the composite materials made from carbon fiber provided that along with carbon fiber production.
▪ Investments made to manufacture high-technology products classified according to OECD technology intensive definition.
▪ Investments made to explore mines in the permitted fields for the investors holding Mining License and Certificate.
▪ Investments made to manufacture turbines and generators for renewable energy and wind turbine wings for wind power.
▪ Integrated investments for aluminium flat products using direct chill slab casting and hot rolling methods.
▪ Licensed warehousing investments.
▪ Nuclear power plant investments.
▪ Qualified laboratory investments
▪ Greenhouse investments based on automation with a minimum of 5 million TL, 25 decare and domestic spare parts
▪ At least 5000 bovine milk-oriented, at least 10,000 bovine cattle meat-oriented livestock investments
▪ Investments in waste recycling and disposal facilities amounting to a minimum of 5 million TL
▪ Elderly and Disabled care centres and wellness investments
▪ Medium-high technology investments amounting to a minimum 500 million TL

Source: Ministry of Industry and Technology – DG of Incentive Implementation and FDI

Notes

[1] The income quintile share ratio or the S80/S20 ratio is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that obtained by 20 % of the population with the lowest income (the bottom quintile) (Eurostat, 2020).

[2] Average Gini coefficient in OECD countries was 0.33 between 2012 and 2019, when the income definition was revised (OECD, 2021). The ratio of income of the wealthiest 10% of the population to income of the poorest is 15.2 in Turkey, while it is 9.6 in OECD countries (Selim et al., 2014: 61).

[3] At least 50% share of the ultimate product must be supplied through imports nationwide; the import amount of the ultimate product must be at least $50 million for the last 12 months, which is not applicable for the goods with no domestic production. The minimum investment requirement is 50 million TL, production must create a minimum of 40% value-added within the borders of the country. Nevertheless, only 54 strategic investment certificates were prepared between 2012-2020.

[4] To clarify the tax deduction mechanism, an example might be useful. Let us consider an investment project worth TL 1 million under the regional scheme in the 4th region. CTD rate is 70% and the investment contribution rate is 30% while the corporate tax rate is assumed to be 20% for convenience.

Deducted CT Rate = (CT Rate) - [(CT Rate) X (CTD Rate) /100]

Deducted CT Rate = 20 – (20 X 70 / 100) = 6%

It means that the 20% CT rate would be applied as 6% and 14% of the CT amount would be waived.

The possible maximum amount of the tax refund will be calculated via investment contribution rate and the total investment expenditure;

Net maximum CT refund = (Investment contribution rate X Investment amount) / 100

Net maximum tax refund = 30 X 1.000.000/ 100 = TL 300.000.

As a result, the investor shall receive back % 14 of the annual accrued CT. Throughout the years after the investment is completed, aggregated CT refund cannot exceed TL 300.000. Obviously, the application of the investment contribution rate aims to keep the support amount commensurate with incentivised capital expenditure (MOIT, 2021).

[5] The calculation of the number of scholars should be coherent to the expected benefits of passing to the 6th region from the 5th region (Priority benefits). In the 5th region, schools get 7 years of social security premium support employer's share while 6th region investments get 10 years of premium support for both employer and employees. The support only applies to the minimum wage equivalent share of the actual wage. The minimum wage social security employer's share is 554 TL for the 2021 (PWC, 2021) For the 5th region total social security benefit would be;

554 x 12 = 6.648 TL per one employee for a year,

6.648 x 7 = 46.536 TL support per one employee for the entire investment. The average employment number per incentive certificate for school investments is "35" in the 2012-2020 period (MOITa, 2020) which translates into;

46.536 x 35 = 1.628.760 TL waived social security premium per school investments.

If schools are granted 6th region benefits for having poor children, they will get 10 years exemption from employers' share and additionally 10 years of exemption on employees share (500 TL for minimum wage) and withheld income tax (456 TL for minimum wage (PWC, 2021)). Then, for the 6th region, the total employer's share of social security premium support would be;

554 x 12 = 6.648 TL per an employee for a year,

6.648 x 10 = 66.480 in total.

Total employee's share premium support would be;

500 x 12 = 6.000 TL per an employee for a year,

6.000 x 10 = 60.000 TL in total.

Total withheld income tax would be;

456 x 12 = 5.472 TL per an employee for a year,

5.472 x 10 = 54.720 TL in Total.

Each support tool will be effective 10 years and for an employee total waived amount would be,

66.480 + 60.000 + 54.720 = 181.200 in 10 years. Considering the average employment number of the school investments (35), the total social security benefit provided for a school investment in 6th region approximately would be,

181.200 TL x 35 = 6.342.000 for the entire project. Considering the 5th region support level is a total of 1.628.760 TL, the difference is 4.713.240 which is the approximate amount that the school investor shall get in case of a 6th region benefit grant. The average private school annual fee is roughly 60.000 TL (Kamuajans, 2021). Thus, 8year compulsory primary education cost would be;

60.000 TL x 8 = 480.000 TL.

If the school investors are granted 6th region benefit terms in case they enrol poor students under the project,

4.713.240 TL ÷ 480.000 TL = 9,8. It means the difference in the grants of the 6th region could be enough to finance 9,8 poor students per project. Considering the frictions, scholarships they would consider giving to students and a certain additional profit margin to nudge them to enrol poor students in their district, 5 poor students enrolment seems plausible as a performance criterion in order to enable school investors to receive 6th region benefits no matter where the investment took place.

[6] Bartik (1991) argues that the unemployment level is usually higher than the average in underdeveloped regions where investment incentives address to develop further. Due to high unemployment, additional labour demand stimulated by the incentivised projects would not put extra upwards pressure on wages, thus not leading to any imbalances in the national inflation policy.

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