



Policy Note

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HOW TIME DEFICITS AND HIDDEN POVERTY UNDERMINE THE SUSTAINABLE DEVELOPMENT GOALS

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Introduction

The Sustainable Development Goals (SDGs) include a clear goal to reduce the incidence of poverty by 50 percent by 2030 and a somewhat vague goal to recognize and render support in various ways to the unpaid provision of domestic services and care of persons undertaken predominantly by women in their households. Policymakers too often fail to grasp the connections between these two goals—a failure that stems from an incomplete understanding of poverty and corresponding blind spot in our official poverty statistics.

The predominant framework for assessing poverty is deeply flawed because it rests on an implicit assumption that everyone has enough time available to devote to household production or enough resources to compensate for deficits in household production by purchasing market substitutes. Official measurements of poverty and poverty reduction are therefore doomed to paint a biased picture of poverty. Results from our research conducted in seven countries indicate the extent of bias stemming from this implicit assumption.¹

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Our findings suggest that, to obtain a more accurate portrait, assessments of progress in poverty reduction should take time deficits in household production into account. They also highlight the interlocking of deficits in time and income (or consumption) for a substantial segment of the working population. This indicates that a closer link may exist between the goals of poverty reduction and support for household production activities than is commonly acknowledged. Failure to recognize the link in policy design can contribute to failure on both fronts.

A Blind Spot in Measurements of Poverty

The SDGs envisage a better world in many ways. I will focus on the two goals of ending poverty (Goal 1) and greater gender equality (Goal 5). The SDGs' poverty reduction target (Target 1.2) is aimed broadly at all dimensions of poverty *recognized by national governments*.² The qualifier is significant. In practice, most countries use either income or consumption thresholds to identify the poor for official statistical purposes.

The goal of greater gender equality has several components. Of particular interest to my discussion is the component (Target 5.4) pertaining to unpaid care and domestic work (referred to hereafter as household production). The target seems to be to provide recognition for household production and support to the women who disproportionately bear the responsibility for such production.³ The desired extent of recognition and support are left to the discretion of national governments. Given that the earlier United Nations declaration on Millennium Development Goals did not contain any reference to household production, the "recognition-support" statement in the SDGs may be considered a step in the right direction.

The two targets are interconnected in several ways. Poor people tend to lack basic amenities in their households (this is indeed a characteristic of being poor in most of the developing world), which contributes to their spending more time on household production tasks such as cleaning and cooking than their better-off counterparts. If they escape poverty, they may be able to reduce the drudgery associated with household production. To illustrate the linkage in the other direction, we can consider a policy initiative that makes free childcare available to poor parents. This may reduce the time that they spend on household production and, provided that opportunities are available, increase their hours of employment, which in turn may allow them to become nonpoor. Of course, there need not

always be a clear inverse relationship between the time spent on household production and poverty status: some people may devote the time they gain from reducing drudgery to caring for their dependent children, so that the total time they spend on household production remains roughly unchanged. In spite of such interlinkages between the spheres of poverty reduction and household production, there does not appear to be a clear articulation of the need for taking household production into account in the measurement and monitoring of poverty.

The absence of serious consideration of household production is reflected in the dominant thinking about poverty. A clear instance of this can be found in the manner in which conventional poverty thresholds are constructed. As originally pointed out by Clair Vickery in a critique of the poverty lines employed in the United States, the thresholds rest on an implicit assumption about the time spent on household production—specifically, to survive with the poverty-level of income, the household will require a household member to be a full-time homemaker who shops at the cheapest retail outlets, prepares meals from scratch, takes care of children, and so on (Vickery 1977, 30).

A research project initiated at the Levy Institute about seven years ago has attempted to unmask the implicit assumption in a variety of national contexts and modify the official poverty thresholds accordingly. The resulting picture of poverty is dramatically different and sheds new light on certain fundamental aspects of poverty alleviation strategies. My goal is to provide an introduction to this body of work, highlight some of the key findings, and outline their implications for the SDGs' targets.

