Building resilient social protection: Lessons from Türkiye's earthquake response

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Abstract This article assesses the functioning and disaster response capacity of the Turkish social security system in the aftermath of the Kahramanmaraş-centred earthquake that struck southeastern Türkiye on 6 February 2023, affecting 11 provinces. Türkiye's social security infrastructure, which was restructured after the 1999 Marmara earthquake, has developed an important response capability with multidimensional instruments such as short-time working allowance, unemployment insurance, survivors' and disability pensions, and access to health services and social assistance. Moreover, social security expenditures have increased, procedures for social security beneficiaries and employers have been simplified and conditions for access to social security benefits have been eased. Administrative and micro datasets from institutions such as the Social Security Institution (*Sosyal Güvenlik Kurumu* – SGK), the Turkish Employment Agency (İŞKUR) and TurkStat reveal the effectiveness and inclusiveness of the social protection system at the regional and sectoral level. The findings show that institutional digital infrastructure enables a more rapid response, but that some population segments are excluded from the system due to informal employment. In the light of past experiences, the article provides recommendations on how a disaster-resilient social security system can be built.

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International Social Security Review, Vol. 78, 2-3/2025

Keywords social protection, resilience, social security administration, disasters, seism, Türkiye

Introduction

Natural disasters such as earthquakes, floods, hurricanes and the like cannot be predicted in advance. Given that such disasters may not affect every person during their lifetime, they are different from social risks such as occupational accidents, occupational diseases, illness, unemployment, disability and old age. Nevertheless, natural disasters may create social risks in terms of their consequences and their effects on employment and livelihoods may lead to permanent job and income losses (ILO, 2015, pp. 1–3).[1]

In response to this, social security systems also act as "automatic stabilizers" (ILO, 2024, p. 28; World Bank, 2021, p. 4), as a mechanism to support household expenditures as well as additional expenditure caused, for example, by an earthquake.[2] The responsiveness of both contributory and non-contributory social security programmes to the challenges posed by earthquakes and similar natural disasters strengthens their function as a cushion against the negative effects of shocks. However, it is not sufficient for social security institutions to only increase expenditures after natural disasters such as earthquakes. It is also important to target support in a fast and accurate manner on issues such as shelter, health, nutrition as well as income loss. To this end, also necessary is the effective use of social security institutions' information and communication technology (ICT) and human resources infrastructure, as well as effective coordination and co-operation among institutions, and a reduction in bureaucracy to enable access to support and allowances. Together, these features should increase the efficiency of the response of the social security system.

In this context, the concept of resilience has emerged as a central framework in understanding how social security systems respond to shocks. Resilience is not merely about resisting disruptions, but encompasses the capacities to absorb their

1. For example, the injury or death of breadwinners as a consequence of an earthquake leads to loss of income for those living in the household. The closure of workplaces causes unemployment, and the destruction of houses causes people to become homeless. In the immediate aftermath of an earthquake, significant public health problems arise in terms of shelter, illness and access to safe water and food.

2. Much has been written about this with regard to the COVID-19 pandemic, wherein pre-established and comprehensive social protection programmes were better able to respond rapidly to provide this automatic stabilizing role (ILO, 2024, p. 67). As such, strong social protection systems offer effective response capacity not only in ordinary periods but also in times of sudden shocks and disasters.

effects, adapt to new realities, and transform in ways that reduce future vulnerability.

According to Bowen et al. (2020), at the household level, resilience refers to the capacity to anticipate, respond to, and adjust after a shock in ways that prevent poverty or the deepening of existing vulnerability. Drawing on Béné et al. (2012, p. 21), resilience can be analytically structured around three interrelated dimensions: absorptive, adaptive, and transformative capacities. Absorptive capacity refers to the strategies that individuals and/or households use to buffer or mitigate the impacts of shocks on their livelihoods and access to basic needs. Together, these three capacities constitute the core components of resilience and offer a conceptual framework for understanding what it means to "strengthen resilience" in a practical policy context. This framework enables a more systematic assessment of how social protection systems respond to and evolve through crises such as natural disasters.

In the context of social security, these capacities support both immediate shock responses and long-term reforms that enhance institutional stability and inclusiveness. When applied to social security, a resilient system therefore demands and combines robust and proactive governance, robust digital and ICT infrastructure, effective risk assessment and management, coordinated action across social insurance, social assistance, social services, and disaster management agencies and, when necessary, the rapid deployment of new programmes. Beyond emergency financial assistance, systems should be designed as comprehensive disaster risk management mechanisms with coordinated action in policy design, absorption, adaptation and transformation (see, for example, ISSA, 2022, pp–6-54).

Due to its geological characteristics, Türkiye is a country with high earthquake risk. The Gölcük earthquake on 17 August 1999 killed more than 17,000 people. The worst recent natural disasters in Türkiye in terms of scope, impact and human suffering were the Kahramanmaraş and Hatay earthquakes of 2023. Around 16 per cent of the national population lived in the 11 provinces affected by the earthquakes.

This article discusses how the labour market in Türkiye was affected by the Kahramanmaraş-centred earthquake, how the social security system responded to this large-scale disaster, which instruments worked and to what extent, and concludes with examples of good practices and a discussion of where improvements are needed. To analyse these dynamics more systematically, the article applies the resilience framework developed by Béné et al. (2012) to classify and evaluate Türkiye's social protection responses to the earthquake, highlighting which measures supported immediate coping, which enabled institutional adaptation, and which contributed to longer-term structural change.

Natural disasters, the labour market and social security

Natural disasters directly affect people's livelihoods and cause them to face significant income losses. Farmers affected by floods and droughts, for example, or employers or self-employed people whose workplaces are destroyed after an earthquake are suddenly confronted by income losses and significant increases in expenses. Typically, social security systems are predominantly based on social insurance programmes financed by contributions paid by registered employers and employees in the formal labour market. Considering this reality, it is important to estimate the negative effects of natural disasters on the labour market in order to determine the nature of the response to be provided by the social security system after a natural disaster.

A number of studies on the effects of natural disasters on the labour market show that this subject remains under-researched. Jiménez Martínez, Jiménez Martínez and Romero-Jarén (2020, p. 1485) reported only 118 articles published on this topic in journals scanned in Web of Science and Scopus between 1900 and 2019 – and only four of these relate to Türkiye. Generally, the number of studies on how to respond to the consequences of social risks such as unemployment, illness, death and disability as a result of natural disasters remains very limited.

