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Editors

PROF. DR. MEHMET FIRAT BARAN
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adopted by Mariam Rasulan

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EVALUATION PROCESS and POLICIES

All applications have undergone double blind peer review process. In addition, each paper was accepted and the process of publishing in the book was carried out through editorial oversight.

The published papers were presented and discussed at the meeting. Full texts and abstracts published in accordance with the Symposium Policy have been prepared in accordance with ethical rules and APA standards. Authors of all papers are both ethically and legally responsible.

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Moscow Local Time: 11:00-12:30

HEAD OF SESSION: Assoc. Prof. Dr. Seden TURAMBERK ÖZERDEN

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Cosmos Saint-Petersburg Pribaltiyskaya Hotel

FISCAL RUPTURES IN THE STATE BUDGET CAUSED BY THE 2023 EARTHQUAKE IN TÜRKİYE

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ABSTRACT

This study examines the fiscal ruptures in the state budget caused by the Kahramanmaraş-centered earthquakes that struck southeastern Türkiye on February 6, 2023, leading to widespread destruction. The main objective is to identify the breakpoints observed in general government expenditures in 2023 based on economic and functional classifications, and to demonstrate that these ruptures stem from the expenditures of the Turkish Disaster and Emergency Management Presidency (AFAD). The analysis is based on a comparative evaluation of budget data for the years 2022, 2023, and 2024 at both economic and functional classification levels. In this context, the study utilizes tables and figures constructed from official data, along with AFAD's activity reports. The main findings indicate that, in 2023, there was an extraordinary increase in capital transfers within the economic classification, while a sharp rise was observed in social security and aid expenditures within the functional classification. To identify the source of these fiscal ruptures, budget expenditures were further examined through the institutional classification for 2023, revealing that AFAD expenditures are particularly decisive. Specifically, AFAD's current transfers amounted to 52.2 billion TRY, while its capital transfers reached 797.1 billion TRY. Expenditures related to disaster housing totaled approximately 795.5 billion TRY, whereas total household support payments amounted to 51.5 billion TRY. In conclusion, the fiscal ruptures observed in 2023 largely stem from AFAD's disaster housing construction and support expenditures. Although expenditures on disaster housing construction constitute capital transfers—directly generating income for contractor firms—within the economic classification, they are recorded as social protection under the functional classification. This misclassification may lead to misleading interpretations in assessing the distribution of public expenditures between social classes (labor and capital). Therefore, it is recommended that such capital transfer expenditures be more accurately classified within the functional framework.

Keywords: State budget, 2023 earthquake, AFAD.

1. INTRODUCTION

The year 2023 represents an exceptional turning point for the Turkish economy and public finance, marked by the February 6, 2023 Kahramanmaraş Earthquakes. These earthquakes not only caused extensive physical and social destruction but also led to sudden and significant changes in the structure of public expenditures. Although the effects of large-scale disasters on public finance have been widely addressed in the literature, studies that examine in detail the rupture dynamics of these effects on budget composition remain limited. In particular, there is a notable lack of studies that jointly analyze general government expenditures at both the economic and functional classification levels and explore the relationships between these two classifications. This gap makes it difficult to accurately assess the nature and class distribution of public expenditures in the post-disaster period.

This study aims to fill this gap. The primary objective is to identify the ruptures observed in general government expenditures in 2023 within the framework of economic and functional classifications, and to reveal the institutional and expenditure-based dynamics underlying these ruptures. In this context, particular emphasis is placed on analyzing the decisive role of expenditures by the Turkish Disaster and Emergency Management Presidency (AFAD) in the transformation of the budget structure. Accordingly, the study seeks to assess not only the magnitude of post-disaster public expenditures, but also their qualitative characteristics and distributional effects.

Methodologically, the study is based on a comparative analysis of general government budget data for the years 2022, 2023, and 2024. Economic and functional classification data are examined jointly to identify trends in expenditure items, and this analysis is further supported by institutional classification data. In addition, the expenditure components underlying the observed budgetary ruptures are elaborated through the use of activity reports and financial statements of the Turkish Disaster and Emergency Management Presidency (AFAD). The quantitative findings are systematically presented and interpreted through figures and tables.