The Levy Institute Measure of Time and Income Poverty (LIMTIP)

Once we accept the idea that surviving with household income (or consumption)⁴ that is around or below the poverty line requires a certain amount of time to be set aside for household production, we have to ask the question: does every household have the requisite time? It is unrealistic to expect the answer to be in the affirmative. For those who do not have the available time, the poverty line does not represent the minimum amount of monetary resources necessary to avoid material deprivation—because households with time deficits will have to purchase market substitutes to fill gaps in household production just to attain the poverty-level living standard. Indeed, to consider two households that are identical in all respects except

time available for household production—one deficient and the other not—as facing the same poverty line is inequitable toward the household with the time deficit (Zacharias 2017, 263–4). In addition to being inequitable, this is also an internally inconsistent procedure for assessing poverty, because while the definition of the threshold includes both the minimum monetary income and (*by assumption*) the time required for household production, the definition of resources includes *only* monetary income (Zacharias, Antonopoulos, and Masterson 2012, 22). The natural way to correct the bias in the poverty line is to add the replacement cost of the time deficit—that is, the cost of buying goods and services to fill in for the missing household production—to the poverty line of households with time deficits. In line with the earlier literature (e.g., Harvey and Mukhopadhyay 2007), this is the strategy that we followed in our studies. Making this correction reveals the poverty that is hidden by the conventional measures and contributes to better-designed poverty alleviation strategies.

The distinctive conceptual feature of the LIMTIP is its treatment of time deficits. Previous studies that followed the approach of Vickery have treated time deficits solely as a household-level phenomenon, because they considered the household as a monolith in terms of time allocation. But this notion goes against our everyday experience—and the evidence amassed from time-use surveys from around the world—indicating that the division of household production tasks is very unequal between members of the household. In general, even when men and women engage in employment for a similar amount of time, women bear a higher share of household tasks. Discarding the monolithic assumption permits us to conceptualize time deficits as individual- and household-level phenomena. Thus, we can integrate *intra*household gender disparities in the division of household production tasks into the measurement of poverty. This allows for the possibility that everyone in a time-poor household (a household with at least one person with a time deficit) need not be time-poor, unlike the case of income poverty in which everyone in an income-poor household is considered as income-poor (Zacharias 2017, 272–6). Combining the information about time and income deficits in the manner described above results in the LIMTIP.

We have developed estimates of the LIMTIP for a set of countries (in a given year): Argentina (2005); Chile (2006); Ghana (2012–13); Korea (2009); Mexico (2008); Tanzania (2011–12); and Turkey (2006).⁵ Our estimates of the LIMTIP

are based on the official national income or consumption poverty lines in conjunction with our own estimates of national thresholds for the required time for household production. Because we are using nationally specific poverty lines, the estimates discussed below are not, strictly speaking, comparable across countries.

