GOVERNMENT EFFECTS ON THE TURKISH CONSTRUCTION INDUSTRY

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Abstract
It has long been known that, the two-way interaction between the construction sector and the overall economy should be examined in order to generate effective solutions to attain the government objectives and make realistic forecasts related to sectoral outputs. Due to direct and indirect resource utilisation by the construction industry, governments perceive construction activity as an accelerator for economic growth. The Turkish construction industry produces around 6% of the GNP and is responsible for approximately 46% of fixed capital formation. Due to the construction sector's potential to bring foreign exchange to local markets as a result of works carried out abroad and strong input-output relations with the rest of the economy, it appears to be one of the leading sectors of the Turkish economy. The aim of this paper is twofold: Initially, the construction industry's contribution to the Turkish economy will be emphasised by analysing the macroeconomic data and related economic indicators. As a second step, possible government effects on the construction industry will be discussed and methods of improving sectoral output and maximisation of government objectives related with refinements in the tax/incentive system, tendering and award mechanisms and private sector participation models will be analysed by emphasising the Turkish practice.

Keywords: Government Strategies, Turkish Construction Industry

1 Introduction

The construction industry, having a GDP share of around 7% in most of the countries, is subject to government intervention in order to enhance the operation of construction market as well as the quality of services and utilised as a fine tuning instrument to regulate overall economic activity. The construction industry is subject to larger fluctuations than the rest of the economy as the demand for construction output is a fluctuating one like in any other capital good industry [1]. Demand for housing is influenced by changes in the economy as a whole and the demand for other buildings and infrastructural construction is affected by many factors like the state of the economy, expectations of investors, level of profits and political reasons as the government is the main purchaser of social construction. Similarly, the demand for construction overseas fluctuates with the competitiveness of the industry and states of economy in other countries. As a result, the government intervenes to stabilise the industry by macroeconomic management and regulating the workload by public sector investment programs.

As the volume of construction activity depends upon market attitudes, anything that the government may do to condition demand, will have some effect on both the amount and

characteristics of construction. The government operates on the demand side of the construction market as a client of public works, indirectly as a lender to housing corporations, as a subsidiser through investment grants and as a regulator concerning the quality of buildings, tendering etc. The government can utilise some instruments of stabilisation like fiscal and monetary policies, direct financing of construction, a public works program that offsets fluctuations in private activity, taxation and different depreciation schemes. Similarly, the improvement in government procurement activities can make it possible for the government to secure goods and services at the lowest possible price consistent with acceptable quality. Furthermore, the government can provide industry with better means for understanding and serving its market by removal of some legal restraints and improvement of information. Apart from the government's direct effects, there also exist indirect government impacts on the construction industry, which originate as a result of deflationary policies like cutting public spending and increasing tax rates. Consequently, macroeconomic policies of the government have indirect effects on all types of investment including those in the construction industry.

The housing sector is an essential and politically popular tool for the government. The government intervenes with housing due to the belief that market forces do not provide an acceptable allocation of resources and the quality of housing will be poor without government intervention. Also, more and better housing is seen to be politically popular and contribute both to social stability and public health. Government intervention is usually in the form of subsidies to encourage investment in construction.

In developing countries, as the construction industry is highly labour-intensive, the government utilises the construction industry as a way of increasing employment. In times of severe unemployment, additional public works programs are prepared and investment grants are given to stimulate economic activity.

The importance of the construction sector, as an economic planning vehicle for governments, stems from the direct and indirect resource utilisation of construction sector and the existence of strong input-output interrelations with many other sectors as a result of which, the effect of any changes in the construction sector may lead to substantial impacts on the overall economy [2].

However, utilisation of the construction sector as a fine tuning instrument is difficult due to long and variable lags between the actions. As the government is the major customer of the construction industry, it can exert a direct effect on the industry by cutting spending. Although slowing down the construction activity is the easiest way to cut spending, this method is known to be ineffective due to time lags between placing orders and actual spending. Lags may be so long that cuts may actually take effect at a time when cuts are no longer required [1]. Lags in the actions occur as there exists a long lead-time on contracts necessary for planning, design and tendering procedures. Furthermore, the effect of a construction project on the economy is initially low due to a 'S' shaped progress curve. It has been observed that when investment is reduced, a long time elapses before the output of the construction industry falls significantly; however, at the end of recession, it takes a long time to recover [3].

