

**Palestine National Authority**  
**Palestinian Central Bureau of Statistics**

**Impact of Labor Shock on the Women Participation in the  
Labor Force: Palestinian Experience**

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## Important Note

**The ideas and thoughts presented in this research present the author's and not necessarily the PCBS' official position**

## **Acknowledgment**

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## **1. Background**

Due to the latest developments in the peace process, and the Israeli aggression on the Palestinian National Authority (PNA) and the Palestinian public at large, much of the gains on the socioeconomic conditions have received a severe blow [1]. More than eighteen months into the Intifada, the Palestinian community is under one of the strictest closures, standards of living have deteriorated in a great deal, poverty rates have almost doubled, and the economy has lost about a half of its value. Labor market is one of the initial victims of these Israeli measures. The usual labor flow from the Palestinian Territory to Israel was disturbed. Borders were closed and more than 135 thousand Palestinian workers were prevented from reaching their usual place of work in Israel and Israeli settlements. This number forms about 25% of total the Palestinian employment, which causes a distortion in the size and structure of labor force as a result of a labor shock (sudden increase in labor supply). Vulnerable groups, in this case women and unskilled laborers, are expected to be the most affected by these external factors, which put pressure on the labor force.

## **2. Characteristics and Trends of the Palestinian Labor Force**

The Palestinian labor market is totally tied to Israel, domestic employment is affected with employment in Israel. There are certain unpredictable constraints on labor mobility, and high unemployment rate is negatively correlated with employment in Israel. In addition, rising wages are concurrent with falling unemployment, and there is a persistent wage gap between domestic and Israeli jobs [8].

According to recent statistics [4], number of participants in the labour force decreased from 735 thousand in the 3<sup>rd</sup> quarter 2000 to 678 thousand in the 3<sup>rd</sup> quarter 2001, number of persons who don't work and don't seek jobs for being discouraged increased by 28.0% between the 3<sup>rd</sup> quarter 2000 and 3<sup>rd</sup> quarter 2001; (26 thousand persons). Number of persons who don't work nevertheless seeking or not seeking job, increased from 170 thousand in the 3<sup>rd</sup> quarter 2000 to 291 thousand in the 3<sup>rd</sup> quarter 2001. While those who don't work, but seeking job reached 172 thousand which represent 25.3% of the total labour force according to the ILO standards, compared with 10.0% in the 3<sup>rd</sup> quarter 2000 (before the beginning of Al-Aqsa Intifada). These statistics indicate significant decrease in the labor force

participation rate (LFPR), and consequently the productive population, which lead to blow up the economic dependency rate.

As for the distribution by economic activity (industry) for those still working is concerned, there is an increase of those working in services and other branches (35.5% in the 3<sup>rd</sup> quarter 2001, compared with 28.6% in the 3<sup>rd</sup> quarter 2000). The results showed a sharp increase in the percentage of those working in services and other branches in the Gaza Strip, (38.0% in the 3<sup>rd</sup> quarter 2000 to 53.0% in the 3<sup>rd</sup> quarter 2001); also it increased in the West Bank from 24.6% in the 3<sup>rd</sup> quarter 2000 to 29.3% in the 3<sup>rd</sup> quarter 2001.

Employment in construction decreased in the Gaza Strip from 15.9% in the 3<sup>rd</sup> quarter 2000 to 6.0% in the 3<sup>rd</sup> quarter 2001, whereas it decreased in the West Bank from 24.2% in 3<sup>rd</sup> quarter 2000 to 18.3% in the 3<sup>rd</sup> quarter 2001.

The distribution by economic activity reveals that services (mostly in the public sector) were used to absorb the increasing labor supply, but this situation reduced dependency on the productive sectors, particularly manufacturing in the private sector.

The average value of the nominal daily net wage of the employees in Gaza Strip increased from 50.4 NIS (about \$12) in the 3<sup>rd</sup> quarter of 2000 to 52.9 NIS (\$11) in the 3<sup>rd</sup> quarter 2001. The Average daily net wage for those working in Israel and settlements decreased form 110.8 NIS (\$26) in the 3<sup>rd</sup> quarter 2000 to reach 105.7 NIS (\$24.5) in the 3<sup>rd</sup> quarter 2001. The percentage of employees whom monthly wages below poverty line equivalent for the year 2001 (1642 NIS, for household composed of two adults and 4 children) increased from 43.5% in the 3<sup>rd</sup> quarter 2000 to 54.0% in the 3<sup>rd</sup> quarter 2001.

