DISCUSSION PAPER SERIES

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ABSTRACT

Measuring Youth Empowerment: An Illustration Using the Example of Tunisia*

Youth empowerment, i.e., the ability of young people to take control over key aspects of their lives, has become a growing concern to achieving sustainable development worldwide. An increasing number of policy interventions is targeting the youth, but to monitor the progress a better understanding on what constitutes youth empowerment is needed. However, in contrast to the area of women's empowerment, little progress has been made on determining which domains of empowerment are important for youth and how they can be operationalized with indicators for measurement. We propose four domains of youth empowerment with corresponding indicators and use a well-established methodology for constructing a composite index. Using data from a household survey in Tunisia including a sample of young adults (18 to 30 years old), we assess youth empowerment in the proposed domains, explore correlates to empowerment and assess the link between youth empowerment and youth well-being. The proposed approach can help to monitor youth empowerment in various contexts and to evaluate the effectiveness of youth interventions.

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1. Introduction

Youth empowerment, i.e., the ability of young people to take control over key aspects of their lives, has become an increasing concern not just in the Middle East and North Africa (MENA) region but across the Global South in general (UN, 2015; UNDP, 2019). Youth empowerment has been widely recognized as an instrument to foster youth participation in decision-making to reach greater youth well-being (see e.g. Morton & Montgomery, 2013). This is not only beneficial at the societal level, but can also prevent the youth from feeling excluded from political and economic decision-making (Prilleltensky, 2008; Zimmerman, 1990), which may ultimately lead to a reduced chance of engaging in criminal activities or political and religious extremism.

The need to focus on youth has become particularly salient in the last decade, resulting in a strategy devoted to incorporating youth policies into the 2030 Agenda for Sustainable Development. In line with this agenda, there has been an increased effort to launch interventions that aim at strengthening educational opportunities and employment prospects for young people that are believed to be conducive for peace, security and sustainable development (UN, 2018). Some of these interventions focus on empowering young women in economic and life skills in particular, because it has been found that it can improve their economic prospects and reduce adverse health challenges for them (Bandiera, Burgess, Gulesci, Rasul, & Sulaiman, 2020; Chinen, Hoop, Alcázar, Balarin, & Sennett, 2017).

Yet, in contrast to women's empowerment, for which various measures with some agreement on important empowerment domains have been developed,[1] there has been less conceptual work in the area of youth empowerment. Hence, there is not yet a consensus which domains of empowerment are salient for the youth and how these can be reasonably operationalized with indicators which can be derived from conventional household surveys. While interventions have typically focused on empowering the youth through economic opportunities (Card, Kluve, & Weber, 2018; Kluve et al., 2019), evidence suggests that dimensions beyond the economic sphere, such as the ability to have control over the future, have personal freedom and assume leadership might also be relevant for youth empowerment (Jennings, Parra-Medina, Hilfinger Messias, & McLoughlin, 2006; Úcar Martínez, Jiménez-

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[1] See e.g. Alkire et al. (2013) for the 'Women's Empowerment in Agriculture Index', which considers the following domains important: production, resources, income, leadership and time. Overall, many approaches rely on Kabeer's (1999) framework for measuring (female) empowerment, which involves three interrelated dimensions: resources, agency and achievements (see e.g. Glennerster, Walsh, & Diaz-Martin, 2019).

Morales, Soler Masó, & Trilla Bernet, 2017). This paper tries to address this gap by proposing a set of youth empowerment domains with concrete indicators tied to these domains. This allows to compare empowerment levels across groups or to measure progress in empowerment levels over time. For the domains, we consider various aspects of life that are relevant to youth empowerment: control over the future, resources (including assets), personal freedom and leadership. We believe that taking a multi-dimensional approach beyond the economic sphere and identifying the domains in which young people are (dis)empowered allows to target youth challenges more effectively and to measure the impact of policy interventions more accurately.

The proposed domains are not meant to be exhaustive, they can easily be expanded or reduced, depending on the context and the data at hand. We moreover provide an exemplary illustration of how such indicators can be aggregated into one single index using the methodology of the Women's Empowerment in Agriculture Index (WEAI) developed by Alkire et al. (2013). A major difference between female and youth empowerment is that there is no clear benchmark for the latter. While gender equality is an obvious objective regarding female empowerment, it is less obvious what should be attained for the youth. Another complication arises from the fact that within households it is even harder to observe the allocation of resources across age groups than between men and women. Finally, to assess the relevance of the proposed domains, we descriptively examine their link to youth well-being, as measured by self-efficacy, self-esteem and life satisfaction.

We apply the youth empowerment index to the context of Tunisia using a sample of youth drawn from a nationally representative household survey that we conducted in 2017. We collected data on 1,150 households and 2,511 individuals, of which 722 were youth, within the age range of 18 to 30 years old. These were partly young people still residing in the household of their parents, and partly young people that already headed their own household. The survey was primarily designed to collect information on variables feeding into both the construction of women's and youth empowerment indices.

The results show that young men and women in Tunisia are particularly disempowered in dimensions covering economic aspects, such as access to credit, activity status and ownership of assets. These findings plausibly relate to the high unemployment rate for young men and women in Tunisia, which leads to low-income levels, low asset ownership, and limited access to credit. We do not necessarily find large average differences between young men and women. Yet, gender differences are more pronounced among young independent couples, displaying an increased gender gap in numerous indicators, as compared to young people still residing with their parents. This may point at more conservative gender norms for married women or selective

migration out of the parental household. The results on the relationship between youth empowerment and youth well-being confirm that our domains of empowerment are relevant for youth's lives and associate with their sense of self-efficacy, self-esteem, and satisfaction in life.

The paper is structured as follows. Section 2 discusses the relevant literature on youth empowerment and existing measurement methodologies. Section 3 introduces four domains of youth empowerment and corresponding indictors. Section 4 discusses the data used. Section 5 describes the main results and presents one possibility to aggregate youth empowerment into one single index using the WEAI methodology. Section 6 assesses the link between youth empowerment and youth well-being. The paper concludes in Section 7 by discussing the limitations of our concepts and analysis and possible applications and extensions for future work.

2. Relevant Literature

In 2019, the world was home to 1.2 billion young people aged 15 to 24 years, accounting for 16 percent of the global population. By 2030, the youth population is projected to grow by another 7 percent to 1.3 billion, with the largest increases expected in less developed countries (Arslan, Tschirley, Di Nucci, & Winters, 2021; UN, 2019) and particularly in Africa (Arslan, Tschirley, & Egger, 2021). With 2030 also being the target date for achieving the Sustainable Development Goals (SDGs), the active engagement of empowered youth in sustainable development has been acknowledged to be central to achieving sustainable, inclusive and stable societies (UN, 2018).