The construction industry operates in a discontinuous environment because of stop-go problems due to government intervention and becomes less efficient than if a steady workload could be maintained [4]. Discontinuity in the workload in the construction industry also affects other industries like material and equipment manufacturers and results in the utilisation of obsolete and inefficient equipment/materials leading to low productivity. Moreover, as a result of variable need for staff in different periods, there exists less incentive to train new operatives and the industry suffers in staffing.

As a result of ineffective government policy, overloading the construction industry causes inflation due to lack of funds to pay contractors for the works done [5]. Inflation occurs due to the possible

pushing up of construction prices as demand for resources exceed supply and leads to price rises in other industries as resources are diverted from other uses. Moreover, the cost of resources sunk in the construction of unfinished works may be substantial [6]. It has also been experienced in many developing countries that subsidies in the housing sector lead to budget deficits and have considerable inflationary pressure. The housing sector is a major loser when housing policies fail and the economy is a major loser when the housing sector fails [7].

Finally, it should be noted that as a result of the two-way interaction between the construction sector and the overall economy, determination of capacity and input-output structure of the construction industry is vital for successful regulation of the economy. Apart from direct manipulations in the economy using public investment programs, the government should make some refinements to the legal grounds, tax/incentive system, tendering and award mechanisms and private sector participation models in order to ensure that the resources are utilised effectively and a stabilised workload is maintained in the construction industry. In the rest of the paper, special features of the Turkish construction industry will be presented, its place in the overall economy will be analysed, and possible government actions to improve the operation of the construction sector will be discussed.

2 Interaction between the economy and the Turkish construction industry

A construction sector that produces around 6% of the GNP and is responsible for 46% of fixed capital formation appears to be one of the leading sectors of the Turkish economy. Its potential to bring foreign exchange to local markets as a result of works carried out abroad and multiplier effect on the economy due to the existence of strong input-output relations with other sectors highlights its importance. It is anticipated that due to its inter-sectoral transactions, the overall effect of the construction industry is much higher on the general economy. The overall share of the construction industry together with the contribution of other sectors that supply input to construction is around 40%. The Turkish construction industry's potential to carry out complex construction projects with advanced technology, with short durations, low cost and in conformance with high quality standards has also made it competitive in the international construction market. International construction activities that generate foreign exchange are important for the balance of payments. Between the years 1980-90, the amount of foreign exchange added to Turkish economy by means of international construction was around 10 billion USD which dictates an input of 1 billion USD per year [8]. The Turkish construction industry is also known to be one of the leading sectors of the economy due its potential for generating employment. The employment share of the construction sector is around 4%.

When an increase in the growth rate as well as creating new job opportunities have been desired, then usually increasing the investment volume in the construction sector is utilised as a government strategy. This is due to the fact that investment in public works has side effects on other industries resulting in a multiplied effect on the overall economy. The strength of the construction industry as an accelerator of the Turkish economy will be evaluated by using the input-output analysis results given in the following paragraphs of this section.

The share of construction sector in GNP during the period 1968 to 1995 is presented in Figure 1 [9]. The construction sector's share in GNP which is around 6% tends to decrease starting from 1994. In fact, a major economic crisis affected all sectors of the economy during the year 1994. Although most of the investments were delayed and GNP had a negative growth rate of 6% in 1994, the decline in construction in 1994 was only 2%. However, despite a growth in the economy of 8% in 1995, the decline in construction continued with a 4.7% decline showing that, the effects of the crisis were still being felt in the construction industry. Figure 2, showing the changes in growth rates of construction sector and GNP demonstrates that, the time lag between the construction industry

and general economic activities is around 9 months in Turkey. Consequently, the expected effect of a recession is not felt immediately in the construction industry, whereas it takes a longer time for the industry to recover at the end of recession. The government should consider this lag time before any direct action is taken to cut investments in the construction sector.