Within this framework, the study is structured into four sections. Following the introduction, the second section provides an overview of the February 6, 2023 earthquakes, while the third section offers a detailed analysis of the ruptures observed in the state budget. The final section discusses the main findings and presents an overall evaluation.

2. THE FEBRUARY 6, 2023 EARTHQUAKES IN TÜRKİYE

On February 6, 2023, at 04:17 (local time), a devastating earthquake of magnitude 7.7 (Mw) struck the Pazarcık district of Kahramanmaraş, followed approximately nine hours later, at 13:24, by a second earthquake of magnitude 7.6 (Mw) in the Elbistan district. These shocks occurred as a result of ruptures along different segments of the East Anatolian Fault and were recorded at relatively shallow depths of approximately 5 to 8.6 kilometers. Considered among the largest continental earthquakes in modern history, these “twin earthquakes” were felt not only at their epicenters but also intensely across surrounding provinces and neighboring countries (Salik Ata, 2023: 61).

The earthquakes caused severe destruction across a vast geographical area of approximately 110,000 square kilometers, encompassing the provinces of Kahramanmaraş, Hatay, Gaziantep, Adıyaman, Malatya, Kilis, Şanlıurfa, Diyarbakır, Adana, Osmaniye, and Elazığ. While this region constitutes about 13.9% of Türkiye’s total surface area, it is home to nearly 14 million residents and approximately 1.7 million migrants. Due to the immense scale of the disaster, all affected provinces were declared “Disaster Areas Affecting General Life,” and a state of emergency was imposed in the region for three months (Ağın Gözükızıl & Tezcan, 2023: 101).

According to official figures, more than 50,000 people lost their lives and over 107,000 were injured as a result of the earthquakes. The scale of physical destruction reached the highest level in the history of the Republic of Türkiye; it is estimated that approximately 40% of the housing stock in the affected region was damaged, and around 650,000 independent units were either destroyed, severely damaged, or required immediate demolition (Aydın Özüdoğru, 2023: 2). The destruction was not limited to residential buildings; schools, hospitals, public buildings, energy transmission lines, airports, and transportation infrastructure also suffered significant damage, bringing daily life and economic activity in the region to a near standstill.

Referred to in public discourse as the “disaster of the century,” the February 6 earthquakes have been recorded as the most severe catastrophe in the history of the Republic in terms of both their geographical scope and the socio-economic trauma they generated (Ağın Gözükızıl & Tezcan, 2023: 108). Immediately following the disaster, a Level 4 international alarm was issued, and rescue teams from more than 90 countries were dispatched to the region (Salik Ata, 2023: 61).

Analyses of the economic cost of the disaster reveal the magnitude of the burden imposed on the Turkish economy. While World Bank estimates place the direct physical damage at 34.2 billion USD (Tetik & Albulut, 2023: 99), national institutions such as the Turkish Presidency of Strategy and Budget suggest that the total cost may exceed 100 billion USD (Turkish Presidency of Strategy and Budget, 2023: 130). The 11 provinces affected by the earthquake account for approximately 9.8% of Türkiye's Gross Domestic Product (GDP). The region is also a strategic production hub, generating around 8.6% of the country's total exports and playing a critical role in agriculture, manufacturing, and logistics (Şen, 2023: 40). The loss of production, labor migration, and extensive infrastructure damage in such an economically significant region have exerted downward pressure on national growth rates and created an unforeseen and substantial financing need in the state budget. Ultimately, this disaster led to a structural rupture in Türkiye's fiscal framework, creating long-term pressures on budget discipline and public expenditures that are likely to persist in the years ahead.