As far as women LFPR is concerned, it is worth mentioning that the last five years witnessed a significant increase in the proportion of women in the labor market, despite the fact that this proportion is still under the average participation of developed and some developing countries<sup>1</sup>.

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<sup>1</sup> Women LFP increased from 72 thousands in 1995 (about 11.2% women LFPR) to 98 thousands in 2000 and was projected to reach 105 thousands in 2001 (12% LFPR). [7].

Some research studies [7] indicated that the low women's LFPR is related to socioeconomic and cultural reasons. Women enter the labor market at later ages compared to men. The number of economic activities that are available for women to compete is limited (basically education, agriculture, manufacturing and services), and this applies to occupations as well (basically school teachers, nurses, textiles workers, skilled and unskilled agricultural workers). A significant proportion of women engaged in the LF are working in unpaid family agricultural activities. There is a significant wage gap between men and women, and most of unemployed women are well educated compared to unemployed men.

### **3. The labor Shock**

“Closure” is a term referring to the restrictions placed by Israeli military army on the movement of Palestinian goods and labor across borders and within the West Bank and Gaza Strip. The restrictions take different forms: internal closure within the West Bank and Gaza Strip, closure of the borders between Israel and the Palestinian territory and neighboring Jordan and Egypt. Internal closure is a dense network of fixed and mobile military checkpoints has been established on transportation lines within the West Bank and Gaza Strip since September 28<sup>th</sup> 2000. As a result of this closure, most of the Palestinian workers in Israel and settlement (about 135,000 in 3<sup>rd</sup> quarter 2000) lost their jobs. The restrictions placed on mobility of goods and raw material, and the closure of borders with the neighboring countries decreased the capacity of domestic private sector to absorb usual labor supply. This three-dimension pressure on the domestic labor market caused a sudden jump (increase) in labor flow (supply) of the domestic labor market due to the reduction of labor demand in Israel. This situation is characterized by:

1. Workers in Israel return back to seek job in the domestic market.
2. Closure of border with neighbors returned the pressure to the domestic market.
3. Absorption capacity (demand) of domestic market decreased due to restrictions.

All these circumstances together squeezed the Palestinian market, particularly the private sector, and women faced a situation where they have to compete with men even at the very traditionally women job opportunities.

#### 4. Impact of the labor shock

We will examine the changes took place in the labor force status for women between the 3<sup>rd</sup> quarter 2000 and 3<sup>rd</sup> quarter 2001, as closure was imposed at the beginning of the 4<sup>th</sup> quarter 2000. This exercise is based on the quarterly labor force survey (LFS) conducted by the Palestinian Central Bureau of Statistics. LFS is based on a (2-2-2) rotation sample scheme<sup>2</sup>. The data used in this article is related to the common households interviewed in the 3<sup>rd</sup> quarter of the two successive years 2000 and 2001. The total sample of individuals 15 years and above is 9720 persons, of which 4754 females.

The methodology of investigating the impact on different LF components is based on following up the common persons interviewed in the two concerned rounds (3<sup>rd</sup> quarter 2000 and 3<sup>rd</sup> quarter 2001). For the purpose of simplicity, we will ignore the increasing supply patterns of women labor during the last five years, which will increase the supply-demand gap in the labor market during the labor shock. The transition matrix  $T$  represents the *change* of the LF classification of persons interviewed in the two concerned quarters. The matrix input  $T_{ij}$  represents the percentage of persons who were classified (i) in the 3<sup>rd</sup> quarter 2000 and classified (j) in the 3<sup>rd</sup> quarter 2001, where

$i=1,2,3,4$ . (1=full employed, 2=underemployed, 3=unemployed, 4=outside LF)

$j=1,2,3,4$ . (1=full employed, 2=underemployed, 3=unemployed, 4=outside LF)

(e.g.  $T_{12}$ : percentage of persons 15 year and above that was full employed in the 3<sup>rd</sup> quarter 2000 and became underemployed in the 3<sup>rd</sup> quarter 2001. Also,  $T_{21}$ : percentage of persons who were underemployed in 3<sup>rd</sup> quarter 2000 and became full employed in the 3<sup>rd</sup> quarter 2001. etc).