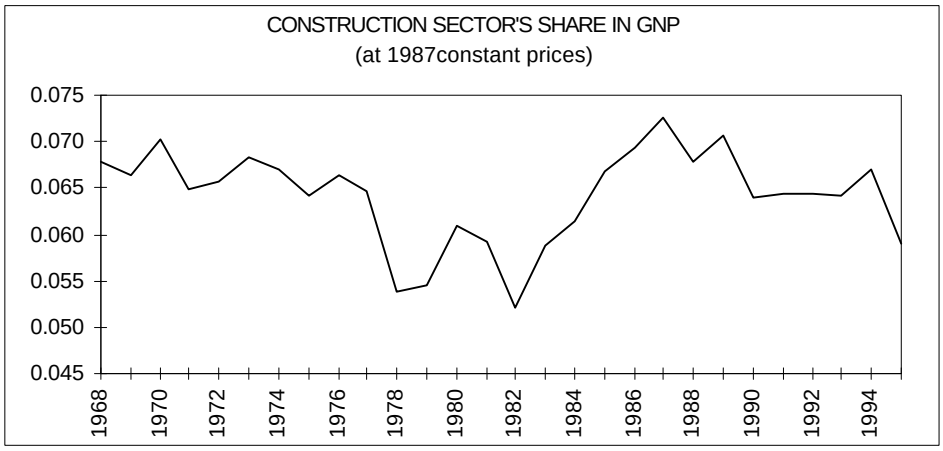

Figure 1. Share of construction in GNP (1987 producers' prices)

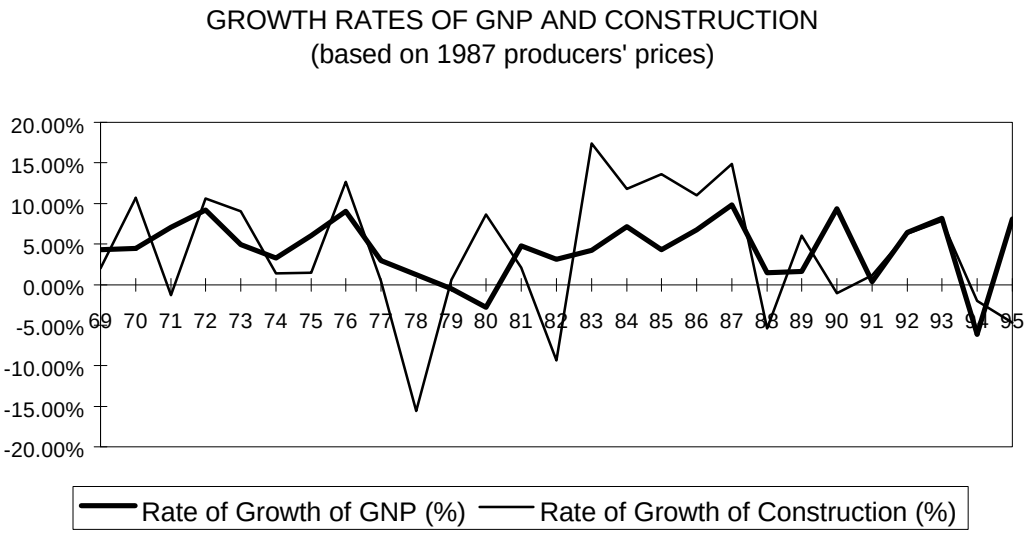

Figure 2. Growth rates of GNP and construction industry (at 1987 producers' prices)

A study of resource utilisation by the construction industry is necessary in order to understand its role within the national economy. However, a study, which takes into account only direct inputs can not reflect the real impact of the construction sector on the economy. Therefore, an input-output analysis considering both direct and indirect resource utilisation by the construction industry should be carried out, to capture the effect of sectoral interdependence and quantify the total impact of construction [2]. Some conclusions that could be derived from the results of an input-output analysis for the Turkish construction sector are given below [10]:

1. The input coefficients of the construction industry are shown in Table 1. From this table it could be realised that manufacturing industry is the main supplier of the construction industry in Turkey and supplies around 40% of construction inputs.