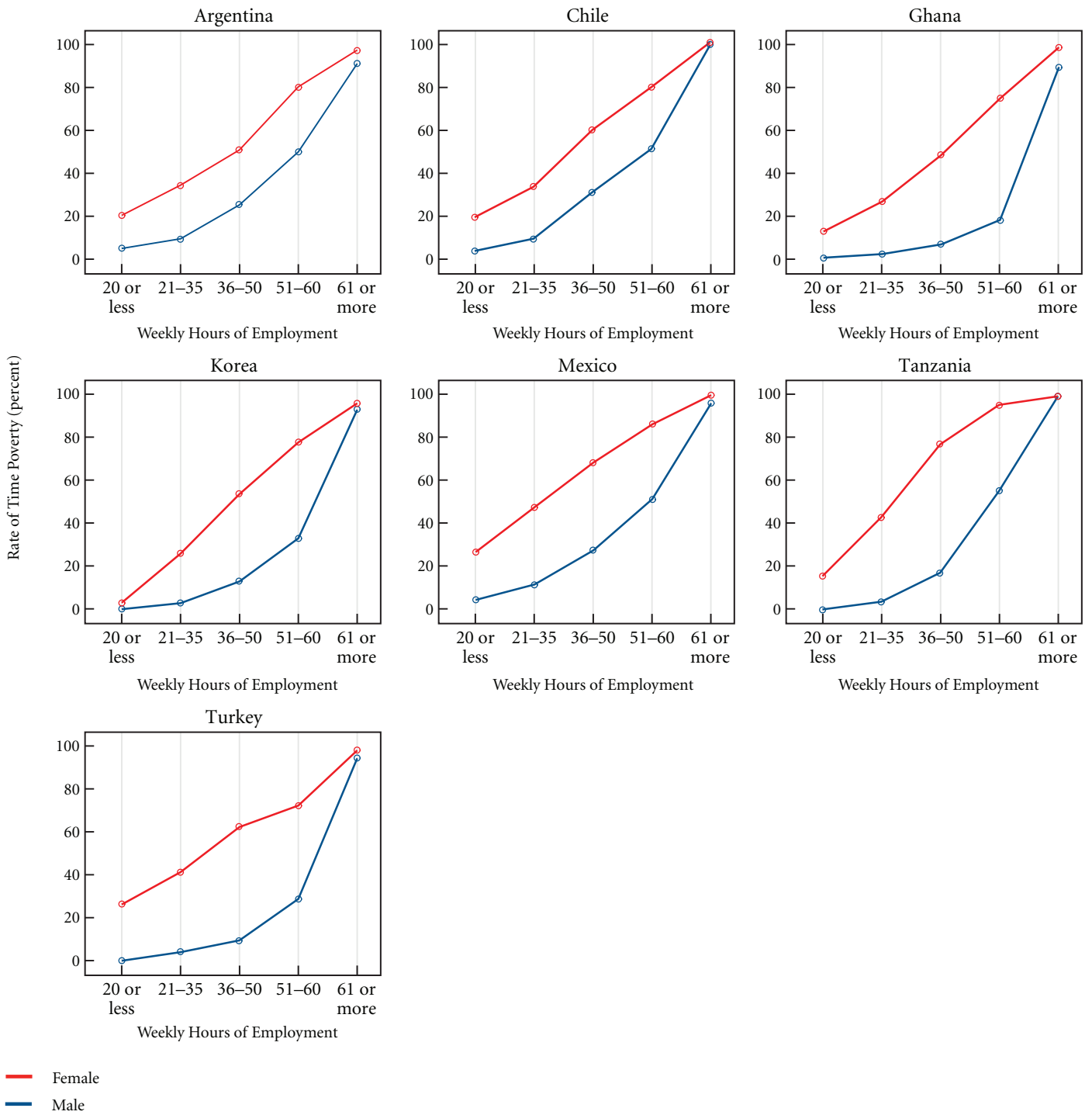
Patterns of Time and Income Poverty

We found that the incidence of time deficits among employed individuals was substantial in all the countries that we studied, with the rate falling between 38 percent (Ghana) and 52 percent (Tanzania). This shows that the assumption that households (at least those with employed persons)⁶ are unlikely to have time deficits is false. We also found that there was a striking gender disparity among employed persons even after we control for hours of employment (Figure 1).⁷ The rates for men and women converge at nearly 100 percent when the hours at the job are very long (over 61 hours per week) in all countries except South Korea, where the equality holds also at the lowest hours interval (20 hours or less per week).

The higher rate of time poverty among women is due to their bearing a higher share of household production responsibilities. This is reflected in the higher average values of the required hours of household production for women compared to men (Figure 2). It is noteworthy how stable men's average hours of household production are across different levels of hours of employment and how little variation women's average hours display. In short, it does not seem to matter much how long the hours at the job are for either sex: women disproportionately bear the responsibilities for household production.