3. FISCAL RUPTURE IN THE STATE BUDGET IN 2023

In order to identify the ruptures in state budget expenditures caused by the February 6, 2023 earthquakes in Türkiye, a deductive approach is employed. Accordingly, the trajectory of expenditure items within total expenditures is first examined based on economic and functional classifications, and the main expenditure categories that experienced sudden changes in 2023 are identified. The sub-components of these disrupted main categories are then analyzed in detail to reveal the specific items driving the rupture. Subsequently, the institution responsible for the observed break in 2023 is determined through an analysis of budget expenditures based on institutional classification. The expenditures of the identified institution—constituting the source of the ruptures observed in both economic and functional classifications—are then decomposed and examined at the levels of economic classification, administrative units, and activities. Ultimately, this approach enables a comprehensive and granular identification of the sources underlying the fiscal rupture observed in the state budget in 2023.

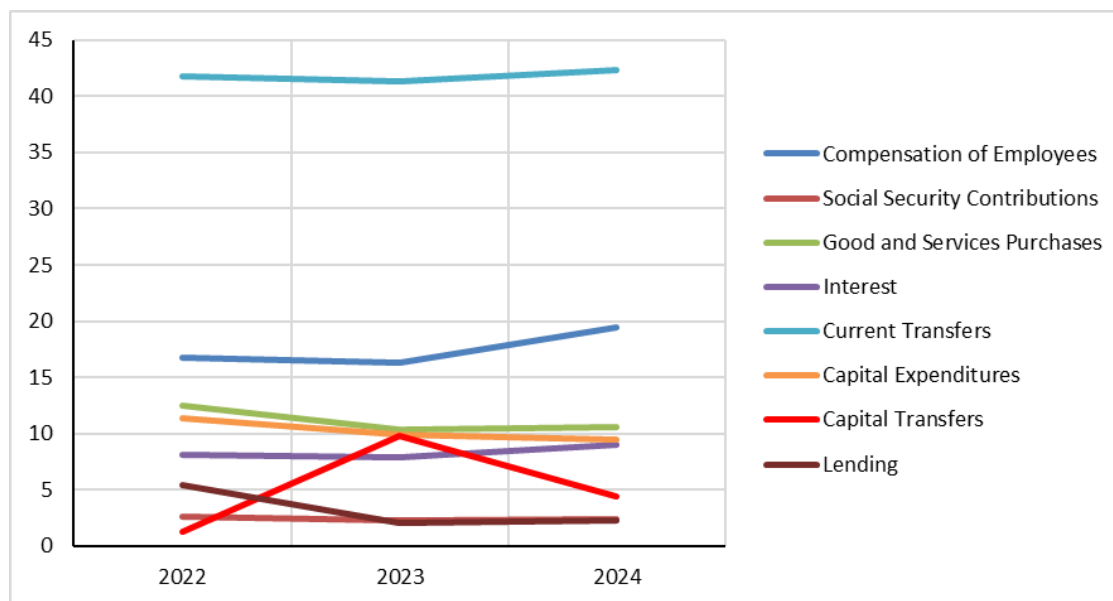


Figure 17. Share of General Government Budget Expenditures in Total Budget by Economic Classification (%)

Source: Turkish Ministry of Treasury and Finance (2026a).

An examination of general government budget expenditures based on economic classification reveals an extraordinary surge in capital transfers in 2023. As shown in Figure 1, the share of capital transfers (represented by the red line) in total expenditures, which stood at 1.26% in 2022 and 4.42% in 2024, increased sharply in 2023, approaching 10%. In contrast, the shares of other expenditure categories remained relatively stable. This pattern clearly indicates a sudden and significant rise in capital transfers.

Table 1 provides a detailed breakdown of the sub-components of capital transfers. Accordingly, the largest contribution to the rupture observed in 2023 stems from the item “Other Institutions, Corporations and Household Transfers Not Elsewhere Classified” within domestic capital transfers. While the amount of this item was only 15 billion TRY in 2022, it surged to 803 billion TRY in 2023, with its share in total expenditures reaching 9.17%. Thus, the source of the rupture in the economic classification in 2023 can be attributed to this extraordinary increase in the sub-components of capital transfers. However, a noteworthy aspect is that this substantial increase is embedded within a residual category of “not elsewhere classified” capital transfers. Such embedded coding makes it difficult to identify the detailed sources of the rupture directly from general government budget tables.