To quantify the impact on women labor in matrix  $T$ , we consider the matrix  $P$  that represents the percentage of females out of all persons in the concerned category in matrix  $T$ . The input  $P_{ij}$  represents the percentage of females out of all persons who were classified  $T_{ij}$ . (e.g.  $P_{12}$ : percentage of females out of all persons who were full employed in the 3<sup>rd</sup> quarter 2000 and became underemployed in the 3<sup>rd</sup> quarter 2001). Using these two observations, we will examine the changes took place on the women LF status. The denominator in all calculations

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<sup>2</sup> In this survey, each household is interviews for two successive quarters, gets out of the sample for two successive quarters, and gets in again to be interviewed for two successive rounds (for more details, see the methodology of LFS in PCBS publications).

of transition matrices is females 15 years and above. This will give us the chance to observe the changes among actually and potentially economically active females.

**4-1 Impact on female labor force participation**

During the labor shock, female labor force participation decreased by 23.2 per cent. About 7 per cent of females 15 years and above lost their jobs and were classified during 3<sup>rd</sup> quarter 2001 outside LF, while the new entries were 3.3 per cent (i.e. net decline 3.7 per cent). On the other hand, most of those left LF were previously employed (85.7 per cent), while less proportion entered LF as employed (78.4%). As a result of the shock, the proportion of economically active women decreased. The shock reduced the proportion of actually productive employed women as well. In addition, the matrix *T* indicates that the impact of the shock on the productive groups is more sever rather than those potentially productive categories (unemployment). The proportion of the full employment decreased during the shock by 22.4 per cent, and underemployment reduced by 75 per cent, while unemployment decreased by 16.7 per cent.

**Transition matrix of females 15+ by LF status**

		3 <sup>rd</sup> quarter 2001				
		1	2	3	4	T
3 <sup>rd</sup> quarter 2000	1	5.4	0.1	0.2	5.9	11.6
	2	0.3	0.0	0.0	0.1	0.4
	3	0.4	0.0	0.4	1.0	1.8
	4	2.9	0.0	0.8	82.4	86.2
	T	9.0	0.1	1.5	89.4	100

**Ratio of females in the transition matrix (*T*) of female LF status**

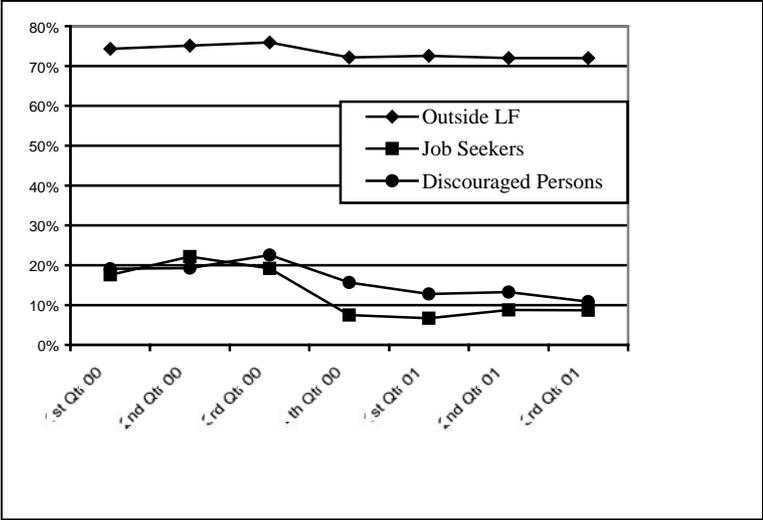
		3 <sup>rd</sup> quarter 2001			
		1	2	3	4
3 <sup>rd</sup> quarter 2000	1	11.5	5.0	1.8	40.1
	2	14.3	6.1	3.2	10.7
	3	17.5	16.7	12.2	33.3
	4	52.1	0.0	24.4	77.0
	T				

It is worth noting that while females constitutes about one half of persons 15 years and above, this proportion is 13.7 per cent of total labor force during the shock (against 15.8 per cent before it). In addition females constitute 55.8 per cent of all persons who were not affected by the shock (i.e. their classification before and during the shock was not changed-those on the

diameter of the matrix  $P$ ). They also constitute about one third of the positively impacted<sup>3</sup> (below the diameter), and more than one fifth of those negatively impacted<sup>4</sup> by the shock (above the diameter).