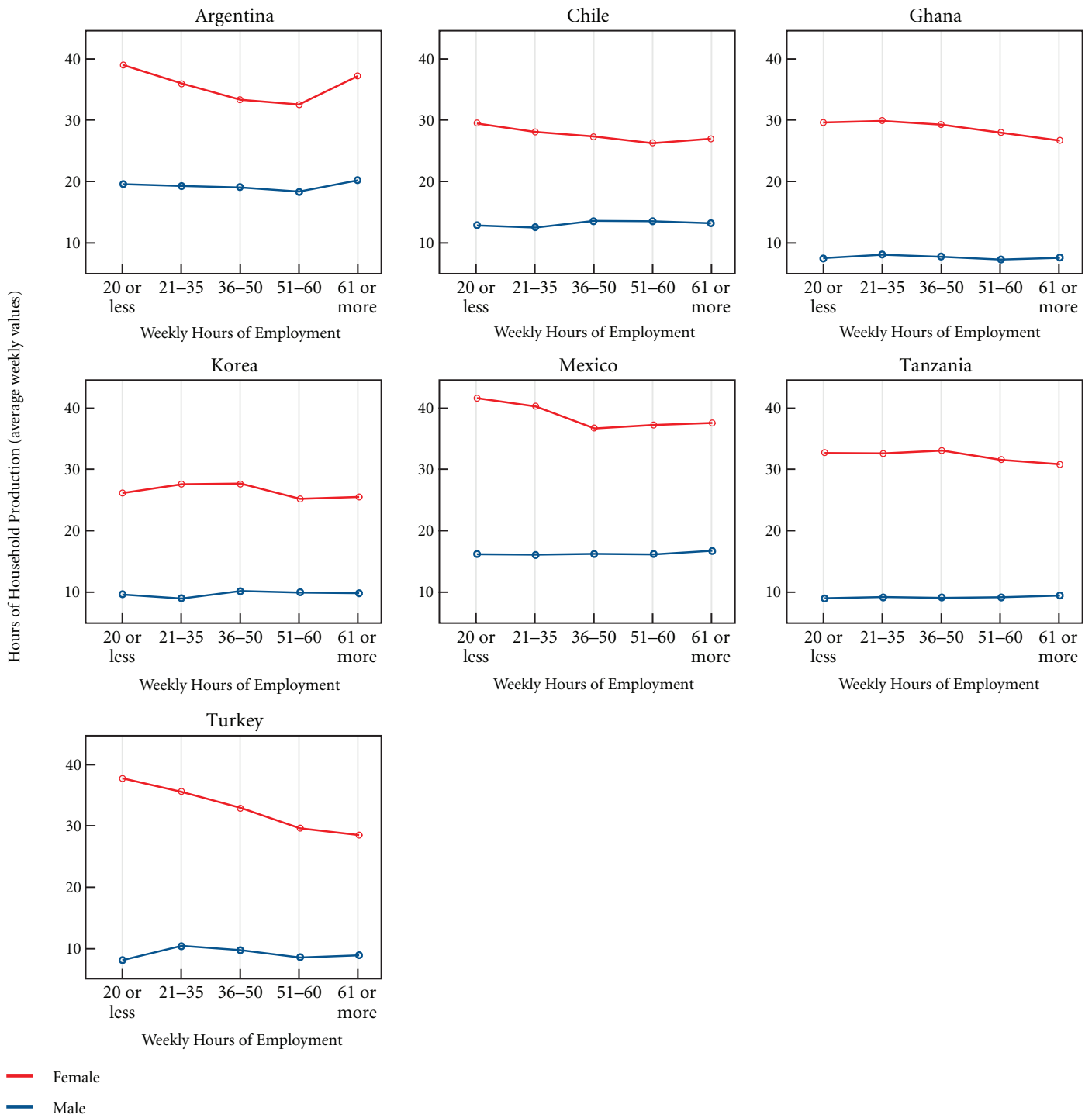
As discussed above, resolving the bias stemming from ignoring time deficits in the official poverty line requires us to include the monetized value of time deficits in the poverty line of households with time deficits. Once we carried out the operation, we expected the adjusted or LIMTIP poverty rate to be higher. However, the size of the difference, or what we prefer to call “hidden poverty,” is remarkable (Figure 3). For example, Korea is the country with the lowest official poverty rate in this group, with only 5.4 percent of households. Taking time deficits into account almost doubles the measured poverty rate to 10 percent, indicating that the extent of hidden poverty is almost as large as officially recognized poverty. A relatively large number of Korean households (relative, that is, to the number of

Figure 1 Rates of Time Poverty among Employed Persons (18–70 years of age) by Country, Sex, and Weekly Hours of Employment



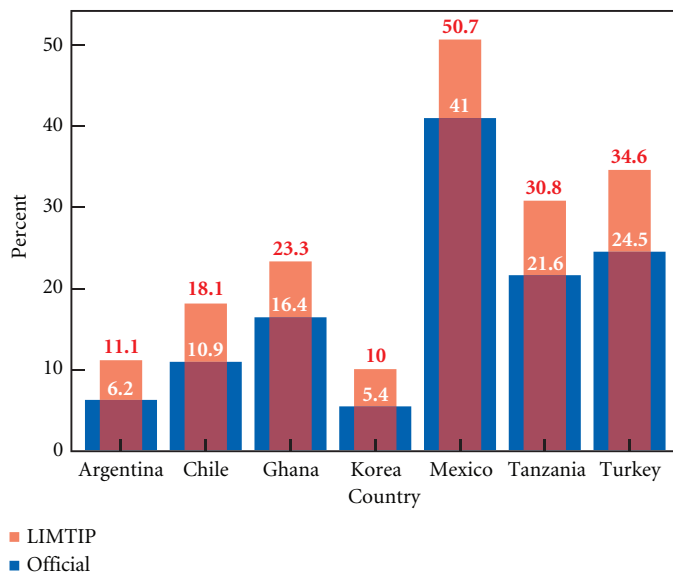
Source: Author's calculations based on synthetic datasets (see Note 7).