Table 23. Sources of the Rupture in Capital Transfers by Economic Classification

Levels					Budget Items	Value (Billion TRY)			Share in Total Expenditures (%)		
						2022	2023	2024	2022	2023	2024
7	0	0	0		Capital Transfers	50	856	652	1.26	9.78	4.42
7	1	0	0		Domestic Capital Transfers	40	838	617	1.00	9.57	4.18
7	1	9	0		Other Institutions, Corporations and Household Transfers	38	835	608	0.95	9.53	4.12
7	1	9	9		Other Institutions, Corporations and Household Transfers Not Elsewhere Classified	15	803	559	0.39	9.17	3.79

Source: Turkish Ministry of Treasury and Finance (2026a).

A similar pattern emerges when budget expenditures are analyzed according to functional classification. In 2023, the category of social security and aid also exhibited a sharp increase. As illustrated in Figure 2, the share of social security and aid (represented by the red line), which was approximately 26% in 2022, rose to 36% in 2023, before declining again to around 32% in 2024. The shares of other functional expenditure categories remained largely unchanged. Therefore, social security and aid stands out as the primary category driving the rupture in the functional classification in 2023. Although a decline is observed in economic affairs, this does not represent a rupture; rather, it reflects a normalization following the temporary surge in fuel and energy services associated with oil and gas activities in 2021 and 2022.

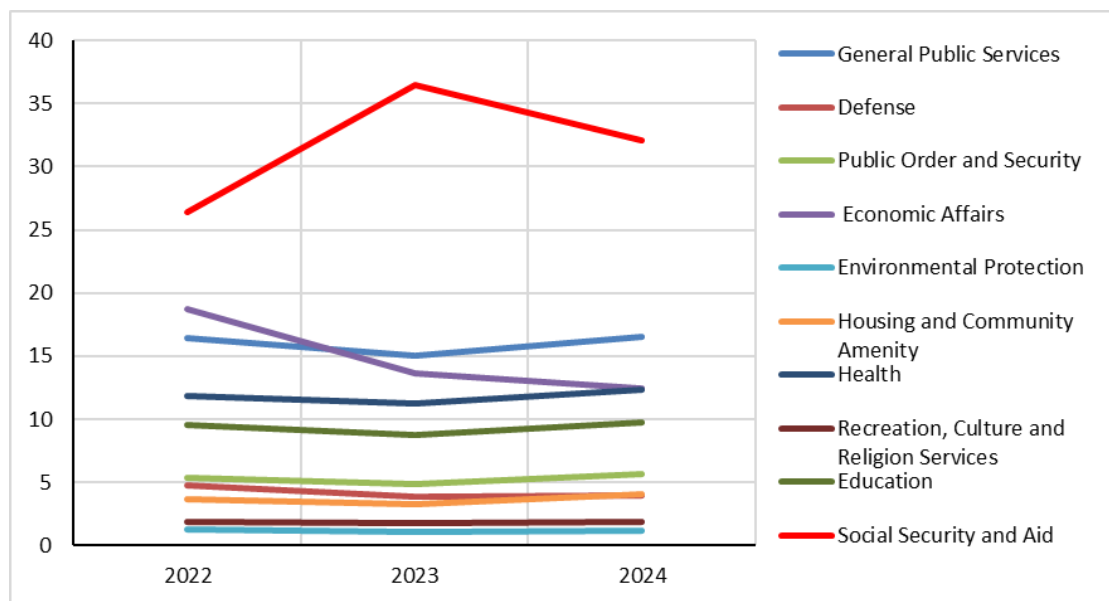


Figure 18. Share of General Government Budget Expenditures in Total Budget by Functional Classification (%)

Source: Turkish Ministry of Treasury and Finance (2026b).

Table 2 presents both the values and the shares of the sub-components of social security and aid that contributed to the rupture in 2023. A significant increase is observed in the category “Social Protection Not Elsewhere Classified.” This sub-item, which amounted to 941 billion TRY in 2022, rose sharply to 2,974 billion TRY in 2023, increasing its share in total budget expenditures from approximately 24% to 34%. Yet again, this substantial increase is embedded within a residual category of “not elsewhere classified” social security and aid expenditures, which complicates efforts to identify the underlying sources of the rupture based solely on aggregate budget tables.