Recent statistics [4] indicate that ratio of female is decreasing over the period 2000-2001 for some selected LF indicators, namely outside LF, jobseekers, and discouraged persons. But the level of the decline explains the low female LF participation rate, due to the fact that while the ratio of decline between the 3<sup>rd</sup> quarter 2000 and the

**Ratio of females by selected labor force status components (2000-2001)**



corresponding quarter 2001 in the category of persons outside LF was 5 per cent, the decline for the discouraged persons was 51.8 per cent and for jobseekers 54.7 per cent, which assumes weakness of female position within the structure of the labor market. Women are most likely to give up from seeking job more than men. Therefore any external pressure on the labor force is assumed to have certain impact on women’s labor.

**4-2 Impact on the distribution by occupation**

Total females occupying certain occupations declined during the shock by 23.5 per cent (from 11.9 to 9.1 per cent). The internal distribution of females by main occupation indicates increase<sup>5</sup> of the proportion of legislators, senior officials, managers, professionals, technical, associate and clerks. Decline by about one third in the category of service, shop & market workers, skilled agricultural & fishery workers, and decline by about one half for the category of craft and related trade workers, plant & machine operators and assemblers. In addition, it

<sup>3</sup> Those changed from Outside LF to full employment to underemployment or unemployment, or those changed from unemployment to underemployment or full employment, or those changed from underemployment to full employment.  
<sup>4</sup> Those changed from full employment to underemployment or unemployment or outside LF, or those changed from underemployment to unemployment or outside LF, or those changed unemployment or outside LF  
<sup>5</sup> The increase refers to the percentage of employed females in this category, which does not include any increase in the number of employed females in the same category, because there was a significant decrease in all employed females in all occupations.

is worth noting that 88.3 per cent maintained their labor force status (of which 82.4 percent outside LF).

### Transition Matrix of females 15+ by Occupation<sup>6</sup>

		3 <sup>rd</sup> quarter 2001						T	
		1	2	3	4	8	9		
$\phi =$	3 <sup>rd</sup> quarter 2000	1	3.3	0.0	0.0	0.0	0.1	1.0	<b>4.2</b>
	2	0.1	1.4	0.0	0.0	0.0	4.0	<b>5.5</b>	
	3	0.0	0.1	0.5	0.1	0.1	0.7	<b>1.5</b>	
	4	0.0	0.1	0.0	0.3	0.0	0.3	<b>0.7</b>	
	8	0.3	0.1	0.0	0.0	0.4	1.0	<b>1.8</b>	
	9	0.5	2.0	0.3	0.1	0.8	82.4	<b>86.2</b>	
	T	<b>4.3</b>	<b>3.6</b>	<b>0.8</b>	<b>0.4</b>	<b>1.5</b>	<b>89.4</b>	<b>100</b>	

### Ratio of Females in the Transition Matrix ( $\phi$ ) of Population 15+ by Occupation

		3 <sup>rd</sup> quarter 2001						T	
		1	2	3	4	8	9		
$\delta =$	3 <sup>rd</sup> quarter 2000	1	26.5	5.3	0.0	0.0	11.9	56.4	<b>25.9</b>
	2	7.7	13.1	0.0	3.9	1.1	64.1	<b>26.0</b>	
	3	2.9	1.4	4.2	3.4	2.0	19.7	<b>5.8</b>	
	4	7.7	7.4	0.0	4.8	0.4	7.6	<b>4.0</b>	
	8	53.8	11.1	4.3	3.0	12.2	33.3	<b>20.9</b>	
	9	66.7	60.0	39.0	7.9	24.4	77.0	<b>74.2</b>	
	T	<b>27.2</b>	<b>19.8</b>	<b>5.4</b>	<b>4.4</b>	<b>7.6</b>	<b>71.3</b>	<b>48.9</b>	

About 22 per cent of those entered LF entered as unemployed; against 14 per cent of those left LF was unemployed. About 0.8 per cent of females 15+ entered the high level and skilled occupations (legislator, professionals, craft workers), against 1.7 per cent left this category to be outside LF, which indicates that skilled and high-level women occupations lost more than one tenth due to the shock.