Following Kabeer's (1999, p. 435) definition, where empowerment is a 'process by which those who have been denied the ability to make strategic life choices acquire such an ability', young people worldwide still face many obstacles to becoming empowered. The ability to exercise choice incorporates three dimensions: (i) resources: gaining access – or future claims – to material, human, and social resources; (ii) agency: the capacity to define and influence decision-making on strategic life choices and act upon them; (iii) achievements: meaningful improvements in well-being and other life outcomes (Kabeer, 1999). When it comes to youth empowerment, a primary obstacle identified by policy-makers and practitioners is the lack of access to resources in the economic sphere as high numbers of young people are still experiencing poor education and employment outcomes (UN, 2018). This is particularly true in the MENA region, where unemployment rates remain the highest in the world and on average one in four youth is unemployed (World Bank, 2021a). In Tunisia, 35.8 percent of youth are unemployed, making their economic situation particularly dire (World Bank, 2021b).

Moreover, there are significant gender and regional disparities in Tunisia, with half of all young women not in education, employment, or training. These disparities may further delay progress in gender equality and female empowerment (World Bank, 2014).

All three dimensions of empowerment proposed by Kabeer (1999) are interrelated and thus, the lack of access or future claims to (economic) resources may manifest in less agency and ultimately low achievements for youth. It follows that many interventions have focused on empowering youth economically by providing decent working opportunities through vocational and business training and summer job programs, and by generating life skills, business skills and providing financial training. Most studies evaluating these types of interventions look at their impact on economic empowerment, which is often measured using labor market outcomes such as a changed employment status, the type of employment and earnings. While some reviews reveal rather sobering effects of active labor market policies for youth in developed countries (Card et al., 2018; McKenzie, 2017), a recent review by Kluve et al. (2019) finds that youth employment interventions are particularly successful in low- and middle-income countries. Attanasio et al. (2011), for instance, evaluate the impact of a training program offered to disadvantaged youth in Colombia and find that the program raises earnings and employment for young women.

Yet, beyond pure economic empowerment, those youth projects may also affect non-economic spheres. So far, only a few studies additionally evaluate the impact on non-economic outcomes. For instance, Blattman et al. (2012) study the impact of a cash transfer program for young people in Uganda. Although the cash transfers were supposed to pay for vocational training, tools, and business start-up costs, the program's objective was not only to enrich young adults, but moreover to generally empower them. As such, besides labor market outcomes, the authors assess the impact on mental health and subjective well-being, but also community participation and engagement. Groh et al. (2012), who study the impact of a program assisting female community college graduates in Jordan finding employment, also consider well-being measures including mental health, subjective well-being and female empowerment.

In other strands of the literature, the concept of youth empowerment has been assessed from a pure psychological sphere. Psychological empowerment is considered a key mechanism by which individuals become stronger and more confident to gain greater control over their lives, which is typically associated with greater participation in democratic decision-making processes, and an increased awareness of their social and political environments (Christens, Peterson, & Speer, 2011; Perkins & Zimmerman, 1995). Zimmerman and Zahniser (1991) propose the Sociopolitical Control Scale (SPCS) to measure psychological empowerment; the

scale comprises of 17 items that include questions on the political efficacy, self-efficacy, desirability of control, perceived competence and civic duty scales. This scale has been modified for use among youth and validated in various settings such as the US (see e.g. Powell et al., 2021) and Malaysia (Christens, Krauss, & Zeldin, 2016).

The outlined evidence suggests that despite being ubiquitous, the concept of youth empowerment is not clear-cut and that there are large heterogeneities in the relevant dimensions depending on the context or research discipline. Úcar Martinez et al. (2017) explore the concept of youth empowerment from various angles in the course of a systematic literature review and identify the following main dimensions that have been associated with youth empowerment so far: the personal growth and well-being dimension, the relational dimension, the educational dimension, the political dimension, the transformative dimension and the emancipative dimension. Yet, low consensus exists on a specific choice of indicators that may be used to measure achieved empowerment in each dimension and eventually how all dimensions can be combined into a holistic youth empowerment index.

Progress in that area has only been made on the level of cross-country comparisons. This includes for instance the Youth Development Index (YDI), which has been developed by the Commonwealth and emphasizes the importance of youth empowerment. It covers the following five domains: education, health and well-being, employment and opportunity, political participation, and civic participation. The composite index is based on 18 indicators that collectively measure the progress on youth development on a country level (The Commonwealth, 2016). The Youth Wellbeing Index in turn, which has is an initiative of the International Youth Foundation, covers similar domains (education, health, economic opportunity, citizen participation, information and community technology, safety and security), but consists of 40 indicators for measuring the well-being of young people on a national level (Goldin, Patel, & Perry, 2014). Lastly, another index – the Youth Progress Index (YPI) developed by the European Youth Forum and the Social Progressive Imperative – explicitly aims to assess youth empowerment independent of economic indicators. Each country gets a score on how well it meets basic human needs, foundations of well-being and opportunity (European Youth Forum, n.d.). While these indices give an overview of the aggregate level of youth empowerment within a country, they are less suited to measure it at the individual level.

To assess youth empowerment among various dimensions on the individual level, we believe a measure that moves beyond existing indicators (e.g., labor market outcomes solely) and indices that focus only on one dimension (e.g., psychological empowerment using the SPCS) is necessary. We therefor develop a composite measure that uses indicators which can

be derived from typical household surveys and that incorporates various aspects of life relevant to youth. This includes economic dimensions and access to resources but also leadership and indicators linked directly to life quality. The goal is to equip actors in policy and research to identify critical areas of youth empowerment and to measure and compare youth empowerment levels over time.