Some studies provide some general guidance in support of public intervention. Jiménez Martínez, Jiménez Martínez and Romero-Jarén (2020) inform that following the Bio-Bio earthquake in Chile in 2010 there was short-term disruption to the labour market. However, government reconstruction efforts in the earthquake zone and other efforts were able to mitigate some of the negative effects in the most affected regions. Park and Wang (2017, p. 38) inform that the 2008 earthquake centred on Wenchuan County, Sichuan Province, China, led to damage estimated at approximately the equivalent of 121 billion US dollars. A household survey found that people's welfare suffered, with households confronted by asset and income losses. However, after large government transfers, average per capita income increased by 17.5 per cent in 2008 compared to 2007, and the poverty rate actually decreased from 34 per cent to 19 per cent. One conclusion was that the size of public transfers to and from the earthquake zone can significantly mitigate the effects of the earthquake on the economy and the labour market. More generally, social protection mechanisms that help compensate households and people for income losses caused by disasters (e.g. short-time work, unemployment allowance, social benefits) allow people not only to better cope with the disaster but to develop resilience to shocks. Reform also permits the social security system to become more resilient, to be able to adjust to meet exceptional events.

Türkiye's experience since the 1999 Gölcük earthquake shows that resilience of the social security system as well as the population can be improved through

institutional reform and with benefits and services delivered more effectively. The 1999 earthquake brought with it many problems, particularly housing loss and unemployment. The economy shrank by 5.1 per cent and unemployment increased (World Bank, 2025). However, to compound these issues, there was an absence of unemployment insurance (which was not yet implemented) as well as short-time working allowances, and social assistance was inadequate. Also, the underdeveloped use of digital infrastructure by social security institutions contributed to the social security system's inability to respond adequately to the social risks created by the earthquake.

Positively, since the 1999 earthquake, to support household income, the qualifying conditions for survivors' and disability benefits within the social insurance system have been simplified, and small-scale community benefit work programmes have been set up by the Turkish Employment Agency (İŞKUR) with the support of resources provided by foreign development projects (Karadeniz, 2023).

Following Law No. 4447 of 1999, which provided for the establishment of the Unemployment Insurance scheme,[3] Türkiye has since continued its reforms in the field of social security and the system's administration. Since the early 2000s, the IT infrastructure of the social security system has been strengthened through different projects, permitting social insurance allowances and pensions and social assistance payments to be made more rapidly and efficiently. Starting in 2003, an integrated social assistance information system was established, and social assistance expenditures were increased. In 2004, short-time working allowances, which are funded by the unemployment insurance fund, began to be implemented. In 2006, the different social security institutions for workers, self-employed workers and civil servants were consolidated and renamed the Social Security Institution (*Sosyal Güvenlik Kurumu* – SGK).[4] Implemented in 2008, a general health insurance system (established by Law No. 5510 of 2006) provides access to general health insurance coverage to all.

Methodology and data sources

Both quantitative and qualitative methods were used in this study. While institutional reports and legislation prepared by the Presidency of the Republic

3. Unemployment insurance started to pay its first benefits in February 2002.

4. Other reforms have sought to improve the institutional capacities at the national level to respond to natural disasters in the wake of the 1999 Marmara Earthquake. The Natural Catastrophe Insurance Institution (TCIP) was established in 2000 to carry out the activities of acquisition, implementation and management of Compulsory Earthquake Insurance. A Disaster and Emergency Management Presidency (AFAD) was established in 2009 by merging three institutions in order to overcome the challenges caused by the absence of institutional coordination.

Strategy and Budget, the Disaster and Emergency Management Presidency (AFAD), the Turkish Employment Agency (İŞKUR), and the Social Security Institution (SSI), among others, were examined qualitatively; the following data sources were used in quantitative analyses:[5]

- Social Security Institution monthly data (old-age, survivorship, disability pensions, number of active insured and workplaces).
- İŞKUR short-time working, cash wage support, unemployment allowance application and beneficiary records.
- Turkish Statistical Institute Household Labour Force Survey (HLFS) and Income and Living Conditions Survey (ILCS) micro data.

The provinces of Kahramanmaraş, Hatay, Adıyaman and Malatya, which were affected by the earthquake and suffered high loss of life and property, were classified as Group 1 (heavily damaged), while the provinces of Adana Diyarbakır Elazığ, Gaziantep, Kilis Osmaniye and Şanlıurfa were classified as Group 2 (other earthquake provinces). In this study, the impact of the earthquake on the labour force is analysed by different methods. Next, social security benefits provided to households and individuals through the contributory and non-contributory social security system are analysed. As stated, it is not sufficient for social security institutions only to provide social security benefits according to the relevant legislation after the disaster. The rapid and efficient delivery of services and benefits to beneficiaries is as important as the scope of the benefits. To this end, practices that will expand the effective scope of the social security system – such as simplifying administrative procedures and simplifying and easing the qualifying conditions for benefit eligibility – are also necessary.

Findings

Employment losses and changes in social insurance coverage

The impact of the earthquake on the labour market can be measured in different ways. One means is through administrative records. However, records such as variations in the numbers of insured persons and workplaces covered by social security institutions only present figures for the losses in formal employment (Table 1). By definition, unregistered workers are not included in these figures. Thus, analyses using different robust estimates are needed to measure the loss of employment and the effectiveness of the social security system's response to natural disasters. Household labour force survey analyses may not yield reliable

5. These online SGK, İŞKUR, TurkStat, AFAD and Natural Disaster Insurance Institution (DASK) sources are in Turkish only, and certain exclude public access. For more information concerning data sources and data used in the Tables and Figures in this article, please contact the author.

Table 1. *Estimated number of employees affected by the disaster in earthquake provinces*

	Total Population	Average Household Size	Number of Households	Number of Employees	Number of Employees per Household	Number of Demolished Buildings	Number of Employees
TR62- Adana, Mersin	4,084,459	4	1,021,115	1,370,638	1.342296	2,952	3,962
TR63- Hatay, Kahramanmaraş, Osmaniye	3,338,329	4	8,345,823	957,213	1.146937	330,692	379,282
TRB1- Malatya, Elazig, Bingöl, Tunceli	1,731,888	4	432,972	586,560	1.354730	81,675	110,647
TRC1- Gaziantep, Adıyaman, Kilis	2,852,650	5	570,530	871,079	1.526789	87,925	134,242
TRC2- Şanlıurfa, Diyarbakır	3,889,878	7	555,696.9	853,596	1.536082	14,765	22,680
	15,897,204	4	3,414,896	4,639,086			650,816

Sources: Author's estimates based on data from the web pages of relevant public institutions and organizations.