Figure 2 Average Weekly Hours of Required Household Production among Employed Persons (18–70 years of age) by Country, Sex, and Weekly Hours of Employment



Source: Author's calculations based on synthetic datasets (see Note 7).

Figure 3 Poverty Rate among Households: Official vs. LIMTIP



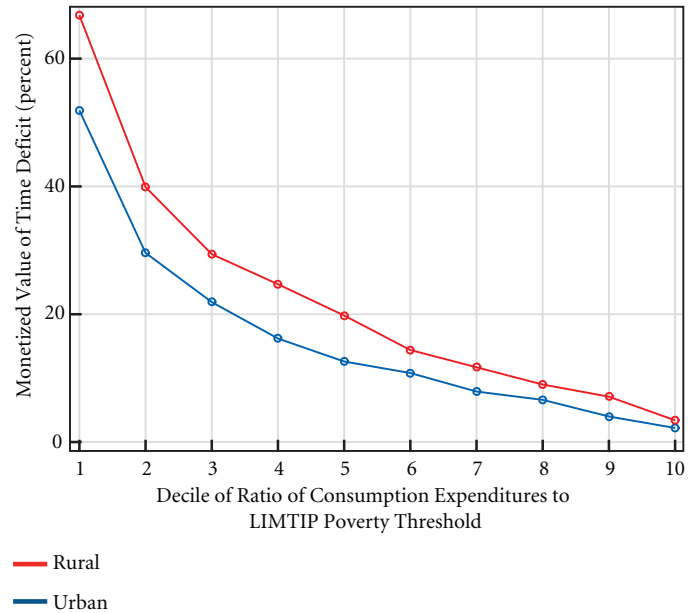
Source: Author’s calculations based on synthetic datasets (see Note 7).

officially poor households) manage to stay above the official poverty line by putting in long hours at the job at the expense of providing the minimum required care for their dependents and homes.

Apart from its impoverishing effects, “buying off” time deficits can be a relatively expensive proposition for many households that are above the LIMTIP poverty line. Indeed, exercising that option may be viable—even for many middle-income families—only by cutting back on other expenditures (e.g., clothing or healthcare) or going into debt. Consider the case of Ghana, a country that is classified by the World Bank as a lower middle-income country. The average monetized value of the time deficit is a sizeable amount even for households well above the poverty line (Figure 4). Expressed as a proportion of total household consumption expenditures, the monetized value of the time deficit falls below 10 percent only in the seventh decile in the urban distribution and in the eighth decile in the rural distribution. In the urban seventh decile, only three nonfood budget shares—education (14 percent), housing (excluding rent), and transportation (10 percent each)—registered a higher proportion, while in the rural eighth decile none did, though education (8 percent) came very close.⁸

Bringing time deficits to the fore also lays bare a gender disparity that remains hidden in the official poverty statistics.