3. Measuring Youth Empowerment

The Youth Empowerment Index (YEI) we propose is an adaptation of the WEAI developed by Alkire et al. (2013). In the WEAI, women's empowerment is measured along five domains of empowerment (5DE): production, resources, income, leadership, and time use. Each of these domains receives an equal weight of 1/5. The domains are measured by several sub-indicators, which are given an equal weight within the domain. In contrast to the WEAI, which measures both absolute empowerment of women and relative empowerment of women in relation to the primary male in the household, we limit ourselves to an absolute youth empowerment index. The primary reason is that there is no obvious benchmark against which to compare the empowerment of a young person. It is questionable, whether the comparison to older or younger people is meaningful as certain decisions such as educational choice (regarding older people) or family planning (regarding younger people) are not as relevant in the respective age group. As a result, we limit the measurement of youth empowerment to absolute empowerment and assess to what extent a young person has the ability to decide on issues that are key for taking control over his or her life, such as the educational or professional career, the ability to access credit, or to participate in social life. As such, the index can be used to make comparisons across different groups (e.g., rural vs. urban) or to track the progress of youth empowerment of a particular group over time.

Table 1 shows the domains chosen to measure youth empowerment, the indicators used within each domain and their respective weights. Each of the four domains receives a weight of 1/4, which is equally distributed among the indicators within each domain. For example, since the resource domain has three sub-indicators, each sub-indicator receives a weight of 1/12.

There are two main differences to the WEAI methodology described in Alkire et al. (2013). First, as mentioned above, we do not measure relative empowerment, and second, we restrict ourselves to four domains of empowerment. In addition, we adapt the domains of empowerment to a youth context and go beyond measuring empowerment in agricultural, rural areas, by expanding the index to be applicable also to the urban youth. The advantage of the index is that it is multi-dimensional and stretches beyond the economic dimension of

empowerment, covering various domains that affect youth's ability to take control over key aspects of their lives.

Table 1. Domains, indicators and weights for the YEI

Four domains of empowerment (4DE)		Indicators	Weight
Control over the future	1.	Activity status	1/12
	2.	Decisions about employment	1/12
	3.	Decisions about education	1/12
Resources	4.	Household assets	1/8
	5.	Access to and decisions on credit	1/8
Leadership	6.	Group membership	1/12
	7.	Use of social media	1/12
	8.	Speaking in public	1/12
Personal freedom	9.	Choice of partner/children	1/12
	10.	Interaction with friends	1/12
	11.	Hobbies	1/12

i) Control over the future

The domain 'control over the future' measures to what extent young people feel they have the ability to determine key aspects that relate to their future opportunities – largely in the economic sphere. Three indicators are used to measure this domain: activity status, decisions about employment and decisions about education. The first indicator – activity status – captures whether a person was employed either as a wage worker or self-employed in the last twelve months or was enrolled in an educational institution or in vocational training at the time of the interview. We deem this indicator important to empowerment, firstly, because education opens important pathways to future opportunities in other dimensions such as employment, health or citizen participation. Secondly, employment is an important means to achieve financial stability and an adequate standard of living (Goldin et al., 2014; The Commonwealth, 2016). Thus, if the interviewed youth fulfill the above-mentioned criteria, we consider this person to be empowered regarding the (current) activity status. Young people working without a salary, for example working as an apprentice or working unpaid for a family business, are not considered empowered. One could argue that young people may have little control over their education or employment status, but also the respective type and area.. For this reason, we add the second and third indicator to this domain to account for the level of agency in that matter. For the second indicator respondents were asked whether they can (generally) freely decide over aspects related to their employment. Respondents that reported that they could (somewhat or completely) freely decide over their employment were considered empowered. A similar cut-off was chosen for the last indicator in this domain: decisions about education. If a respondent

reported to be (generally) able to freely choose which education to pursue, s/he is considered empowered.

ii) Resources

The second domain – 'resources' – determines the ownership or access to economic resources such as household assets. This domain finds direct standing in Kabeer's (1999) empowerment framework, though beyond material resources, it extends to human and social resources, which we cover in other domains. It is necessary to mention that both access to and future claims on these assets count. Thus, even though young people living with their parents may currently not necessarily own these assets themselves, they might either directly benefit from their use, or indirectly benefit from growing up in a wealthier household. Specifically, we elicit whether (at the time of the interview) a household has assets such as land for construction or agriculture, a house, a non-agricultural economic activity or a business, cattle, or a motorized vehicle. These types of assets may allow youth to increase their productivity and incomes to ultimately generate value for society (Arslan, Tschirley, Di Nucci, et al., 2021). If a young person lives in a household with one or several of these assets, s/he is considered empowered. Access to and decisions on credit make up the second indicator in the resources domain. For this indicator we elicit whether a person has taken a credit in the previous 12 months or generally has the possibility to take a credit if s/he wished to. A person is empowered if s/he did have the possibility to take a credit – and if so, whether s/he was able to decide over its use and responsible for repayment.

iii) Leadership

The 'leadership' domain is divided into three indicators: group membership, use of social media and speaking in public. Civic and social groups provide important networks and social capital for young people – yet, access to them, particularly in rural areas, is often lacking (Trivelli & Morel, 2021). For this indicator we consider civic groups, cultural associations, sports clubs, political parties, and religious associations. A young person is considered empowered if s/he feels (generally) free to join at least one of the listed groups. In the MENA region and in particular in Tunisia, social media play a crucial role in how young people communicate. The platform Facebook is especially popular among youth; in 2017, 6.4 million Tunisians (54.9 percent of the population) used Facebook, of which only 17 percent are more than 35 years old (Miniwatts Marketing Group, n.d.). A young person is considered empowered if (at the time of

the interview) s/he actively participates in online discussion fora or uses at least one of the most common social media platforms, i.e., Twitter, Facebook, Instagram, or LinkedIn. The last indicator determines whether a person is free to speak in public. A lack of possibilities for civic engagement may curb youths' frustration, which may lead to social instability and in extreme cases to extremist behavior (The Commonwealth, 2016). This indicator is particularly relevant for the Tunisian youth, as even though they played a leading role in bringing change to the regime during the Arab Spring, young people have hardly been heard in political decision-making on issues that directly affect them (World Bank, 2014). For the YEI, a young person is considered empowered if s/he feels free to speak in public or can be a candidate for a position in politics or in a social institution.

iv) Personal freedom

The fourth dimension of the YEI measures 'personal freedom', which is determined by three indicators: the choice of partner and children, interaction with friends and the choice of hobbies. In the MENA region spouses are often chosen or need to be approved by the family. An important aspect in empowerment is the ability to choose one's own spouse or partner, and, if the person is already married, is free to engage in family planning and decide on how many children to have. The first indicator considers the ability to choose the spouse and engage in family planning. If a person is (generally) free or free to some extend to decide on the own family composition, we consider the person empowered. The second indicator measures the freedom of a young person to interact with friends. This indicator might be especially problematic for young women who might not be able to go out with friends of the opposite sex or a mixed group of friends. A person is considered empowered if s/he is (generally) free or free to some extend to go out with a group of friends of the same sex or a mixed group. The final indicator in this domain looks at whether a person is (generally) free to choose his or her own hobbies. If a person is free or free to some extend to decide on his or her hobbies, the respondent is considered empowered.