Table 1. Input coefficients of the Turkish construction industry

	Input Coefficients			
	1973	1979	1985	1990
Agriculture	0.0013	0.0012	0	0
Mining	0.0093	0.0216	0.028	0.0211
Manufacturing	0.3682	0.3836	0.3965	0.3877
Trade	0.0376	0.0593	0.0277	0.0614
Transport	0.0354	0.1551	0.0663	0.0603
Services	0.0252	0.0099	0.0079	0.0278
Utilities	0	0	0.0057	0.0053

2. Figure 3 shows the direct backward linkage indicators and output multipliers of the Turkish construction industry. The backward linkage indicators show the proportion of the construction sector's direct inputs that come from other sectors rather than the primary inputs. Since the construction sector is an assembly sector, backward linkage indicators are high. As the backward linkage indicator is greater than 0.50, it shows that majority of materials and components are manufactured off-site. The output multipliers show the total effect of a monetary unit change in the final demand for the services of the construction sector on the output of all sectors. The fact that this figure is found to be around 2 in the Turkish case shows that, economic pull of the construction sector is very strong. In this respect, if the government targets to increase output, each Turkish lira spent to increase the final demand of construction will have a doubling effect on the total output.

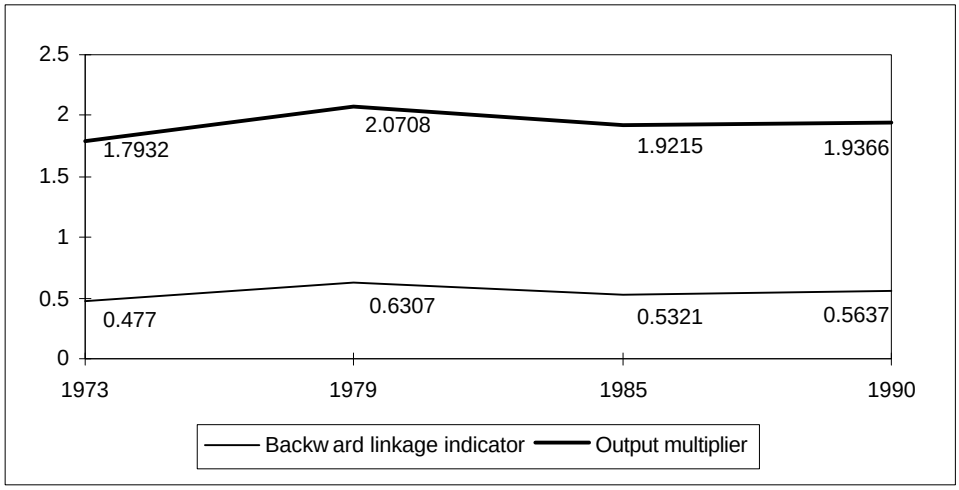

Figure 3. Backward linkage indicators and output multipliers of construction industry

3. The supply-side, input-output model is carried out to measure the economic push effect of the construction sector. Obtained results reveal that, the forward linkage indicator that measures the proportion of construction sector's direct output to other sectors is very low (around 2%). This demonstrates that maintenance and repair activities within the construction sector are not very strong in Turkey. Similarly, the input multiplier that measures the effect of a monetary unit change in primary inputs available to construction on the input of all industries is around 1, showing that indirect effects are negligible.

Consequently, any government action for fine tuning the economy through the construction sector should take into account the time lag of approximately 9 months between the action and reaction, as well as the strong pull and weak push effects of construction industry.

3 Government's role in the Turkish construction industry

The activities of the Turkish construction industry can be grouped under two main headings, namely; domestic and international construction. These will be analysed separately since the regulations and characteristics of markets in which the contractors operate differ considerably.

3.1. Domestic Construction

The total volume of works carried out by the contractors, who are members of Turkish Contractors Association till 1995 amount to 37 billion USD. The yearly variations in the shares of different project types within the overall construction activity are presented in Table 2. It should be noted that in the 1950s, the share of infrastructure projects in total construction works was the highest. During the 1960s and 1970s, new types of projects started to appear and industrial investments took a considerable share within the total. It is the year 1980 when housing and other building projects started to have considerable shares in total construction works. One of the reasons that housing and building projects constitute the highest portion during the 1990s is the lack of public funds to finance infrastructure projects. In fact, the housing problem in Turkey has always been an important issue due to increasing urban population as a result of migration from rural areas to big cities. The 25% urban population in the 1950s has become 60% in the 1990s resulting in high housing demand which could not be met by the housing supply and leading to the generation of squatter regions in metropolitan cities.