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results since they are based on surveys, contain annual data and cannot make monthly forecasts. Other methods are therefore required to measure the immediate impact of natural disasters, such as earthquakes, on the labour market.

The International Labour Office (ILO) suggests in "*Guidelines for post disaster needs assessments*" that the number of destroyed buildings can provide data to help determine to what extent employment has decreased as a result of a natural disaster (ILO, 2015, p. 15). The number of destroyed dwellings can infer that a certain number of workplaces were also destroyed, with a likely number of people losing their jobs (ILO, 2015, p. 17). Small family workplaces and enterprises, including shops, small manufacturers and workshops, especially those located under apartment buildings, may be those most affected by an earthquake.[6] The number of people employed in demolished buildings can be calculated using the average household size and the number of employees from the Household Labour Force Survey micro data set.

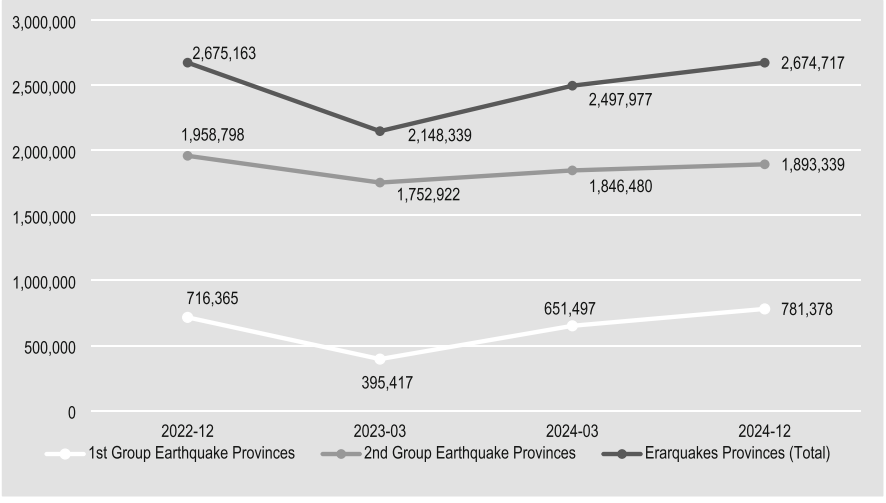
However, this approach also has some limitations. The first constraint is that the average number of employees in all households is taken into account regardless of sector and employment status. The second limitation is the assumption that employees are equally distributed to all households and that there are employees in all houses in all demolished buildings.

According to Social Security Institution statistics, there was a decrease of approximately 527,000 in the total number of insured workers in March 2023 due to the earthquake (Figure 1). Immediately after the earthquake (as of March 2023), the number of employees insured in Group 1 provinces (heavily damaged) decreased by 44.8 per cent. However, by the end of 2024, this number started to increase again and exceeded the 2022 level. Employment in temporary workplaces increases by 168 per cent, highlighting the role of temporary public employment in response to the crisis. It can be suggested that this growth in employment was driven by workers employed in debris removal and construction in the region (Table 2).

The figures calculated on the basis of the first method (based on destroyed building) and the second method (based on administrative records of the Social Security Institution) are consistent. The ILO (2023) estimated that around 220,000 workplaces were damaged by the earthquake with a decrease in activity correspond to the working hours of 657,147 full-time equivalent workers.

6. The ILO (2015) propose a formula to measure the estimated loss of home-based employment (ILO, 2015). This formula may be valid for those who work in small or family businesses whose workplace is close to home: The estimated number of employed persons whose home-based incomes or jobs are affected is calculated as: Employment loss = Estimated number of households (from the housing sector) that lost their dwellings as a result of the disaster × Estimated number of employed persons per household.

Figure 1. *Number of registered workers in earthquake regions by month (2022/12–2024/12)*



Source: Developed by the author based on data from the web pages of relevant public institutions and organizations.

Table 2. *Number of permanent and temporary workplaces and insured workers in the earthquake region, 2022–2024*

Indicator	2022 Dec	2023 Mar	2024 Mar	2024 Dec
SSI, Number of permanent workplaces	221,016	160,656	198,472	216,887
SSI, Number of compulsory insured persons in permanent workplaces	1,829,539	1,430,251	1,616,875	1,720,686
SSI, Number of temporary workplaces	23,860	15,855	22,042	29,137
SSI, Number of compulsory insured in temporary workplaces	348,109	287,649	481,163	513,680
SSI, Number of public workplaces	7,427	6,794	6,359	6,683
SSI, Number of compulsory insured in public workplaces	417,674	393,001	424,612	378,705

Source: Developed by the author based on data from the web pages of relevant public institutions and organizations.

Household Labour Force Surveys also provide a measure of the impact of the earthquake on the labour market to some extent. However, since these surveys cover the entire year, they do not reflect monthly changes. For example, within the framework of the debris removal and reconstruction works that started

Table 3. *Employment and unemployment rate by earthquake region, (%) (2022–2024)*

		Employment rate			Unemployment rate		
	Provinces	**2022**	**2023**	**2024**	**2022**	**2023**	**2024**
Group 1 Earthquake provinces	Hatay	43.1	38	44.3	14.4	15.6	12
	Kahramanmaras	41.8	39	44.4	15	14.6	11.8
	Malatya	45.9	43.9	48.8	7.2	6.4	5.6
	Adiyaman	42.9	39.4	43.8	17.2	12.2	11.1
Group 2 Earthquake provinces	Adana	44.1	43.7	46.6	15.3	14	11.4
	Diyarbakir	35.1	35.9	39.5	13.5	11.9	10.5
	Elazig	41.4	43.3	43	8.3	7.9	5.5
	Gaziantep	44.9	44.4	45.2	8.5	9.6	10.4
	Kilis	45	44.6	46.3	8.9	10.7	12.5
	Osmaniye	41.2	39.4	43.6	14.2	16.7	11
	Sanliurfa	40	41	42.3	9.7	9.9	8

Source: Developed by the author based on data from the web pages of relevant public institutions and organizations.

immediately after the 6 February 2023 earthquake, employment started to increase a few months after the earthquake. Household Labour Force Surveys may be periodically weak in showing the impact of natural disasters. Nonetheless, they can provide broader information on the labour market since they also cover informal employment. According to Household Labour Force Surveys, the earthquake caused employment rates in Group 1 provinces (heavily damaged) to decrease by 2 to 5 points (Table 3).