Table 24. Sources of the Rupture in Social Security and Aid by Functional Classification

Levels	Budget Items	Value (Billion TRY)			Share in Total Expenditures (%)		
		2022	2023	2024	2022	2023	2024
100	Social Security and Aid	1047	3192	4726	26.40	36.46	32.04
109	Social Protection Not Elsewhere Classified	941	2974	4384	23.73	33.97	29.72

Source: Turkish Ministry of Treasury and Finance (2026b).

Table 3, which presents the intersection values of the two categories responsible for the rupture in public expenditures under both economic and functional classifications, analyzes the share of capital transfers within social security and aid on an annual basis. Accordingly, while only 1.15% of social security and aid expenditures consisted of capital transfers in 2022, this ratio increased to 25.2% in 2023 and remained elevated at 12% in 2024. Of the 3,192 billion TRY in social security and aid expenditures that contributed to the rupture in 2023, 806 billion TRY consisted of capital transfers. Similarly, of the 856 billion TRY in capital transfers that contributed to the rupture, 806 billion TRY corresponded to social security and aid. This substantial overlap between two distinct expenditure categories across different classification systems indicates that the analysis is correctly identifying the underlying source of the fiscal rupture.

Table 25. Intersection of Capital Transfers and Social Security and Aid Services (Billion TRY)

	Capital Transfers		
	2022	2023	2024
Social Security and Aid	12	806	568

Source: Turkish Ministry of Treasury and Finance (2026c, 2026d, 2026e).

To understand the rapid increase in capital transfers within the economic classification and in social security and aid within the functional classification in 2023, the institutional classification of general government budget expenditures is examined, revealing the prominence of the Turkish Disaster and Emergency Management Presidency (AFAD). Accordingly, as shown in Table 4, AFAD’s total expenditures increased dramatically from only 16 billion TRY in 2022 to 854 billion TRY in 2023, before declining to 570 billion TRY in 2024 while still remaining at a significantly elevated level. In terms of its share within different types of state budgets, AFAD’s share was below 1% in 2022, whereas in 2023 it rose to 13.14% of the general budget, 12.96% of the central government budget, and 9.75% of the general government budget.

Table 26. AFAD Budget by Institutional Classification

	2022	2023	2024
AFAD's Total Expenditures (Billion TRY)	16	854	570
AFAD's Share in the General Budget (%)	0.56	13.14	5.31
AFAD's Share in the Central Government (%)	0.55	12.96	5.28
AFAD's Share in the General Government (%)	0.41	9.75	3.86

Source: Turkish Ministry of Treasury and Finance (2026f, 2026g, 2026h).

Indeed, an additional allocation of 482.8 billion TRY was provided to AFAD through the supplementary budget law for 2023 (Turkish Presidency of Strategy and Budget, 2022b), along with an additional 68 billion TRY in disaster and emergency appropriations (Turkish Disaster and Emergency Management Presidency, 2024: 47). While AFAD's initial budget appropriation for 2023 was only 8 billion TRY, its year-end expenditure reached 854 billion TRY due to the February 6, 2023 earthquakes (Turkish Disaster and Emergency Management Presidency, 2024: 33).

In light of the analyses conducted thus far, it becomes evident that the fiscal rupture in the 2023 state budget originated from capital transfers in the economic classification, from social security and aid in the functional classification, and from AFAD expenditures in the institutional classification. These findings collectively indicate that the rupture in the 2023 state budget is closely associated with the February 6 earthquakes. To substantiate this conclusion more precisely, it is necessary to examine AFAD expenditures in greater detail at lower levels of disaggregation.

Based on AFAD's activity reports, Table 5 shows that the expenditures driving the budgetary rupture in 2023 at the economic classification level are current transfers and capital transfers. In this regard, AFAD's current transfers amounted to 52.22 billion TRY, while its capital transfers reached 797.11 billion TRY, accounting for 6.11% and 93.33% of the total AFAD budget, respectively. Although both expenditure categories increased substantially in nominal terms in 2023 compared to other years, the share of current transfers within the AFAD budget has declined over time, while the share of capital transfers has steadily increased. These findings confirm that the rupture originating from AFAD expenditures is predominantly driven by capital transfers within the economic classification.