Table 2. Shares of different construction types in the overall construction activity

	Period				
	1950-59	1960-69	1970-79	1980-89	1990-95
Dams	37%	22%	15%	22%	4%
Harbours	16%	11%	4%	1%	1%
Irrigation	15%	9%	2%	3%	2%
Railways/Metro	13%	1%	8%	2%	5%
Airports	12%	1%	1%	1%	2%
Roads/Bridges/Tunnels	6%	19%	7%	27%	19%
Industrial plants/Refineries	-	22%	27%	5%	6%
Pipelines	-	3%	2%	3%	3%
Sewage systems/Treatment plants	-	1%	10%	4%	6%
Energy plants/Distribution networks	-	2%	7%	6%	6%
Buildings	-	9%	8%	9%	22%
Housing	-	-	-	13%	21%

Note: (-) denotes that share in total construction is less than 1%

The Turkish Government's policies and proposed strategies for managing the housing sector will be mentioned at the next section.

3.1.1 Government policies for managing the housing sector

The government's housing policies have an important impact on the performance of the housing sector and thus a significant effect on the economy as a whole. The major problem in the Turkish housing sector is known to be the lack of funds for the improvement of quantity and quality of housing units. In order to solve the financing problem, the Turkish government established the Mass Housing Fund (Mass Housing Law no.2985) and with the utilisation of this fund, more than 200 000 housing units per year have been constructed between the years 1985-1995. However, the accelerator effect of this fund in the housing construction sector ceased due to price increases in the construction inputs and utilisation of funds for purposes that do not conform with the initial objectives.

It has long been known that governments should abandon their role as producers of housing and adopt an enabling role of managing the housing sector as a whole. The government's housing policies must move away from its narrow focus on the engagement of government in the direct production of low-cost housing and turn to demand stimulating and supply facilitating policies ensuring the responsiveness of demand and supply forces to market conditions. Turkish practice demonstrates that acting as direct producers of housing units creates a high financial burden on the government's budget and due to delays in project completion, most benefits are not captured. Moreover, only a small number of the population in specific regions can be made house owners which provides a minor and limited solution to the major housing problem in Turkey. A number of government policies that influence cost, availability and quality are known to affect the performance of theconstruction industry; but it has been reported that the impact of government's macroeconomic policies on the construction industry is higher than those from direct government actions [7]. Policies affecting the responsiveness of the supply side of the market to changes in demand are known to offer the greatest potential to improve the sector performance. On the contrary, policies that constrain market efficiency and responsiveness of the housing supply system result in reduced investment and less affordable housing of lower quality. The Turkish Government's actions are mainly to use demand-side instruments like Mass Housing Fund to finance housing investments; however more should be done by the government to increase housing supply by providing infrastructure for residential land development and effective organisation of the building industry. Some of the government policies that enable the housing markets to work in Turkey can be listed as follows:

1. Necessary infrastructure facilities should be provided for residential land development and related regulations should be revised.
2. An effective finance system should be employed for housing. Development of mortgage finance, creating competitive mortgage lending institutions which may foster innovative arrangements for greater access to housing finance by the poor can be a solution.
3. Most of the low-income families in Turkey perceive housing cooperatives as the most convenient way to become house owners. Government should provide supervision and control in housing cooperatives and issue some regulations in order to ensure the quality standards.
4. Government should understand how markets work and constitute a legal and regulatory framework within which housing suppliers can operate effectively. The right strategy will be to increase the responsiveness of housing supply which is strongly influenced by action in the

provision of infrastructure, regulation of the housing sector and organisation of construction industry.