Early retirement and survivors' benefits from the social insurance system

Early retirement. With the Law Act No. 7438,[7] which entered into force on 6 March 2023, the age requirement for insured persons who were employed before the first pension reform (8 September 1999) was abolished nationwide. Although it seems problematic in terms of the financial sustainability of the public pension programme, this practice has significantly compensated the income losses of households, especially in the earthquake region. Due to the introduction of unemployment insurance in Türkiye only in 1999, early retirement was often

7. The Law Act No. 7438 is known as the "Regulation for those who were not able to retire due to age".

perceived as a substitute for unemployment insurance (Işıklı, 1999). The effective coverage of unemployment insurance is quite narrow due to the strict eligibility conditions for access (Kumaş and Karadeniz, 2017). Moreover, it is commonplace for employers who lay off workers to report that the workers have resigned voluntarily. This is done to avoid paying severance pay. It is estimated that only 20 per cent of unemployed workers receive unemployment benefits (Görmezöz, 2018). Therefore, those who retire early, say in their mid-40s, may see the old-age pension as a form of income replacement to be used while they are unemployed. Between March 2023 and March 2024, the number of people receiving the old-age pension in areas affected by the earthquake increased by 49,916 in Group 1 provinces (heavily damaged) and 129,351 in Group 2 provinces (other earthquake provinces), totalling 179,267 people.

Survivors' pension. Survivors' pensions are another possible arrangement used to compensate for household income losses in the earthquake region. According to Law No. 5510 of 2006 on Social Security and General Health Insurance, for survivors to receive benefits deceased workers must have been insured for a minimum of 5 years and paid 900 days of contributions; self-employed and civil servants must have contributed for a minimum of 1,800 days. After the 1999 earthquake, the conditions to qualify for the survivors' pension were eased. In the 2023 Kahramanmaraş-centred earthquake, however, the conditions to qualify for the survivors' pension were not eased. One of the reasons for this may be that the age condition to qualify for the old-age pension was abolished for those who were employed before 1999 and the people in the households affected by the earthquake were already entitled to the old-age pension without an age requirement. Regardless, in the period between March 2023 and March 2024, the number of survivors' pension beneficiaries increased by 3,868 in Group 1 provinces; and 11,226 in Group 2 provinces, totalling 15,094 persons due to the death of insured family members who satisfied the eligibility conditions.

Short-time working and unemployment insurance allowances, cash wage subsidies and active labour market programmes

Short-time working allowance payments were made to workplaces that ceased to operate or whose production decreased significantly due to the earthquake. Employers were able to claim a certain portion of the wages of workers who could not work due to the earthquake from the Turkish Employment Agency (İŞKUR) unemployment insurance fund. In this process, the number of days of paid contributions required to receive the short-time working allowance was reduced and application conditions were simplified (discussed below).

According to the Labour Law No. 4857 (Art. 24/III), the employer is obliged to pay the wage for the first seven days of unemployment in the event that production stops in the workplace due to a compelling reason. As an emergency response, short-time working allowances were extended to cover the first seven days of the disaster for workplaces affected by the earthquake (Dörtlemez, 2023, p. 19).[8]

Especially during disaster events, it is very difficult to document that a workplace has been severely damaged, workplace production has stopped, and workers cannot work. With regulation 125 of the Presidential Decree No. 125, the short-time working allowance is paid by İŞKUR in line with an employer's declaration without waiting for the completion of the determination of eligibility to be made by labour inspectors for the workplaces located in the provinces/districts (Dörtlemez, 2023, pp. 19–20).[9]

For those workers whose employment contract was terminated due to the closure of the workplace as a consequence of the effects of the earthquake and who did not qualify for an unemployment allowance within the scope of the same Law, and for workers who did not qualify for short-time working allowance, cash wage support similar to the short-time working allowance was introduced. Cash wage support is also financed from the unemployment insurance fund.

To deliver benefits, due to structural damage to the Provincial Directorates of Labour and Employment in the earthquake zones, the work of these bodies was carried out by Provincial Directorates that were not in the earthquake zone. Enabled by effective coordination between the Social Security Institution and İŞKUR and facilitated by strong IT infrastructure, payments were made to beneficiaries without delay.

Unemployment allowances were an important source of support in the same period. The increase in the number of applicants for unemployment allowance in Adıyaman, Hatay, Kahramanmaraş and Malatya, the four provinces most affected by the earthquake, was greater than the Türkiye average in 2023. In the earthquake region (Group 1 and Group 2) the number of claims was greater than the Türkiye average in 2024 (Table 4). Comparing the pre-earthquake period with the year after the earthquake, unemployment allowance applications decreased by 8 per cent in Türkiye as a whole, while they increased by

8. The monthly short-time working allowance is 60 per cent of the insured's average daily gross earnings calculated on the basis of the last 12 months' contributory earnings, and the amount of the allowance cannot exceed 150 per cent of the minimum wage. The duration of the allowance is the duration of the short-time working period and cannot exceed 3 months (see Short-time working allowance on the İŞKUR public website).

9. The determination of eligibility is determined by the Ministry of Labour and Social Security within the framework of the regulation and/or the workplaces that document that they are destroyed, to be destroyed immediately, or heavily or moderately damaged due to the earthquake (Dörtlemez, 2023, pp. 19–20).

Table 4. *Number and rate (%) of unemployed people applying and eligible for Unemployment Allowance, 2023–2024*

Group	Application	Deserving	Eligibility rate (%)	Period
Group 1	67,241	29,115	43.3	2023 Jan
Group 1	92,132	31,365	34	2023 Dec
Group 1	70,139	25,014	35.7	2024 Dec
Group 2	163,440	73,109	44.7	2023 Jan
Group 2	138,238	54,345	39.3	2023 Dec
Group 2	139,430	61,904	44.4	2024 Dec
Group 3	3,185,019	1,522,788	47.8	2023 Jan
Group 3	2,737,380	1,261,010	46.1	2023 Dec
Group 3	2,776,429	1,353,572	48.8	2024 Dec

Source: Compiled by the author based on data from the web pages of relevant public institutions and organizations.