Calculation of the YEI

The absolute empowerment index is calculated using the Alkire-Foster method. It aggregates the information from the eleven indicators described in Table 1 and mirrors youth's achievements in each indicator and domain. In its disaggregated form it can identify specific areas that need improvement. For the WEAI, Alkire et al. (2013) construct a 5DE-index, which

is determined by the percentage of empowered women, the percentage of disempowered women and the percentage of domains in which disempowered women have adequate achievements. For the YEI we adapt the WEAI to construct the 'four domains of empowerment (4DE)'-index as a measure of youth empowerment. Empowered means that a young person has adequate achievements in at least three of the four domains or is empowered in a combination of the weighted indicators that make up at least three quarters of the total.

The stepwise approach to calculate the 4DE-index is to first identify the disempowered and then calculate the disempowerment index across the four domains (M_{0y}). First, all indicators are coded such that a respondent receives a value of 1 if s/he has inadequate achievements in this indicator and 0 otherwise. Next, an inadequacy score is computed summing the weighted inadequacies of each person using the weights in Table 1. The inadequacy score of each individual will thus lie between 0 and 1. If a respondent displays inadequacies across all indicators, s/he will have the maximum score of 1, if the respondent has no inadequacy in any indicator, hence is empowered over the entire set of indicators, the score will be zero. A second cut-off is introduced to define who is disempowered. It is determined by the share of weighted inadequacies a young person must have to be considered disempowered. If a young person's inadequacy score exceeds the disempowerment cut-off of 0.25, s/he is considered disempowered, and the score is replaced by 0. With an inadequacy score below or equal to 0.25, meaning s/he had adequate achievements in at least three quarters of the weighted indicators, the person is considered empowered. Consequently, a higher disempowerment cut-off point would result in a lower number of disempowered individuals, whereas a lower cut-off point would imply a higher number of disempowered individuals. The difficulty lies in finding the adequate cut-off point. Yet, following Alkire et al. (2013), we want to emphasize that the YEI should rather be used to track changes of youth's (dis)empowerment over time or to compare the level of empowerment across different groups of young people. Thus, we choose an adequacy cut-off that results in empowerment baseline indices that allow for reasonable improvement over time.[2] After having identified the disempowered, one can calculate the 4DE-index according to

$$4DE = H_{ey} + \left(H_{ny} \times A_{ay}\right) \tag{1}$$

where:

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[2] As a robustness check we also calculate the YEI for a disempowerment cut-off of 0.20, meaning that if a respondent had adequate achievements in at least 80% of the weighted indicators, the person is considered empowered. Results are shown in the Table S1 (Supplementary Material).

$$H_{ey} + H_{ny} = 100\% \text{ and } 0 < A_{ay} < 100\%$$

H_{ey} is the percentage of empowered youth, H_{ny} is the percentage of disempowered youth and A_{ay} is the percentage of domains in which disempowered youth have adequate achievements. The 4DE yields a value between 0 and 1, where higher values indicate greater empowerment. According to equation (1), increasing the number of empowered youth or increasing the number of domains in which disempowered youth are empowered increases the 4DE-index. Equation (1) could also be rewritten as:

$$4DE = 1 - M_{0y} = 1 - \left(H_{ny} \times A_{ny}\right) \tag{2}$$

where M_{0y} is the disempowerment index which is the product of the percentage of disempowered youth (H_{ny}) and the percentage of domains in which disempowered youth have inadequate achievements (A_{ny}).

4. Data

We use a representative cross-sectional dataset that was designed for the purpose of measuring women's and youth empowerment in Tunisia. It included survey questions concerned with the domains of the WEAI and our new youth empowerment measure described in Section 3. In addition, we included modules on labor participation, employment status, migration, social media use, psychological well-being, attitudes towards domestic violence and attitudes towards radicalization.

Data collection took place between September and November 2017. We collected data among 1,150 households which were selected based on a stratified random sampling strategy. The stratification took place at the level of governorates, delegations and sectors. In total, 115 sectors were randomly selected, of which 48 were rural and 67 were semi-urban or urban. In each sector, ten households were selected randomly and surveyed. In each household the household head, his spouse and up to two young adults aged 18 to 30 living in the household were interviewed. If there were more than two young adults, two adults were randomly selected. We have full information on a sample of 2,511 individuals, of which 722 are youth between 18 and 30 years of age. 363 of these 722 young adults are female. The survey is representative at the level of households (or household heads), but not for the population in general as the sampling strategy did not draw a representative sample of household members in each household. Some key descriptive statistics for our youth sample are shown in Table 2.

Table 2. Descriptive statistics of the youth sample

	Men		Women		Total	
	Mean	SD	Mean	SD	Mean	SD
Demographics						
Rural area	0.30	0.46	0.37	0.48	0.33	0.47
Coastal	0.60	0.49	0.58	0.49	0.59	0.49
Age	23.97	3.58	24.20	3.55	24.08	3.57
Married	0.05	0.22	0.28	0.45	0.16	0.37
Living in independent (own) household	0.09	0.29	0.25	0.44	0.17	0.38
Living in parents' household	0.91	0.29	0.75	0.44	0.83	0.38
Household size	4.57	1.43	4.51	1.43	4.54	1.43
Level of education						
No education	0.02	0.13	0.03	0.17	0.02	0.15
Primary education	0.31	0.46	0.18	0.39	0.25	0.43
Secondary education	0.45	0.50	0.42	0.49	0.44	0.50
Tertiary or higher education	0.22	0.41	0.37	0.48	0.29	0.45
Employment status (last 12 months)						
Wage worker	0.35	0.48	0.19	0.39	0.27	0.44
Entrepreneur/independent worker/farming	0.15	0.36	0.02	0.14	0.09	0.28
Unemployed	0.37	0.48	0.34	0.48	0.36	0.48
Inactive	0.29	0.46	0.53	0.50	0.41	0.49
Observations	359		363		722	

5. Results

Table 3 displays the results for the absolute YEI in Tunisia, which is 0.75 for young women and 0.80 for young men, respectively. 61 percent of young women and 49 percent of young men are disempowered and do not reach the critical threshold of empowerment. On average, disempowered men and women have inadequate achievements in 40 percent of the domains.