Table 27. AFAD Expenditures Causing the Budgetary Rupture at the Level of Economic Classification

Year s	Current Transfers		Capital Transfers	
	Value (Billion TRY)	Budget Share (%)	Value (Billion TRY)	Budget Share (%)
2022	1.57	9.75	12.25	75.97
2023	52.22	6.11	797.11	93.33
2024	6.78	1.19	551.86	96.86

Source: Turkish Disaster and Emergency Management Presidency (2023, 2024, 2025).

When AFAD expenditures are analyzed at the level of administrative units (Table 6), it is observed that the increase in 2023 is largely concentrated in two units. Expenditures of the General Directorate of Administrative Services amounted to 52.64 billion TRY, while those of the General Directorate of Housing and Construction Works reached 797.81 billion TRY. The shares of these units within the total AFAD budget were 6.16% and 93.41%, respectively. A similar pattern persists in 2024, with the share of the General Directorate of Housing and Construction Works rising to approximately 97%. In summary, the units within AFAD that triggered the budgetary rupture are the General Directorate of Administrative Services and the General Directorate of Housing and Construction Works.

Table 28. AFAD Expenditures Causing the Budgetary Rupture at the Level of Administrative Units

Year s	General Directorate of Administrative Services		General Directorate of Housing and Construction Works	
	Value (Billion TRY)	Budget Share (%)	Value (Billion TRY)	Budget Share (%)
2022	1.23	7.62	12.49	77.46
2023	52.64	6.16	797.81	93.41
2024	7.29	1.28	553.02	97.07

Source: Turkish Disaster and Emergency Management Presidency (2023, 2024, 2025).

Finally, when AFAD expenditures are examined at the activity level (Table 7), it becomes clear that the primary contribution to the 2023 rupture stems from the activity “construction of disaster relief housing.” In 2023, 52.46 billion TRY was allocated to national disaster and emergency activities, 1.51 billion TRY to assistance to local administrations whose

infrastructure has been damaged due to natural disasters, and 795.49 billion TRY to construction of disaster relief housing. The latter accounted for 93.14% of the total AFAD budget, while national disaster and emergency activities represented 6.14%. A similar pattern is observed in 2024, where construction of disaster relief housing continued to dominate, accounting for approximately 96% of total expenditures. These findings demonstrate that the fiscal rupture in 2023, at the activity level, is primarily driven by the construction of new disaster housing.

Table 29. AFAD Expenditures Causing the Budgetary Rupture at the Level of Activities

Years	National Disaster and Emergency Activities		Assistance to Local Administrations Whose Infrastructure Has Been Damaged Due to Natural Disasters		Construction of Disaster Relief Housing	
	Value (Billion TRY)	Budget Share (%)	Value (Billion TRY)	Budget Share (%)	Value (Billion TRY)	Budget Share (%)
2022	1.39	8.63	0.85	5.25	11.41	70.79
2023	52.46	6.14	1.51	0.18	795.49	93.14
2024	7.11	1.25	0.67	0.12	547.10	96.03

Source: Turkish Disaster and Emergency Management Presidency (2023, 2024, 2025).

These findings are also consistent with AFAD’s support expenditure data related to the February 6, 2023 earthquakes (Turkish Disaster and Emergency Management Presidency, 2024: 47–48). The total support expenditure of 51.48 billion TRY—comprising 19.76 billion TRY in household support payments, 8.32 billion TRY in relocation assistance, 12.28 billion TRY in rental assistance, 48 million TRY in evacuation support, 4.1 billion TRY in death compensation, and 6.97 billion TRY in debris removal and demolition activities—closely corresponds to the 2023 expenditures of the General Directorate of Administrative Services (52.64 billion TRY), expenditures on national disaster and emergency activities (52.46 billion TRY), and current transfers (52.22 billion TRY). This close alignment is not coincidental; rather, these figures represent the same support expenditures reflected across different classification systems.