<sup>6</sup> The classification of occupation is: (1): Legislators, Senior Officials, Managers, Professionals, Technical, Associate and Clerks, (2): Service, Shop & Market Workers, Skilled Agricultural & Fishery Workers, (3): Craft and Related Trade Workers, Plant & Machine Operators & Assemblers, (4): Elementary Occupations, (8): Unemployed, (9): Outside LF.

The results in the two matrices  $\phi$  and  $\delta$  explains that skilled female workers (usually in manufacturing and agriculture in the private sector) were the most impacted, while professionals (usually school teachers and nurses in the public sector) are less impacted by the shock.

**4-3 Impact on the distribution by economic activity**

During the shock, the absorption capacity of all economic activities declined, and the direction of distribution moves towards outside LF. About 88.2 per cent of females did not change their labor force status during the shock.

Absorption capacity of agriculture declined by 40 per cent. About 1.7 per cent of females 15+ were absorbed by this sector, while a doubled percentage was dismissed from this sector to outside LF, and 0.1 per cent was transmitted to be absorbed by the sector of commerce and restaurants. The decline in the absorption of manufacturing reached 47 per cent. About 1.0 per cent of all females 15+ were dismissed from this sector (0.7 to outside LF, 0.1 to commerce, and 0.1 to unemployment).

**Transition Matrix of Fmales15+ by Industry**

		3 <sup>rd</sup> quarter 2001						
		1	2	3	4	8	9	T
3 <sup>rd</sup> quarter 2000	1	0.9	0.0	0.1	0.0	0.0	3.4	<b>4.5</b>
	2	0.0	0.6	0.0	0.1	0.1	1.0	<b>1.9</b>
	3	0.0	0.0	0.4	0.1	0.0	0.5	<b>1.0</b>
	4	0.0	0.0	0.1	3.5	0.1	1.0	<b>4.7</b>
	8	0.0	0.0	0.0	0.3	0.4	1.0	<b>1.8</b>
	9	1.7	0.3	0.2	0.6	0.8	82.4	<b>86.2</b>
	T	<b>2.7</b>	<b>1.0</b>	<b>0.9</b>	<b>4.5</b>	<b>1.5</b>	<b>89.4</b>	<b>100</b>

**Ratio of Females in the Transition Matrix (§) of Population 15+ by Industry**

		3 <sup>rd</sup> quarter 2001							
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>9</b>	<b>T</b>	
<b>β=</b>	3 <sup>rd</sup> quarter 2000	<b>1</b>	24.7	0.0	29.4	0.0	1.5	62.7	<b>38.4</b>
	<b>2</b>	14.3	10.7	7.7	7.5	4.5	43.0	<b>16.0</b>	
	<b>3</b>	0.0	0.0	5.6	7.0	0.0	25.3	<b>7.5</b>	
	<b>4</b>	0.0	0.0	5.6	12.7	1.9	18.1	<b>10.8</b>	
	<b>8</b>	6.7	10.0	5.3	24.6	12.2	33.3	<b>20.9</b>	
	<b>9</b>	73.2	44.4	23.4	37.2	24.4	77.0	<b>74.2</b>	
	<b>T</b>	<b>35.0</b>	<b>12.4</b>	<b>8.0</b>	<b>13.9</b>	<b>7.6</b>	<b>71.3</b>	<b>48.9</b>	

The decline in commerce reached 10 per cent. This sector accommodated 0.2 per cent of females 15+ and dismissed to 0.5 per cent to outside LF, and transmitted 0.1 to services and other branches. In addition, absorption of services and other branched declined by 4.2 per cent.

It is worth noting that females who lost their jobs and became unemployed during the shock are shared equally by manufacturing and services, while more than half of those who lost jobs and became outside LF were working in agriculture (57.6 per Cent), and about one sixth were in manufacturing or services. On the other hand, about 55 per cent of those who found jobs of those who were unemployed or outside LF were engaged in agricultural activities, 28.8 per cent in services and other branches, while manufacturing absorbed less than one tenth of them (9.7 per cent), noting that all those found jobs who were unemployed were absorbed in commerce and restaurants sector.