In Figure 1, we disaggregate the results into the different indicators. Our observation is that young people are primarily disempowered in the domain that is related to economic opportunities. The lowest level of empowerment is in the area of access to and decisions on credit. More than three-quarters of young men and women do not reach the critical threshold of empowerment in this dimension. More than half of all young people live in households with relatively few assets, with little difference in empowerment between men and women. In the actual activity status indicator, a different picture emerges. Only 43 percent of young women are empowered in this indicator, compared to 62 percent of men. This result emerged already from the descriptive statistics presented in Table 2 showing that women and men seem equally likely to be unemployed, but women are much more likely to be economically inactive

compared to men. Surprisingly, young people are also disempowered in the 'group membership' indicator. A plausible reason could be that there are not many sports clubs or civic society groups offered in Tunisia, which is especially the case in rural areas. These findings are largely in line with findings by the World Bank (2014), which identifies access to economic opportunities – particularly for young women – and youth-friendly services at the local level as key youth policy targets to facilitate youth inclusion and contribution to Tunisian society.

Table 3. Absolute YEI

Indices	Youth Tunisia	
	Women	Men
Disempowered headcount (H_{ny}), %	61.32	49.45
Average inadequacy score (A_{ny}), %	40.83	40.47
Disempowerment index (M_{0y})	0.25	0.20
4DE-index (1 - M_{0y})	0.75	0.80
Observations	359	363

Figure 1. Percentage of empowered young men and women in Tunisia, by indicator
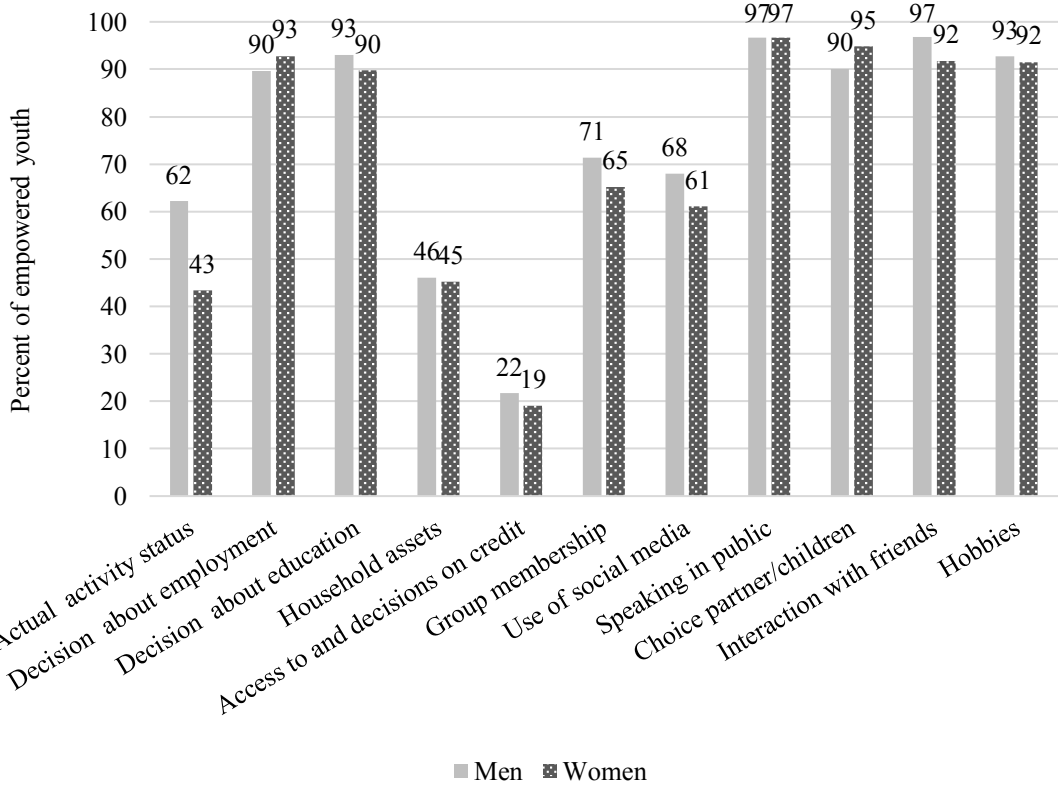
Table 4. Percentage of empowered young men and women, by region, education and household status

	Actual activity status	Decision about employment	Decision about education	Household assets	Access to and decisions on credit	Group membership	Use of social media	Speaking in public	Choice partner/ children	Interaction with friends	Hobbies	Obs.
	%	%	%	%	%	%	%	%	%	%	%	
Region												
Urban												
Men	67.26	89.69	92.83	42.60	21.52	71.75	71.75	96.86	89.69	97.31	92.38	223
Women	47.45	94.90	91.84	43.37	18.88	70.41	68.88	96.94	94.90	94.39	92.86	196
Rural												
Men	50.00	89.71	93.38	54.41	22.06	70.59	58.82	96.32	91.18	95.59	93.38	136
Women	36.53	89.22	86.23	48.50	19.16	56.29	47.90	96.41	94.61	87.43	89.22	167
Education												
Primary												
Men	58.12	88.03	93.16	49.57	23.08	72.65	54.70	98.29	89.74	97.44	92.31	117
Women	29.58	92.96	83.10	47.89	14.08	56.34	26.76	97.18	97.18	85.92	91.55	71
Secondary												
Men	60.87	87.58	91.30	45.34	21.12	70.81	65.22	95.65	90.06	94.41	91.93	161
Women	45.70	92.05	91.39	41.06	21.85	56.29	60.93	98.01	93.38	90.73	91.39	151
Tertiary												
Men	68.00	96.00	96.00	48.00	22.67	73.33	89.33	97.33	90.67	100.00	94.67	75
Women	48.06	93.80	92.25	51.94	19.38	78.29	79.84	96.12	94.57	95.35	92.25	129
Household status												
Independent HH												
Men	77.87	90.67	88.29	38.39	37.31	51.19	65.08	94.14	100.00	91.76	90.67	31
Women	19.09	84.62	88.01	42.59	21.29	59.15	39.83	93.22	100.00	82.02	87.15	93
Parental HH												
Men	60.59	89.59	93.46	46.86	20.12	73.43	68.22	96.96	89.14	97.31	92.87	328
Women	51.74	95.60	90.36	46.18	18.19	67.26	68.42	97.95	93.01	95.17	93.01	270

In contrast, Tunisia's youth is fairly empowered in indicators that relate to the choice of education or jobs, with little difference between men and women in these indicators. A similar result holds for the domain of 'personal freedom', which measures whether young people are free to choose their hobbies, their partners, engage in family planning and interact with friends. In these indicators, more than 90 percent of youth are empowered. The exception is the use of social media and access to internet, as less than 70 percent of young people are empowered in this indicator. Given the popularity of social media in Tunisia, and the high penetration of Facebook among youth (see Section 3) one could expect youth to be more empowered in this indicator. With a third of Tunisia's youth reporting to be disempowered, it might be that access to the internet is most prevalent in urban areas, restricting the access of youth in rural areas.