63 per cent in Hatay, 38 per cent in Adıyaman, and 24 per cent in Kahramanmaraş and Malatya.[10]

Of note, the ratio of those who are entitled to unemployment allowance compared to those who applied for unemployment allowance in the earthquake region is lower than the Türkiye average. One reason for this may be the difficulty of satisfying the number of days of paid contributions required to qualify for the unemployment allowance. Another reason may be that the employees of the heavily damaged workplaces that were destroyed were not entitled to the allowance due to the inability of the employers to carry out the exit procedures.[11]

Other arrangements made in 2024 were changes to eligibility conditions for vocational training courses and on-the-job training programmes in earthquake-affected provinces. Some flexibility has been provided for the active labour market programmes implemented by İŞKUR in the earthquake zone. According to Law No. 4447, the wages and insurance contributions of trainees and participants participating in vocational training courses and on-the-job training programmes organized by employers are covered by the Unemployment Insurance Fund. Employers must retain in employment at least 70 per cent of trainees participating in vocational training courses and on-the-job training

10. Labour market data sourced from İŞKUR (not publically available).

11. In order for an employee to qualify for unemployment allowances, the employer must notify the termination of the employment contract to the Social Security Institution, as required by the related social security regulations; this notification forms the basis for the eligibility assessment under Law No. 4447 on Unemployment Insurance.

programmes for a period that is twice the duration of the course and programme. These employer commitments have been reduced from 70 per cent to 30 per cent for Group 1 earthquake provinces, with the arrangement made in the regulation, and the duration of the employment period has been reduced (from twice) to coincide only with the duration of the course and programme. For example, while seven out of ten trainees participating in a 90-day on-the-job training programme in non-earthquake provinces must be employed by the employer for at least 180 days, in Group 1 earthquake provinces, it is sufficient for the employer to employ three employees for 90 days in order to fulfil its commitment to İŞKUR. In Group 2 earthquake provinces, it is 40 per cent of the trainees/participants. The employment period is 1.5 times the course and programme duration.

With these measures, it is aimed to accelerate the economic and social recovery of the region. Between 2023–2024, a total of 32,920 people in 11 provinces benefited from these programmes, with an expenditure of 1.7 billion Turkish lira (TRY) (SBB, 2025, pp. 46–47).

Contribution deferrals

It is estimated that small and medium-sized enterprises were particularly affected by the earthquake. In the Group 1 provinces most affected by the earthquake (Kahramanmaraş, Hatay, Adıyaman, Malatya), the social insurance contribution collection rate for employees decreased from 87 per cent as of December 2022 to 44 per cent in 2023. For self-employed workers, the collection rate declined from 58 per cent to 26 per cent in the same period (Alıç, 2024). However, no financial penalties (paid with interest) for the late payment of contributions were applied. Further, no contribution deductions were made by employers on the workers' cash support up to TRY 50,000, paid by employers to the insured in the provinces affected by the earthquake (Alıç, 2024). The deadline for the submission by employers[12] of contribution records to the Social Security Institution was extended to 31 July 2025. The contribution arrears of small and medium-sized enterprises, employers and self-employed workers in the earthquake region were postponed until June 2025 or December 2025, depending on the nature of the arrears (SBB, 2025, p. 48).

12. Employers who meet the criteria determined by the Ministry of Treasury and Finance in Group 1 Provinces (taxpayers whose cumulative price constituting the provision of deliveries and services included in the last term value added tax declaration to be submitted for the 2022 calendar year is less than TRY 2.5 million) (See SBB, 2025, p. 48).

Social assistance

In the aftermath of the earthquake, a large number of in-kind and cash social assistance transfers were provided to households in a coordinated manner by different public institutions and organizations. The assistance was provided in coordination with the Ministry of Social Services; the Disaster and Emergency Management Presidency (AFAD); Social Assistance and Solidarity Foundations (SYDV); the Red Crescent, the Ministry of Environment, Urbanisation and Climate Change; and NGOs.

The AFAD provided TRY 10,000 in cash support per household and also provided TRY 15,000 relocation assistance to families leaving the earthquake-hit cities, TRY 5,000 in monthly rent assistance to tenants, and TRY 12,000 in monthly assistance to homeowners for a maximum period of 12 months. Survivors' benefits, paid as lump-sum social assistance, were paid to the relatives of the deceased. Those whose homes were destroyed in the earthquake were first provided with tents for shelter and then accommodated in prefabricated houses. The construction of permanent housing for households whose houses and workplaces were destroyed in the earthquake continues through the Housing Development Administration (TOKİ).

During the post-earthquake period, a large part of the social assistance has been provided by the AFAD and the expenditure necessary for the provision of prefabricated housing and permanent housing has been provided from the general budget. To provide additional resources for the general budget, an additional motor vehicle tax was levied in 2023.

In a disaster context, the scrutiny that normally accompanies the award and provision of social assistance may have to be relaxed. In Türkiye, a number of flexible practices were adopted to avoid disruption in the delivery of social assistance in the earthquake zone. For example, social assistance beneficiaries in the disaster area were exempted from having to provide proof of their permanent address, the contribution arrears of self-employed workers were not taken into account while in receipt of social assistance, and certain entitlements of the family support programme were continued where otherwise they may have been suspended (SBB, 2025, p. 49).

The number of people benefiting from regular social assistance in the earthquake region increased by 220,000 compared to the pre-earthquake period and reached 1,997,597 in 2023. In addition, approximately TRY 3.4 billion was transferred from the general budget to social assistance and solidarity foundations. As part of the immediate social assistance measures following the 2023 earthquakes, the Turkish government and affiliated agencies implemented "social markets, providing essential goods free of charge to disaster victims

through both fixed locations and mobile units. This initiative helped address urgent consumption needs, prevent distress sales of household assets, and contributed to absorptive resilience capacity by sustaining basic livelihoods. In the earthquake region, approximately 300 social markets and mobile social markets provided services to meet the urgent needs of disaster victims" (SBB, 2025, p. 49).