**4-4 Impact on the distribution by employment status**

The contribution of employment status categories decline during the shock, particularly wage employment and unpaid family members. About 6 per cent of females 15+ lost there jobs to outside LF, while 2.8 per cent entered found jobs from outside LF. About 10 per cent of those lost their jobs to outside LF were self-employed, 28.6 per cent were wage employees and 63 per cent were unpaid family members.

This distribution does not differ significantly from the distribution of the new entries (those who found jobs from outside LF). About 1.1 per cent of females 15+ lost their jobs to be unemployed, while the unemployed females who found jobs are 1.2 per cent. Out of each hundred of those lost their jobs to be unemployed, there are 91 unpaid family members and 9 self employed, while out of those found new jobs, there are 8 self employed, 8 wage employees and 84 unpaid family members.

**Transition Matrix of Females 15+ by Employment Status**

		3 <sup>rd</sup> quarter 2001						
		1	2	3	4	8	9	T
3 <sup>rd</sup> quarter 2000	1	0.0	0.1	0.0	0.0	0.0	0.0	<b>0.1</b>
	2	0.0	0.3	0.0	0.1	0.0	0.6	<b>1.0</b>
	3	0.0	0.0	4.1	0.0	0.2	1.6	<b>5.9</b>
	4	0.0	0.1	0.1	1.0	0.0	3.8	<b>5.0</b>
	8	0.0	0.0	0.4	0.0	0.4	1.0	<b>1.8</b>
	9	0.1	0.3	0.8	1.6	0.8	82.4	<b>86.2</b>
	T	<b>0.1</b>	<b>0.8</b>	<b>5.4</b>	<b>2.7</b>	<b>1.5</b>	<b>89.4</b>	<b>100</b>

It is also noted that all employers who remain in the category of employment became self-employed, while one third of self-employed became unpaid family members.

No single wage employee was transmitted to other different employment status category, out of hundred of those changed their status became unemployed and 89 left LF.

In addition, about 83 per cent of all persons who changed their employment status from unpaid family members to outside LF were females. One female out of each five persons changed from wage employees to unemployed, and one female out of each three persons changed from wage employees to outside LF.

## Ratio of Females in the Transition Matrix ( $\phi$ ) of Population 15+ by Employment Status

		3 <sup>rd</sup> quarter 2001						T	
		1	2	3	4	8	9		
$\mathbf{\xi=}$	3 <sup>rd</sup> quarter 2000	1	1.8	0.0	6.3	0.0	0.0	5.9	<b>1.9</b>
		2	2.9	4.0	1.4	12.5	0.0	24.3	<b>6.7</b>
		3	0.0	0.9	14.0	0.0	1.8	20.1	<b>11.1</b>
		4	0.0	29.4	14.3	46.2	4.8	82.6	<b>62.1</b>
		8	0.0	4.8	22.5	0.0	11.6	33.3	<b>20.6</b>
		9	33.3	27.6	37.6	73.3	24.4	77.2	<b>74.2</b>
		T	<b>4.1</b>	<b>5.3</b>	<b>15.2</b>	<b>46.7</b>	<b>7.6</b>	<b>71.3</b>	<b>48.9</b>

The results in the two matrices  $\phi$  and  $\xi$  indicate that the shock significantly affects the different categories of employment status, while it does not significantly affect the distribution of persons coming in (or going out) LF during the shock.

## 5. Conclusion

LF participation rate is low in the Palestinian territory, particularly for females. Thus during the closure of 2000 economic dependency ratio increased significantly. Due to the shock many females gave up and left the labor market to be not economically active. It is worth noting that contribution of females to the jobseekers is very low, and this proportion declines during the labor shock. Population of potentially productive females (15+) is a dynamic one and effectively interacting with labor shock caused by closure. The nature of changes taking place during the shock is biased towards the more disorganized sectors and occupations (self employed, unpaid family business). The more organized private sector that is absorbing female labor (manufacturing) is the less absorbing sector during the shock. Therefore females are transmitted from the more organized to the less organized sectors, which means less labor rights.

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