Our method allows us to compare empowerment levels across different groups within Tunisia. In Table 4 we disaggregate the results further into regional differences, education and position in the household. Urban and rural youth are equally empowered in most indicators. Some disparity in empowerment is salient in the economic activity indicator where rural young men are 17 percentage points less empowered than urban young men. This result is related to the scarcity of economic opportunities in rural areas (Arslan, Tschirley, & Egger, 2021) and the inequality that persists between rural and urban, and between coastal and non-coastal areas in Tunisia (Ramadan, Hlasny, & Intini, 2018). Regional differences can also be observed for the indicator of group membership and use of social media, where young women in rural areas seem to be less empowered. By contrast, young men are more empowered in rural than in urban areas in assets, mainly because agricultural assets and cattle of the household are present. Educated youth are more likely to be empowered across all indicators, but particularly in the use of social media. This might be because young people at university are more likely to have internet access allowing them to use social media more frequently.

An interesting comparison can be made between youth that still live at home and youth that live in their own household, probably after marriage or when starting to study. Interestingly, the gender gap increases for those young adults that moved out of their parents' home for various indicators. 61 percent of young men and 52 percent of young women living in their parents' house are empowered in the actual activity status, implying a gender gap of 9 percentage points. However, for youth who are married and heading their own household, this gender gap increases considerably; the empowerment level for young men goes to 78 percent but decreases for young women to 19 percent. Moving out of their parent's home seems to exacerbate traditional gender roles, where once a woman sets up her own household she is

expected to raise children and do the household chores, reducing women's labor market participation (Ayed Mouelhi & Goaied, 2017; Dildar, 2015; Hanmer, Tebaldi, & Verner, 2017).

Indeed, Table 4 shows that women living independently are less empowered compared to women still living in their parent's households on many indicators, but especially in the actual activity status, decisions about employment, use of social media and interaction with friends. This result might also relate to the fact that once governing their own household, women have less time for social activities as they are pre-occupied on managing the household chores. In contrast, men become more empowered in the indicators related to economic opportunities, such as actual activity status and access to and decisions on credit. Overall, comparing dependent and independent youth shows that the gender gap increases significantly on various indicators, once young people move into their own household. Empowerment in the household asset domain goes down for independent youth, because a newly set-up household will probably have less assets available than the household of their parents.

To test whether traditional gender roles intensify once young people set up their own household, we measured gender attitudes on a sub-sample of households using seven statements related to gender inequality (see Table 5).

Table 5. Gender inequality statements, by household status

	Share 'agreeing'				
	IHM	IHW	PHM	PHW	Total
(1) A man should have the final word about important decision in the home	0.80	0.63	0.72	0.65	0.68
(2) Men should decide whether a woman can work outside the house	0.72	0.56	0.59	0.46	0.54
(3) Jobs should rather be given to men than to women	0.80	0.62	0.68	0.51	0.61
(4) Men should take the decision with respect to a woman's education	0.65	0.35	0.49	0.32	0.42
(5) Men should decide where a woman can go to and when	0.80	0.43	0.63	0.37	0.51
(6) Doing the cooking, cleaning and washing are a woman's responsibility	0.65	0.63	0.62	0.55	0.59
(7) A young woman should obey her brother(s)	0.72	0.57	0.76	0.63	0.68
Observations	14	46	141	121	322

Note: 'Agreeing' includes the response categories 'strongly agree', 'somewhat agree' or 'indifferent'. IHM = 'living in independent household, men', IHW = 'living in independent household, women', PHM = 'living in parents' household, men', PHW = living in parents' household, women'.

Respondents answered these statements using a 5-point Likert scale from 1 reflecting strongly agree to 5 reflecting strongly disagree. Next, we calculated the share of respondents 'agreeing' with a specific statement, where 'agreeing' means that respondents either answered they strongly agree, agree or were indifferent. Higher shares of agreement then represent more

conservative gender attitudes. Table 5 shows that young men and women that live in their parents' homes are on average less conservative than those that set up their own households. Independently of the household status, young men are more likely to adhere to traditional gender roles than young women. Almost three quarter of young men and more than sixty percent of women believe that men should have final decision-making power and that young women should obey their brothers, while agreement with the statement that men should take decisions with respect to women's education is less prevalent. These findings are in line with the argument that gender roles intensify once young people move out of their parents' home, resulting in lower empowerment status of young women once they set up their own household.

Table 6. Share of indicators a young person is empowered in

	(1) EMP SHARE	(2) EMP SHARE	(3) EMP SHARE	(4) EMP SHARE FEMALE	(5) EMP SHARE MALE
Female	-0.03***	-0.01	-0.02		
	(-2.92)	(-0.87)	(-1.54)		
Independent HH		-0.00	-0.03	-0.08***	-0.04
		(-0.09)	(-0.98)	(-3.68)	(-1.32)
Female × independent HH		-0.09***	-0.07**		
		(-2.67)	(-2.19)		
Rural			-0.02	-0.03*	-0.01
			(-1.41)	(-1.72)	(-0.36)
Coastal			0.03***	0.02	0.04**
			(2.70)	(1.32)	(2.44)
Household size			-0.01**	-0.01	-0.01
			(-2.24)	(-1.65)	(-1.61)
Age (years)			0.00	-0.00	0.00*
			(0.71)	(-1.01)	(1.77)
Primary education			0.10**	0.09	0.08
			(2.31)	(1.49)	(1.20)
Secondary education			0.11**	0.12**	0.08
			(2.57)	(2.14)	(1.20)
Tertiary or higher education			0.16***	0.17***	0.13*
			(3.71)	(3.08)	(1.90)
Constant	0.75***	0.75***	0.63***	0.71***	0.58***
	(87.61)	(84.95)	(9.23)	(7.50)	(5.97)
Observations	722	722	722	363	359
R-squared	0.01	0.05	0.13	0.18	0.08

Note: Robust t-statistics in parentheses, clustered at the household level, *** p<0.01, ** p<0.05, * p<0.1. EMP SHARE denotes the share of indicators a young person is empowered in. For education 'no education' is the reference category.