Housing

Shelter remains one of the most critical social needs in the aftermath of large-scale disasters. In the 2023 earthquake response, Türkiye initially deployed tent cities, which were subsequently replaced by over 214,000 container units accommodating approximately 650,000 individuals (SBB, 2025, p. 19). In parallel, the Natural Disaster Insurance Institution (DASK) paid TRY 39.2 billion in compensation across 506,657 claims in 28 earthquake zones (SBB, 2025, p. 20). Although DASK is a legally mandatory insurance scheme for residential buildings in urban areas, only 1.1 million of an estimated 5.4 million dwellings in the affected region were actually insured, reflecting widespread non-compliance and enforcement gaps. As a result, insurance coverage amounted to just 8 per cent of the projected TRY 964 billion reconstruction cost (Özüdoğru, 2023, p. 21). With such limited risk pooling, the financial burden of rebuilding has largely fallen on the general budget. Public institutions – including the Ministry of Environment, Urbanisation and Climate Change, AFAD, and TOKİ – have led the construction of 391,245 permanent disaster-resilient homes, of which 201,431 have been completed, along with 42,000 new commercial units (SBB, 2025, p. 23).

Health services

Within the scope of general health insurance, the Social Security Institution decided not to charge co-payments for medical examinations, medicines and medical supplies. This was done to prevent the inequitable treatment of patients when visiting health service providers and when procuring medicines and/or continuously used health care products and medical supplies. Further, regulations that could hinder access to health services have been relaxed (SGK, 2023). According to the Social Insurance and General Health Insurance Law No. 5510, self-employed workers and general health insurance holders who pay their own contributions cannot benefit from health services if they have contribution arrears (except for natural disasters and emergencies). However, it has been ensured that the said groups with contribution arrears after the earthquake will benefit from health services without interruption until 31 December 2025, regardless of arrears

(SBB, 2025, p. 47). These practices have expanded the effective scope of health services and ensured that all disaster victims benefit from access to necessary care under General Health Insurance coverage.

Social security and digital infrastructure

The short-time working allowance and cash wage subsidies were distributed rapidly due to the ITC capacities of İŞKUR and the Social Security Institution (e.g. e-Government integration, online application forms). Moreover, the Disaster Management and Decision Support System (AYDES) is an integrated geographical information system developed by AFAD that can carry out disaster management in a holistic manner in a digital environment. The system supports effective execution of disaster-related processes before, during and after natural disasters. With AYDES, damage assessment integration and instant data flow regarding destruction, deaths, and requests for social support, logistics and resource dispatch management were provided immediately after the earthquake. In the aftermath of the disaster, the follow-up of the processes of social assistance given to households, management of shelter areas, debris removal, among others, were undertaken rapidly. AYDES' data-based analyses are integrated with the e-governance systems of the Social Security Institution, Social Assistance and Solidarity Foundations, Population and Citizenship Affairs and many other public institutions.

For the immediate granting of social assistance, the Integrated Social Assistance Information System used by the Social Assistance and Solidarity Foundations performs income tests required with the data it receives from different public institutions and organizations (ESCAP, 2024).

Discussion: The 2023 earthquakes and the resilience of the social security system

Türkiye's social security response to the 2023 earthquakes can be classified according to the resilience framework of Béné et al. (2012): absorptive (coping) measures, such as cash transfers and short-time working allowances; adaptive measures, such as the simplification of eligibility conditions and administrative procedures; and transformative measures, including the establishment of a disaster fund[13] and

13. Following the 2023 Kahramanmaraş-centred earthquake, the enactment of Law No. 7441, 21 March 2023, which provides for the establishment of the Disaster Reconstruction Fund (*Afet Yeniden İmar Fonu*), reflects a transformative policy commitment to strengthen disaster risk financing in Türkiye. Although the Fund remains in its institutional set-up phase, it represents a forward-looking initiative aimed at securing dedicated and sustainable resources for post-disaster reconstruction and resilience-building efforts (See online source: Official Gazette, No. 32139, 21 March 2023).

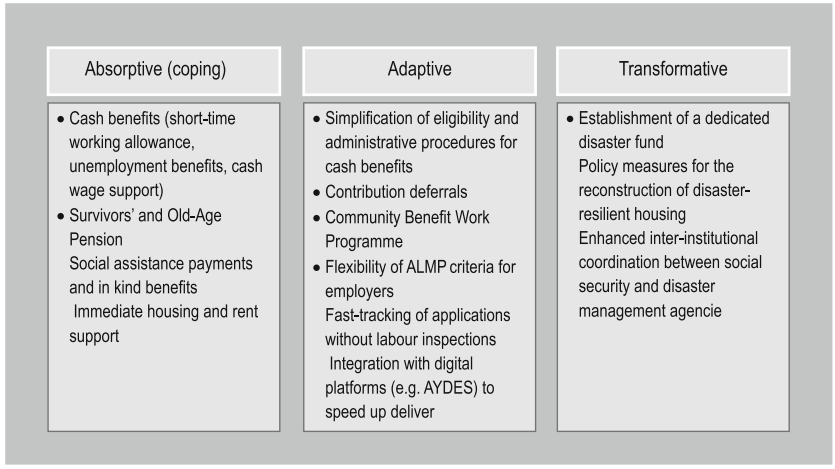
increased state support for the creation of disaster-resilient housing and cities (Figure 2).

The social protection measures taken after the earthquakes in Türkiye are summarized in Table 5. It is estimated that, as of 2023, the combined cost of short-time work allowances, cash wage support, survivors' pensions, community benefit work programmes, and unemployment allowances corresponds to approximately 0.5 per mille (‰) of GDP. In the 2023–2024 period, public expenditures to compensate for the losses and damage caused by earthquakes and for reducing disaster risks totalled approximately the equivalent of 75 billion US dollars at end-2024 prices (SBB, 2025). The most important item of these expenditures is infrastructure and housing projects. It is estimated that earthquake-related expenditures correspond to 3 per cent of GDP in 2023 and in 2024.

Of further importance, the easing of bureaucratic procedures in the immediate aftermath of the earthquakes – to facilitate access for employers, insured persons, and social insurance and social assistance beneficiaries to social security services – has greatly expanded effective social security and health coverage.

Specifically, following the loss of 650,000 jobs in the earthquake zone, 435,000 people have received support from the unemployment insurance fund, while the Social Security Institution has provided early pensions and survivors' pensions to around 197,000 people (Table 6). Across the earthquake zone, the trajectory of the regions' poverty rates offer an indication of the effectiveness of

Figure 2. *Classification of Turkish social security measures for the 2023 earthquake using the resilience framework of Béné et al. (2012)*



Source: Author's elaboration using national reports and Béné et al. (2012).