3.1.2 Government policies for managing infrastructure projects

Infrastructure projects in Turkey are carried out in accordance with the government's investment schemes and priorities, which are affected adversely by economic and financial instabilities. Most infrastructure projects in Turkey could not be finished on time due to frequent delays occurring in payments as a result of scarce financial resources. In recent years, budget constraints and potential loss of contractors due to price differences resulting from high inflation rates caused a dramatic fall in infrastructure type of investments. Delayed progress payments further increased the total project costs due to compounded interest payments as a result of delayed construction. This burden on the government budget can be lowered by utilising models where the private sector arranges 100% of the necessary funding with foreign credits or introducing models like Build-Operate-Transfer (BOT) and Build-Operate (BO). By doing this way, social/economical benefits could be derived from the early completion of projects and even cost reductions due to innovative approaches of private sector could be achieved. As the result of serious problems in raising funds for urgent infrastructure projects and limited borrowing capacity of government, Turkish government was left no chance but the private sector participation models for the realisation of major infrastructure projects. The BOT concept was first introduced by Turgut Ozal, Prime Minister of Turkey in 1984 as a part of the Turkish Privatisation Program. With the utilisation of this special financing model, the government's objective was to realise projects requiring advanced technology and high capital investment and create a new market for construction companies. However, although the BOT model was first seen as a magic approach capable of solving infrastructure problems in Turkey, the model could not be made operational successfully due to the immature legal system, organisational inefficiencies of government authorities, disagreement between the parties on the allocation of risks resulting from country factors as well as level of government guarantees and high level of bureaucracy causing delays in project realisation [8]. Although there exist more than 200 infrastructure projects at different stages of project realisation, the majority of them are cancelled, delayed or still under evaluation. Table 3 summarises the status of infrastructure type BOT projects in Turkey, which are at different stages of project realisation. The realisation rate of BOT projects are low as the result of a very long negotiation period held between the government and private sector, sometimes extending to several years.

It is clear that the BOT model can accelerate the construction market in a case in which necessary refinements are made on the legal and organisational grounds. The government can give impetus to the construction sector and encourage foreign participation in major projects so that foreign capital can be brought to the country. Some remedial measures to be taken by the government for improving BOT mechanism can be listed as follows;

1. Bureaucratic delays and organisational problems should be solved. Establishment of a single agency responsible for the realisation of BOT projects is one way of minimising organisational problems.
2. Evaluation process should be made simpler so that it will result within a shorter period of time. A selection criterion that takes into account both price and non-price factors related with government objectives should be incorporated into the evaluation mechanism. Competitive selection adds success to BOT projects. Besides, tendering procedure should be such that evaluation criteria should be defined clearly and the list of invited tenderers should not be too long.

Table 3. Infrastructure BOT projects in Turkey

ENERGY SECTOR:	
Status: Under Operation	
Number of Projects	7
Total Project Costs (1000 US$)	287 324
Status: Under Construction	
Number of Projects	10
Total Project Costs (1000 US$)	2 890 850
Status: Concession Agreements are Signed	
Number of Projects	31
Total Project Costs (1000 US$)	8 060 681
Status: At the Contract Stage	
Number of Projects	8
Total Project Costs (1000 US$)	1 090 870
Status : At the Feasibility Stage	
Number of Projects	100
Total Project Costs (1000 US$)	-
Status: Proposed to be Realised by BOT Model	
Number of Projects	83
Total Project Costs (1000 US$)	-
TRANSPORTATION SECTOR:	
Status: Under Operation	
Number of Projects	9
Total Project Costs (1000 US$)	84 600
Status: Under Construction	
Number of Projects	4
Total Project Costs (1000 US$)	315 570
Status: At the Contract Stage	
Number of Projects	3
Total Project Costs (1000 US$)	1 970 143
Status: At the Tender Stage	
Number of Projects	11
Total Project Costs (1000 US$)	776 100
Status: At the Feasibility Stage	
Number of Projects	4
Total Project Costs (1000 US$)	2 730 000
Status: Proposed to be Realised by BOT Model	
Number of Projects	2
Total Project Costs (1000 US$)	4 200 000

3. Exclusive negotiations between the parties should begin only after a competitive pre-qualification process and selection of one group for exclusive negotiations should occur relatively sooner, after initial proposals are submitted. This point is important as negotiation stage takes considerable time leading to delays in project realisation in Turkey.
4. An adequate legal framework should be defined. Necessary revisions (tax exemptions, level of guarantees, definition of concession, benefiting from re-evaluation, etc.) should be introduced into current laws.
5. Political instability plugs the way of BOT projects, thus project company members should be given the security that negotiations will not be interrupted/cancelled with the changes in the government.