To analyze youth empowerment further, we conduct a multivariate analysis on the share of indicators an individual is empowered in, by adding variables such as gender, household status, age and education (see Table 6). Young women are empowered in less indicators than young men, but this effect is mainly driven by the lower empowerment levels of married young women. Youth living in coastal areas and with higher education are empowered in more indicators, while living in a large household decreases the share of empowerment. Separating our youth sample by gender indeed shows that young women in their independent household are less empowered than young women living in their parents' household. In contrast, for men this is not observed. For young women both secondary education and tertiary education are positively associated with a higher empowerment share, while for men only tertiary education is positively related with the share of empowerment. Running the multivariate analysis on the indicators of empowerment separately shows the most striking result for the actual activity status, where young married women are significantly less empowered (see Table S2, Supplementary Material).

6. Youth Empowerment and Youth Well-Being

In addition to questions related to empowerment, we asked youth on their overall well-being following the framework of Kabeer (1999) who states that the' ability to achieve meaningful improvements in well-being and other life outcomes' is a key dimension of choice. Indices for cross-country comparisons such as the YDI and the Youth Wellbeing Index incorporate youth well-being as a core component to measure youth's development over time. While this is a valid choice, it could be argued that well-being at the individual level might be an outcome of empowerment. We thus measure well-being at the individual level, using three psychological scales that measure the constructs of self-efficacy, self-esteem and life satisfaction and relate these to our youth empowerment domains.

The New General Self-Efficacy Scale (NGSE) is an 8-item measure capturing people's beliefs that they can achieve their goals despite encountering difficulties (Chen, Gully, & Eden, 2001). The NGSE scale uses a 5-point Likert scale (1=strongly disagree to 5=strongly agree) and asks respondents how much they agree with the following eight statements:

(1) *I will be able to achieve most of the goals that I have set for myself.*
(2) *When facing difficult tasks, I am certain that I will accomplish them.*
(3) *In general, I think that I can obtain outcomes that are important to me.*
(4) *I believe I can succeed at most any endeavor to which I set my mind.*

(5) I will be able to successfully overcome many challenges.

(6) I am confident that I can perform effectively on many different tasks.

(7) Compared to other people, I can do most tasks very well.

(8) Even when things are tough, I can perform quite well.

Scores are summed and averaged over all eight items and kept on a continuous scale. Higher scores indicate higher general self-efficacy.

The second scale is based on Rosenberg's (1965) self-esteem (SE) scale and measures the confidence one has in one's own worth and abilities. Using a 4-point Likert scale (1=strongly agree to 4=strongly disagree) respondents are asked about the following five statements:

(1) On the whole, I am satisfied with myself.

(2) I take a positive attitude toward myself.

(3) I certainly feel useless at times.

(4) I feel I do not have much to be proud of.

(5) I feel that I'm a person of worth, at least on an equal plane with others.

Scores are summed and averaged over all items and kept on a continuous scale. Moreover, since statement three and four were negatively phrased, their sign was reversed. Higher scores then would indicate higher levels of self-esteem.

Finally, we asked the youth on their life satisfaction at present, before the 2011 revolution and five years from now using the following statements:

(1) Overall, to what extent are you currently satisfied with your life in general?

(2) Overall, to what extent were you satisfied with your life before the revolution?

(3) Overall, in your opinion, what will be the life satisfaction you expect in five years from now?

Items are scored using a 5-point Likert scale (1=very dissatisfied to 5=very satisfied). Higher scores indicate higher life satisfaction. We consider each statement separately without constructing an index.

Figure 2 shows that young women and men in Tunisia believe that they can reasonably achieve their goals, with the average of the NGSE score higher than 3.5. Young men and women have also a relatively high self-esteem but are on average neither satisfied nor dissatisfied with their life. Life satisfaction is reported having been slightly higher before the revolution and is

also projected to be slightly higher in five years both compared to life satisfaction at present. However, these differences are very small and are statistically not significant at conventional levels. Table S3 (Supplementary Material) shows that the urban youth scores slightly higher on all well-being indicators than the rural youth. More educated youth exhibit higher self-efficacy levels and higher self-esteem.

Figure 2. Well-being indicators for young men and women in Tunisia
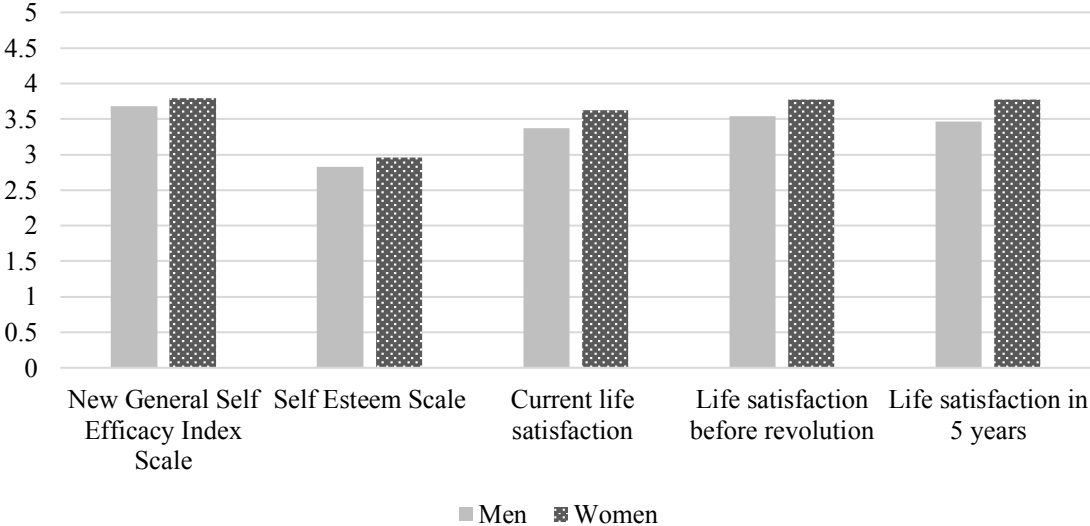
Young women believe that they are more capable of achieving their goals, have higher self-esteem and are generally more satisfied in life than young men (see Figure 2). This is surprising as it contrasts with their earlier observed lower empowerment levels in key economic dimensions such as their activity status, decision-making over assets of the households or decisions over and access to credit.