Table 5. *Post-earthquake social protection measures in Türkiye*

Social protection measure	Policy summary	Funding source
Short-work allowance	Application procedures have been simplified for employers.	Unemployment Insurance Fund
Cash wage support	Support was provided to people who could not qualify for other unemployment benefits.	Unemployment Insurance Fund
Community benefit programmes (TYP)	TYP programmes were initiated for debris removal and reconstruction works.	Unemployment Insurance Fund
On-the-job training and vocational training courses	Employers' post-programme employment obligations were reduced.	Unemployment Insurance Fund
Old-age and survivors' pensions	The applications were prioritised and the eligibility periods were extended.	SSI and General Budget
Easıng of contribution conditions for employers and tradesmen	Contribution payment and notification periods are postponed.	Social Security Institution (SSI)
Social assistance	Benefit and eligibility conditions have been relaxed.	General Budget
In-kind aid	With social market applications, disaster victims were provided with quick access to basic needs.	General Budget
Rent and removal assistance	Rent support and moving expenses were met for disaster victims.	General Budget
Temporary and permanent housing construction	Container cities were established and permanent residences were built.	General Budget, TCIP, Donation Campaign
Cash assistance to households	TRY 10,000 was paid to the damaged households and TRY 100,000 to the relatives of the deceased.	General Budget, Donation Campaign
Health service facilities	Disaster victims were provided with over-the-counter medicines, exemption from co-payment and bureaucratic flexibility in health procedures.	SSI

Source: Compiled by the author from the web pages of relevant public institutions and organizations.

these social security expenditures. In income and living conditions surveys, the poverty rate of each year is calculated by taking into account the income of the previous year, i.e. the poverty rate in 2024 considers 2023 incomes. In almost all earthquake provinces (except Gaziantep, Adıyaman, Kilis – TR C1), it is observed that poverty showed a small decrease compared to the previous year. It can be said that the income, allowances, pensions and social support provided to households (with and without contributory coverage) from the social security system prevented the increase in poverty to a great extent following the earthquake (Table 7). One of the key components reflecting the absorptive capacity of the social protection system in the aftermath of the earthquakes was the implementation of short-time working allowance and cash wage support.

Table 6. *Social transfers to the earthquake region by İŞKUR and the SSI, no. of people, amount (TRY), (2023)*

Institution	Social transfer	Number of people	Estimated annual amount (2023)
İŞKUR	Unemployment allowance *	96,707	386,828,000
	Short-work allowance	117,108	990,094,487
	Community benefit work programme	139,974	14,008,597,920
	Cash wage support	82,000	700,000,000
	Total	435.789	16,085,520,407
SSI	Survivors' benefits ** after earthquake	15,094	566,025,000
	Old-age pension after the earthquake***	179,267	13,445,025,000
SSI Total		194,361	14,011,050,000

Notes: *Number of unemployment benefit applications and amount paid are estimated. **When calculating the Survivors' benefits, those who received a pension for the first 10 months for 2023 were calculated receiving over 50 per cent of the minimum pension. ***Minimum old-age pension is taken into consideration.
Source: Compiled by the author based on data from the web pages of relevant public institutions and organizations.

Table 7. *Poverty rates in the earthquake region (2014–2024), (%)*

	Adana, Mersin-TR62	Gaziantep, Adıyaman, Kilis-TRC1	Hatay, Kahramanmaraş, Osmaniye-TR63	Malatya, Elazığ, Bingöl, Tunceli-TRB1	Şanlıurfa, Diyarbakır-TRC2
2014	21	14	18	19	17
2015	17	14	19	18	22
2016	22	14	19	19	18
2017	20	12	19	17	15
2018	20	14	17	13	18
2019	20	12	20	16	17
2020	20	14	14	16	13
2021	22	13	19	10	17
2022	21	8	20	12	13
2023	18	8		19	14
2024	18	10	20	18	13

Note: The poverty rate of each region is considered as the proportion of people below 60 per cent of the median income of each region.
Source: Compiled by the author based on data from the web pages of relevant public institutions and organizations.

Table 8. *Informal employment by employment status, (2022) (%)*

	General informal employment rate		Informal employment rate in non-agro sectors	
Status at work	**Türkiye**	**Earthquake region**	**Türkiye**	**Earthquake region**
Employer	13	16	11	12
Own account	57	60	47	53
Unpaid family labourer	85	90	65	73
Paid and salaried	10	17	9	15
Casual	84	93	77	85
General	28	36	17	24

Source: Compiled by the author based on data from the web pages of relevant public institutions and organizations.

According to the field survey conducted by İŞKUR in September–October 2023, 66.1 per cent of enterprises reported that they maintained their employment levels even after these supports ended. This finding indicates that the provided measures helped prevent further employment losses and contributed significantly to the recovery of workplaces in the region.[14]

The 2023 earthquakes in Türkiye posed a significant threat to household resilience, particularly for low-income groups facing the loss of homes, businesses and employment. Early assessments anticipated sharp increases in poverty and inequality due to widespread asset destruction and limited access to financial compensation (Özüdoğru, 2023). Yet, poverty levels in the region have not risen as severely as expected, indicating that Türkiye's social security system has played a critical role in strengthening the resilience of affected households, at least in the short term. Rapidly delivered cash benefits, early retirement allowances, and social assistance programmes helped mitigate the immediate income shocks and supported household consumption in the aftermath of the disaster. These mechanisms functioned as effective coping tools by stabilizing income and preventing deeper destitution. However, important gaps remain in the system's capacity to protect all vulnerable populations. With an informal employment rate of 36 per cent in the earthquake region – well above the national average – many workers remained outside the reach of contributory programmes (Table 8). This includes small-scale tradesmen, casual agricultural labourers, and unpaid spouses of self-employed workers who are excluded under the eligibility rules of Law No. 5510 (Karadeniz, 2011). These limitations illustrate the need to further extend both legal and effective coverage to ensure that the protective functions of the social security system are equitably distributed and truly universal in times of crisis.

14. Data sourced from İŞKUR (not publically available).

For some groups of workers, the challenge of effective coverage also arises. For example, self-employed workers cannot benefit from disability and old-age pensions if they have contribution arrears. Similarly, the dependent survivors of deceased self-employed workers cannot access the survivors' pension if the insured worker had contribution arrears. The decrease in the proportion of own-account workers who pay regular contributions and who have no arrears (from 56 per cent to 26 per cent) in the year after the earthquake thus translates into a rise in the number of own-account workers with contribution arrears, barring their access to social insurance benefits.