Similarly, the close correspondence between the expenditures of the General Directorate of Housing and Construction Works (797.81 billion TRY), the combined expenditures on “construction of disaster relief housing” and “assistance to local administrations whose infrastructure has been damaged due to natural disasters” (797 billion TRY), and total capital transfers (797.11 billion TRY) in 2023 reflects a consistent accounting of the same underlying expenditures. Indeed, as shown in Tables 1 and 3, of the total 856 billion TRY in capital transfers in the economic classification in 2023, 806 billion TRY corresponds to social security and aid in the functional classification; Table 7 further indicates that 795.49 billion TRY of this amount was allocated to construction of disaster relief housing. In other words, social security and aid expenditures with the nature of capital transfers consist predominantly of disaster housing construction, accounting for 96.57% in 2022, 98.67% in 2023, and 96.38% in 2024.

In summary, AFAD’s expenditures on construction of disaster relief housing and assistance to local administrations whose infrastructure has been damaged due to natural disasters are classified as capital transfers in the economic classification and are carried out by the General Directorate of Housing and Construction Works. At the same time, expenditures on construction of disaster relief housing are recorded under social security and aid in the functional classification. Conversely, AFAD’s expenditures on national disaster and emergency activities are classified as current transfers in the economic classification and are implemented by the General Directorate of Administrative Services. The fiscal ruptures observed in the state budget in 2023 can thus be attributed to these disaster-related expenditures.

4. CONCLUSION AND EVALUATION

The results of the analysis reveal the nature of the fiscal intervention in the state budget following the February 6, 2023 earthquakes, as well as the classification problems embedded in this process. Although AFAD’s activities related to the construction of disaster relief housing are essentially in the nature of capital transfers, they have been recorded under social security and aid within the functional classification. However, according to the 2023–2025 Budget Preparation Guide, when a non-repayable payment (i.e., a grant or aid) is made from the budget of a central government institution to provide housing for citizens affected by an earthquake, such expenditures should be recorded under the item “07.01.90.06 Capital Transfers to Households.” By contrast, when housing is provided through repayable payments (i.e., loans to be collected at a later date), these should be recorded under the lending category (Turkish Presidency of Strategy and Budget, 2022a: 401). An examination of the share of general

government expenditure items within the total budget based on economic classification shows that the share of “07.01.90.06 Capital Transfers to Households” remained unchanged and at a very low level (0.02%) throughout the period 2022–2024. This indicates that AFAD’s construction of disaster relief housing is not recorded under this item and does not constitute a non-repayable transfer (i.e., a grant or aid) to earthquake-affected households. Instead, AFAD’s housing construction activities are classified under “07.01.90.90 Capital Transfers to Other Institutions, Corporations and Households Not Elsewhere Classified” in the economic classification and under “10.9.9 Social Protection Not Elsewhere Classified” in the functional classification.

Nevertheless, recording the construction of disaster relief housing as a form of social assistance within the functional classification is open to debate. The housing units constructed after the February 6, 2023 earthquakes were not provided to beneficiaries as free social assistance. Rather, they were allocated through long-term repayment schemes, implying a market-based transaction rather than a non-commercial transfer. Moreover, Law No. 7269 on “Measures and Assistance to Be Implemented in the Event of Disasters Affecting Public Life” explicitly stipulates that disaster victims cannot obtain housing free of charge. According to the law, the costs of the constructed housing are not granted gratuitously to beneficiaries; instead, a substantial portion of these costs is recovered through indebtedness.

Therefore, the findings of this study are consistent with the fact that disaster housing is provided not as grants but through credit mechanisms. In this sense, such expenditures do not constitute direct social assistance to labor; rather, they represent capital transfers implemented through contractor firms, with repayment obligations ultimately borne by households. Consequently, classifying capital transfers that directly generate income for contractor firms as social assistance within the functional classification is misleading. This misclassification may lead to distortions in assessing the class-based distribution of the state budget between labor and capital.

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