3.1.3 Other problems of the Turkish construction industry

A big bottleneck in the realisation of public works tendered on the basis of State Procurement Law is the awarding of the contract to the tenderer that offers the highest discount rate over the unit prices and thus submitting the lowest price. Due to unrealistically high discounts offered by the contractors to take the job, most of the projects can not be realised within budget and price adjustments become necessary which further results in higher costs for the government and creates unfair competition. Government should revise the current tendering and award mechanisms so that, only the pre-qualified contractors of sufficient experience and resources should be called for bidding and a workable evaluation formula that facilitates the choice of the optimum (not necessarily the lowest) tender price should be utilised.

Moreover, most of the public works carried out in Turkey are tendered on the basis of unit price contracts in which the unit prices being used are determined by the Ministry of Public Works and Settlement each year. These unit prices determined by the government are far from reflecting the real market prices which create the major bottleneck in the construction industry. The unit price calculation method of the government should be revised, real market prices should be incorporated into the unit prices and technologically new materials and methods should be included into the unit price list to avoid legal disputes.

The lack of a regulation about quality and control in the building industry leads to poor quality in small-medium size buildings and affects the environment adversely. Government should establish a regulatory framework to ensure an acceptable standard in buildings and increase the quality of building services in the built environment.

Government should take strict measures for protecting the social security rights of workers employed in the construction industry. Safety measures should be improved and continuously controlled in construction sites to avoid work accidents.

One other major problem of the Turkish construction industry is the existence of huge number of legal disputes between the client organisations and contracting companies. Urgent legal arrangements should be introduced by the government to avoid unfair loss of contractors as well as to gain the confidence of foreign investors who are willing to work in Turkey.

As a summary, it could be concluded that Turkish government's efforts should be focused on the elimination of organisational, legal and bureaucratic bottlenecks that hinder the effective operation of the construction industry.

3.2. International construction

Internationalisation of the Turkish construction industry started in mid 1970s as a result of government cutbacks in the domestic construction market which has forced the Turkish contractors to seek work in the international construction market. At the same time, oil prices had increased rapidly and oil producing countries, that have common cultural and religious backgrounds with Turkey gained considerable incomes. Consequently, North Africa and Middle East markets, that are not very far from Turkey, appeared as attractive markets for the Turkish construction firms. Since that times, Turkey has became one of the leading countries in the international construction sector. Till 1990, countries where Turkish contractors had been awarded considerable amount of contracts were Libya, Iraq and Saudi Arabia. Another milestone in the internationalisation of Turkish construction industry was the Natural Gas Agreement signed between Turkey and Russia. After this agreement, Turkish contractors penetrated into Russian Federation and Independent Republics. Table 4 presents the distribution of the volume of contracts awarded to Turkish construction firms in different countries between years 1970 and 1996 [11].

Table 4. Share of major countries in the total international contract volume (between years 1970 and 1996)

Country	Share in total contract volume
Libya	36.98%
Russian Federation	24.66%
Saudi Arabia	12.97%
Iraq	5.48%
Germany	2.55%
Kazakhstan	2.32%
Kuwait	2.08%
Turkmenistan	1.79%
Pakistan	1.58%
Belarus	1.37%
Azerbaijan	1.10%
Ukraine	1.03%
Lebanon	1.02%
Others	5.07%

As of December 1997, there are about 93 Turkish construction companies working in about 39 countries. It has been reported that total value of contracts awarded to Turkish construction companies till 1998 adds up to 26 billion USD. The Russian Federation and Independent Republics of former USSR have been the most attractive markets for Turkish contractors for the past few years. As of December 1997, the total number of works carried out in those countries is 424 and total value of contracts sums up to 9.4 billion USD where the completed amount of works is 6.2 billion USD. Except Russian Federation and Independent Republics of former USSR, Turkish contractors have been awarded 467 jobs that worth 16.8 billion USD in 26 different countries. Among these countries, Libya, Saudi Arabia and Iraq have the highest shares where the total value of contracts amount to 9 billion, 3.3 billion and 1.58 billion USD, respectively.