In contrast, the non-contributory social assistance system has responded rapidly, but it is fragile in terms of financial sustainability. Although institutional capacities in Türkiye are highly developed, it is observed that the normative framework does not sufficiently include the need to respond systematically to disaster risk.

The transformative capacity of Türkiye's social security and urban policy framework following the 2023 Kahramanmaraş-centred earthquake is reflected not only in the reconstruction of affected areas but also in proactive measures targeting disaster risk reduction in high-risk cities. A notable example is the *Yarısı Bizden* (Half of Us) campaign, introduced exclusively for İstanbul in response to heightened public awareness of seismic vulnerability. This initiative represents a shift towards pre-disaster structural resilience by incentivizing the voluntary renewal of risky housing stock. Under the scheme, the government provides homeowners with a comprehensive support package of TRY 875,000 in grants, TRY 875,000 in interest-free loans, and TRY 125,000 in relocation assistance – amounting to TRY 1,875,000 per residential unit. For additional units owned by the same beneficiary, a loan of up to TRY 1,750,000 is available. Loan repayments are deferred until two years after obtaining the construction permit and are structured over a 10-year term, with no interest applied in the first year. In large-scale collective urban renewal projects (e.g. housing estates), construction is undertaken by public developers such as TOKİ and the Emlak Konut Real Estate Investment Trust, with the grant amount deducted from total costs and the remainder offered on favourable long-term conditions. Although the campaign does not apply directly in the earthquake-affected provinces, it demonstrates a transformative, forward-looking approach to reducing disaster risk through voluntary, state-supported urban regeneration.[15]

Conclusion and policy lessons

Natural disasters are not traditionally classified as direct social risks within the framework of conventional social security systems. However, their consequences

15. For more information, see Questions and Answers on Half of Us.

often fall squarely within the scope of social security intervention. In particular, earthquakes affect not only physical infrastructure but also employment, household income, housing, access to food, and essential health services. In such contexts, the capacity of social security systems to enhance household resilience becomes critically important. At the same time, in order to fulfil this function effectively, the social security system itself must demonstrate institutional and financial resilience. The 2023 Kahramanmaraş-centered earthquakes in Türkiye offer important lessons in this regard, as the social security system provided a coordinated and comprehensive response during and after the crisis.

Resilience framework findings

The earthquake experience of the Turkish social security system shows that traditional social security programmes should be designed not only as social protection mechanisms, but also as integral components of disaster and crisis management. Cash benefits played a key role not merely in compensating for income losses, but also in protecting household consumption, preventing distress migration, and sustaining links with the labour market. In this way, cash transfers contributed significantly to strengthening the long-term resilience of affected populations and helped to prevent a deepening of poverty in the disaster-stricken areas. From the perspective of resilience capacities (Béné et al., 2012), the coping function of the social security system was largely fulfilled, while adaptive capacity was enhanced through the simplification of benefit eligibility conditions and administrative processes, enabling rapid delivery of support to those affected. The transformative dimension was reflected in forward-looking measures, such as the establishment of a dedicated disaster fund, the acceleration of urban transformation projects, and the launch of campaigns such as *Yarısı Bizden* (Half on Us) to encourage the reconstruction of at-risk housing stock. Housing, while not always formally integrated into social security systems, constitutes a fundamental pillar of social protection. In Türkiye, housing reconstruction and resilience have largely been financed through household savings combined with state support. However, such state support is predominantly funded through indirect taxes, which – being regressive rather than progressive – may exacerbate income inequality and limit the equitable distribution of the financial burden of disaster recovery.

Financial sustainability and coverage challenges

The capacity of social security systems to protect households against the severe shocks of natural disasters is closely linked to their own institutional and

financial resilience. In Türkiye's case, the large-scale early retirement scheme – although it provided immediate income support to many households – illustrates a measure that undermines the long-term financial sustainability of the social security system. Likewise, the financing of disaster-related housing reconstruction through indirect taxes highlights challenges in ensuring that the financial burden of recovery is distributed in a socially equitable manner. To enhance preparedness, social security systems need to develop new financing mechanisms for disaster response, such as dedicated disaster funds.

Empirical studies confirm that Türkiye's tax structure – particularly its reliance on indirect taxes – has a limited redistributive effect and may even exacerbate income inequality. Yılmaz, Özyer and Özyer (2019) show that consumption-based taxation in Türkiye tends to be regressive, imposing a heavier relative burden on low-income households. In the context of disaster recovery, this reliance on indirect taxation implies that the poorest segments of society disproportionately bear the cost of reconstruction, further underscoring the need for progressive and equitable financing mechanisms. These could be financed through progressive taxes on wealth or land value rather than consumption taxes, which may disproportionately impact low-income households. Strengthening resilience requires not only sustainable financing but also the broadening of legal and effective coverage. Informal workers remain excluded from most social insurance benefits, limiting the reach of social security as an effective buffer against disaster-related income shocks. Expanding formal employment is therefore critical to enhance the shock-absorbing function of social security systems in future crises. Furthermore, the impact of social security transfers on household and individual resilience cannot be fully assessed due to data limitations. The collection of post-disaster data through surveys such as the Income and Living Conditions Survey faces significant challenges, particularly due to internal displacement and migration. This calls for innovative approaches to combining administrative records with targeted surveys to better understand and support household resilience.

Policy lessons for other countries

Türkiye's integrated and rapid social security and disaster management response offers valuable policy lessons for other countries confronting rising disaster risks. Social security systems must be designed as proactive pillars of disaster risk management, simultaneously strengthening the resilience of affected individuals and households, and ensuring their own capacity to withstand and respond to future crises. To achieve this, it is essential to reinforce digital infrastructures, improve coordination with disaster management agencies, develop equitable and

sustainable financing strategies, and embed disaster responsiveness into the core design of both contributory and non-contributory social security programmes.

With robust governance, inclusive coverage, and innovative data systems that can effectively capture the impact of shocks even amid internal migration, social security systems can fulfil their role as automatic stabilisers and key agents of resilience in the face of future natural disasters. Türkiye's experience shows that resilience requires not only immediate responses but also structural reforms that can serve as a model for countries seeking to build disaster-ready social protection systems. As demonstrated in Türkiye's earthquake response, social security systems can act quickly in crisis situations. However, long-term resilience requires not only efficient responses but also structural preparedness. As the ILO (2024, p. 26) clearly states, "disaster response is an ancillary, not a primary function of social protection". Building resilient systems thus requires prioritizing ex ante mechanisms that reduce vulnerability before shocks occur.

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