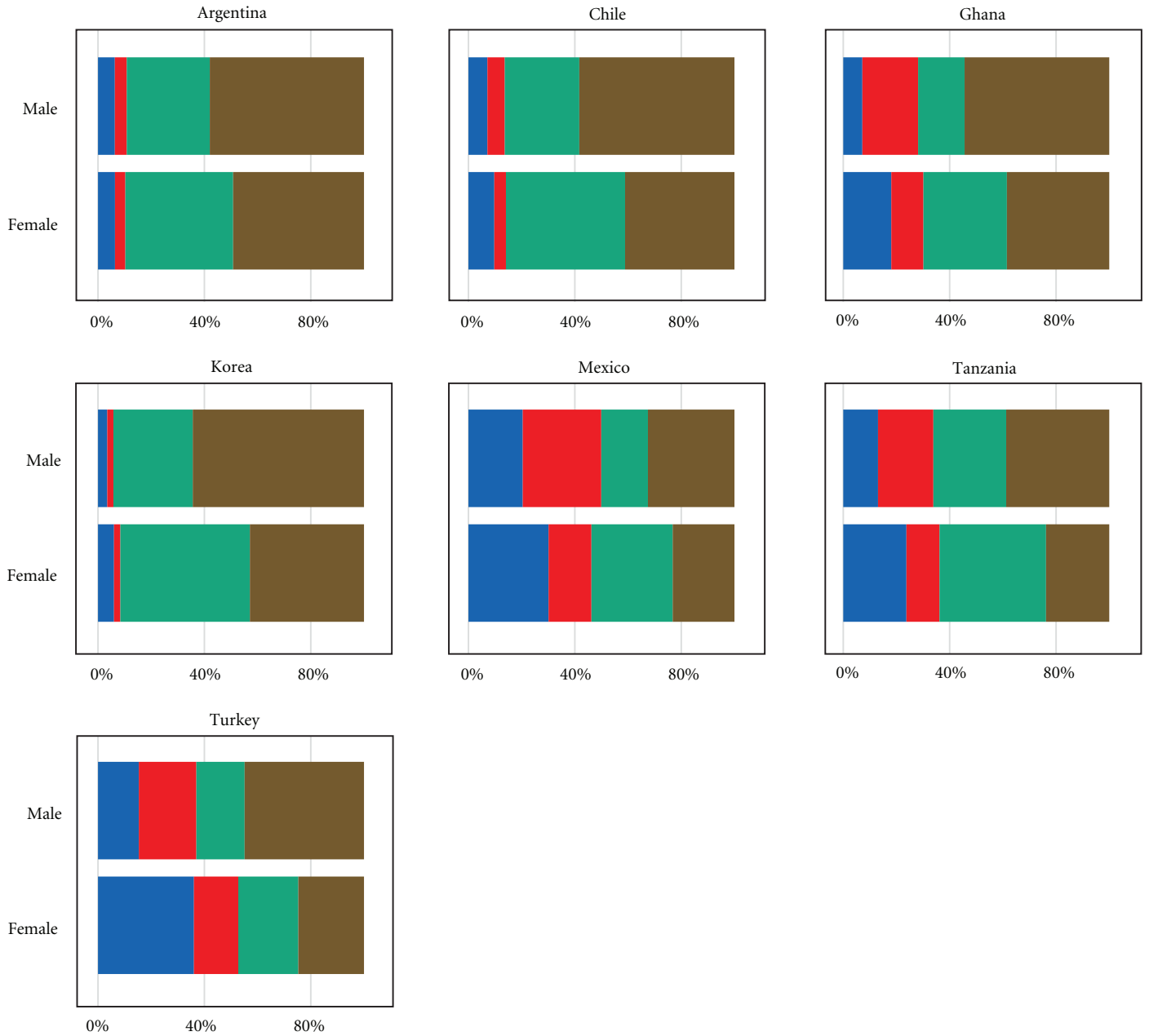
Figure 4 Monetized Value of Household Time Deficit as Percentage of Household Consumption Expenditures, Ghana



Source: Author’s calculations based on synthetic datasets (see Note 7).

As is well known, the official poverty lines are constructed at the household level; that is, every person in a poor household is poor irrespective of how unequal the intrahousehold sharing of income or consumption expenditures might be. In most countries, this conception of poverty results in roughly similar rates of income poverty for men and women, with the exception being those countries with a relatively large proportion of single-female-headed households that are disproportionately poor. However, viewed through the lens of LIMTIP, we can observe two instances of clear gender disparity: the proportion of women who bear the double burden of income and time deficits is much higher than that of men; and the proportion of women with neither income or nor time deficits is notably lower than the proportion for men (Figure 5).

Figure 5 Distribution of Employed Persons (18–70 years of age) by LIMTIP



Four-way Classification of Individuals According to LIMTIP

- Income-poor and Time-poor
- Income-poor and Time-nonpoor
- Income-nonpoor and Time-poor
- Income-nonpoor and Time-nonpoor

Source: Author's calculations based on synthetic datasets (see Note 7).