International construction sector's contribution to Turkish economy is substantially high as it increases the employment rate, affects the foreign exchange input positively, increases the volume of exports and improves the production capacity and quality of local construction materials. The works carried out abroad by Turkish contractors' constitute one of the most important foreign exchange generating activities of Turkey. It has been reported that foreign exchange transfers to Turkey as a result of international construction exceeded 2 billion USD in 1997 [11]. Furthermore, around 50 000 workers have been employed in this sector which dictates the significance of international construction's employment generation capacity. The competitive advantage of Turkish contractors working abroad are mainly the low cost of labour in Turkish firms which is far below the average in European Community countries, cultural and religious familiarity to potential markets, positive company reputation gained by past references and their willingness to take risks [11]. It is anticipated that Turkey can achieve substantial benefits if government helps international contractors to improve their competitiveness by making some refinements in the tax system and regulative framework. Some of the problems and possible corresponding government actions can be listed as follows;

1. Tax burden in international construction is known to be high due to double taxation. The problem is that, contractors suffer as they pay taxes in Turkey and the country in which the work has been carried out. This problem can be solved if Turkish government makes agreements with major countries where Turkish contractors work to avoid double taxation.
2. One of the major problems faced by Turkish contractors working abroad is the lack of favourable financial resources to facilitate funding of large projects. As a result of this problem, contractors have to find partners who can reach financial resources easily and consequently, they have to share their profits. In order to facilitate financing of large projects, Eximbank credits should be made available to companies that satisfy certain criteria.
3. It has been experienced that unwillingness of government to provide some guarantees plugs the way of Turkish contractors in some world markets which are economically and/or politically unstable. Similarly, lack of insurance schemes like Overseas Private Investment Corporation (OPIC) decrease the competitiveness of Turkish contractors abroad. Insurance against some political and commercial risks and government guarantees can provide an accelerating effect on the volume of international construction works.
4. A law for international construction should be prepared and regulating framework should be made clear.
5. The level of bureaucracy concerning the entry and exit of construction equipment to/from Turkey should be decreased.
6. Organisational problems should be minimised by the establishment of a single agency responsible from international construction.

Consequently, refinements in the tax system and related regulations that would increase contractors' competitiveness in world markets are vital, if government aims to derive benefits for the national economy. It has been known that contracting companies from Japan, South Korea and France are receiving significant government support in their countries such as project financing, insurance applications and other incentives. To compete under equal conditions, Turkish contractors should be given the same level of support by the government. It can be concluded from the above discussions that, improvement of the international construction market and consequently general economy can only be possible with the revision of existing regulations and preparation of an adequate legal ground. Both domestic and international construction sectors are subject to organisational and legal bottlenecks and government should make the necessary enhancements to ensure that the sector works at/near its capacity and market works efficiently.

4 Conclusions

Turkish construction industry which constitutes around 6% of the GNP has a substantial economic pull as it is the major direct and indirect resource utilising sector of the economy. It has been observed that approximately a time lag of 9 months has to elapse before the output of construction industry falls significantly during recession and it takes a longer time to recover at the end of recession. Turkish government should take into account of construction sector's resource utilisation scheme and lagged relationship between the sector and overall economy before any direct actions are taken. Turkish government should use effective demand-side instruments like development of mortgage loan system to finance housing investments; however more should be done to increase housing supply by providing infrastructure for residential land development and effective organisation of the building industry. For infrastructural development, government should make use

of the private sector participation models, particularly BOT and BO, more applicable by providing the adequate legal and organisational grounds in order to benefit from the early completion of urgent infrastructure projects. Refinements in tendering and award mechanisms are vital to decrease the financial burden on the government's budget due to projects exceeding their time and cost limits as a result of poor selection and evaluation of tenders. Moreover, economy can benefit from international construction if refinements in the tax system, social security rights and incentive schemes are made together with regulative refinements. Consequently, it should be noted that, domestic and international construction sectors are both subject to organisational and legal bottlenecks and government should make the necessary enhancements to ensure the efficient operation of markets. The policy which will make the supply and demand forces operate efficiently should depend on the determination of capacity of the sector, so that overloading the industry that increases inflation can be avoided and government should focus on its role as the organiser and regulator of the industry rather than directly being involved in the housing production process or financing majority of the construction works.

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