Conclusion

In the developing world, the most important pathway out of income poverty for the employed population and their dependents is better employment prospects. A crucial question highlighted by our findings is whether higher earnings will be sufficient to offset the impoverishing effects of time deficits. If not, although officially measured poverty may show progress toward the SDGs' target, the reality for the working poor can be different. We must also recognize that, insofar as the improvement in household earnings is attained by the entry of women into employment, the agenda of gender equality will be undermined to the extent that women are likely to encounter the double bind of income and time poverty. Furthermore, the nexus of labor market/household production realities faced by women and men—unintentionally or not—can encourage the persistence of the “male breadwinner” model, especially among low-income households. Although they desperately need additional income, it does not often “pay” for women to be full-time workers, due to a combination of wage differentials and precarious work for women, men who are already working very long hours for slightly better pay, and the lack of social care provisioning (Antonopoulos, Masterson, and Zacharias 2012). This mechanism can undermine increases in female labor force participation, with negative consequences for advancing gender equality in the multiple domains included in the SDGs.

These considerations point toward the need for integrating household production into the measurement and understanding of deprivation. They also highlight the need for policy design to be informed by such an integrated perspective. And they make it abundantly clear that the SDGs' target of full employment, decent work, and pay equity (Target 8.5)⁹ is crucial to attaining progress in poverty reduction (Target 1.2) and to easing the impoverishing effects of time deficits (Target 5.4). Making investments in the social care infrastructure and physical infrastructure can hasten progress toward all three targets. Enforcing or enacting legislation regarding hours of employment to prevent overwork, moving toward living wages and away from starvation wages, extending social insurance and labor protections to workers in the informal sector, and providing genuine support to small farms can also help us move closer to attaining the SDGs. However, the current macroeconomic and political regime that prevails within most countries (and internationally) severely limits fiscal expansion and places the interests of profits before people. Real progress toward the wishes and

aspirations embodied in the SDGs may not be possible in many parts of the world without serious challenges to the status quo.

Notes

1. The research findings reported in this policy note were produced in collaboration with my colleagues at the Levy Institute—Rania Antonopoulos, Kijong Kim, Tamar Khitarishvili, Thomas Masterson, and Fernando Rios-Avila—as well as collaborators elsewhere: Valeria Esquivel (Argentina); Sarah Gammage and María Elena Valenzuela (Chile); Monica E. Orozco Corona and Armando Sanchez Vargas (Mexico); Tae-hee Kwon (Korea); Emel Memiş (Turkey); Bernice Ofosu-Badu (Ghana); and Ahmed Makbel (Tanzania). I am also grateful for the financial support of UNDP-RSCLAC for the Latin American studies; UNDP-Turkey for the research on Turkey; Korea Employment Information Service for the Korean study; and the Hewlett Foundation for the research on Ghana and Tanzania.
2. Target 1.2: “By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.”
3. Target 5.4: “Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.” We should note that unlike the goal of poverty reduction, there is no specific quantitative target here—which is probably a reflection of the balance of forces or compromise among the contending parties for and against the inclusion of unpaid care work in the SDGs.
4. The Levy Institute measure has been constructed for countries that use income as a measure of resources for assessing poverty and for those that use consumption. To avoid cumbersome sentences, I will generally refer only to income as the relevant resource.
5. It should be noted that our samples for Argentina and Chile are not representative of the entire country: instead, they represent, respectively, the City of Buenos Aires and Greater Santiago. Detailed analysis of the results and information regarding sources and methods can be found in the following list of references: Zacharias, Antonopoulos, and Masterson (2012) for Argentina, Chile, and Mexico; Zacharias, Masterson, and Memiş (2014) for Turkey; and

- Zacharias, Masterson, and Kim (2014) for Korea. The report discussing Ghana and Tanzania is currently under preparation.
6. Households with at least one employed person constitute the vast majority of households in all the countries that we studied. This is likely to be generally true in other countries.
 7. The figures were generated using the individual country data files compiled for the research project. Each individual country data file is a synthetic dataset created by statistically matching a time-use survey and income/consumption survey. The sources and methods used for Latin America, Turkey, and Korea are discussed, respectively, in Zacharias, Antonopoulos, and Masterson (2012); Zacharias, Masterson, and Memiş (2014); and Zacharias, Masterson, and Kim (2014). A forthcoming Levy Institute publication will provide details regarding the estimates for Ghana and Tanzania.
 8. The deciles were computed separately for rural and urban areas. In the rural distribution, the bottom three deciles consisted entirely of consumption-poor households and 69 percent of the fourth decile was consumption-poor. Only the bottom decile of the urban distribution was made up entirely of consumption-poor households, while in the second decile, about 32 percent of households were consumption-poor.
 9. Target 8.5: “By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.”

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