Therefore, to look at the relationship between empowerment and well-being in greater detail, we relate the psychological well-being scores to the empowerment indicators of the YEI. We perform a multivariate analysis, adding gender, household status, education, and household size as additional variables. Columns (1) to (3) in Table 7 show that young women feel consistently more capable of achieving their goals, have higher self-esteem and are generally more satisfied with life than young men. This is consistent with our findings in Figure 2 and irrespective of household status. Youth in coastal areas has higher levels of self-efficacy. Well-being indicators seem higher for the younger respondents and for the higher educated. In particular, young people with a tertiary degree feel that they are more capable of accomplishing their goals, have higher self-esteem and are more satisfied in life. Not surprisingly, young entrepreneurs feel that they can achieve their goals, presumably a prerequisite to start your own company, and are more satisfied in life. Unemployment decreases life satisfaction significantly.

Table 7. Youth well-being and empowerment

	(1) NGSE	(2) SE	(3) LS	(4) NGSE	(5) SE	(6) LS
Female	0.12*	0.13***	0.19*	0.06	0.12***	0.14
	(1.70)	(2.91)	(1.79)	(0.99)	(2.60)	(1.33)
Independent HH	-0.00	0.08	0.19	-0.07	0.09	0.13
	(-0.01)	(0.73)	(0.79)	(-0.45)	(0.81)	(0.53)
Female × independent HH	-0.03	-0.01	0.23	0.09	0.01	0.21
	(-0.18)	(-0.11)	(0.89)	(0.55)	(0.06)	(0.79)
Rural	0.04	-0.02	-0.03	0.05	-0.02	-0.05
	(0.55)	(-0.47)	(-0.26)	(0.73)	(-0.51)	(-0.50)
Coastal	0.26***	0.04	0.03	0.23***	0.02	0.07
	(3.85)	(0.99)	(0.26)	(3.57)	(0.55)	(0.64)
Household size	0.01	-0.01	0.06*	0.01	-0.01	0.04
	(0.54)	(-0.59)	(1.66)	(0.36)	(-0.62)	(1.04)
Age (years)	-0.01	-0.02**	-0.04**	-0.02*	-0.02***	-0.04**
	(-0.81)	(-2.47)	(-2.38)	(-1.87)	(-2.73)	(-2.32)
Primary education	0.39*	0.26*	0.41	0.32	0.22	0.45*
	(1.87)	(1.87)	(1.54)	(1.62)	(1.50)	(1.72)
Secondary education	0.47**	0.33**	0.43	0.38*	0.28**	0.52**
	(2.36)	(2.38)	(1.58)	(1.92)	(1.98)	(2.01)
Tertiary or higher education	0.71***	0.45***	0.52*	0.60***	0.37**	0.68**
	(3.46)	(3.15)	(1.93)	(3.04)	(2.53)	(2.56)
Wage worker, last 12 months	0.01	0.10*	-0.07	0.04	0.10**	-0.01
	(0.09)	(1.95)	(-0.65)	(0.50)	(2.01)	(-0.12)
Entrepreneur/independent worker, last 12 months	0.28**	0.08	0.30*	0.26***	0.05	0.36**
	(2.57)	(1.06)	(1.74)	(2.63)	(0.64)	(2.04)
Unemployed, last 12 months	-0.05	-0.04	-0.21**	-0.05	-0.03	-0.19*
	(-0.74)	(-0.96)	(-2.00)	(-0.81)	(-0.69)	(-1.78)
Decision about employment				0.45***	0.12	0.09
				(3.41)	(1.50)	(0.45)
Decision about education				0.21*	0.10	-0.25
				(1.78)	(1.42)	(-1.64)
Household assets				0.01	0.12***	0.04
				(0.14)	(2.73)	(0.42)
Access to and decisions on credit				0.21***	-0.00	-0.33**
				(2.95)	(-0.03)	(-2.58)
Group membership				-0.16**	0.01	-0.17
				(-2.35)	(0.12)	(-1.65)
Use of social media				0.17**	0.06	-0.20*
				(2.25)	(1.41)	(-1.82)
Speaking in public				0.36**	0.19	0.66**
				(2.51)	(1.33)	(2.29)
Choice partner/children				0.31**	0.16*	0.25
				(2.54)	(1.75)	(1.15)
Interaction with friends				-0.31*	-0.01	-0.19
				(-1.94)	(-0.13)	(-0.87)
Hobbies				0.05	-0.01	-0.24
				(0.41)	(-0.08)	(-1.36)

Table 8. *continued*

	(1) NGSE	(2) SE	(3) LS	(4) NGSE	(5) SE	(6) LS
Constant	3.12***	2.84***	3.57***	2.46***	2.34***	3.52***
	(9.39)	(13.34)	(7.31)	(6.36)	(9.05)	(6.09)
Observations	714	709	707	714	709	707
R-squared	0.07	0.06	0.05	0.17	0.16	0.09

Note: Robust t-statistics in parentheses, clustered at the household level, *** $p<0.01$, ** $p<0.05$, * $p<0.1$. NGSE denotes the 'New General Self-Efficacy Scale'-index [1, 5]. SE denotes the 'Self Esteem'-scale [1, 4]. LS denotes life satisfaction at the time of the interview [1, 5]. For education 'no education' is the reference category.

Next, we estimate the relationship between youth well-being and empowerment, adding the empowerment indicators as additional variables. We omit the actual activity status indicator as it largely overlaps with the education and employment covariates used in column (1) to (3). Column (4) shows the relationship between empowerment indicators and the NSGE score. Being empowered in decisions about employment, education, credit, use of social media, speaking in public and choice of partner and children is positively correlated with the feeling of being capable to achieve one's goals. Empowerment in group membership and interaction with friends is negatively associated with the NGSE score. It could be that feelings of despair that arise when economic opportunities are missing are also shared in peer groups and nurture feelings of inability to achieve a goal. Self-esteem increases with empowerment on the choice of partner and children and if a young adult lives in an asset-rich household. Life satisfaction is negatively associated with access to credit and use of social media and positively with speaking in public.

7. Conclusion and Discussion

Given the many economic and political challenges young adults face in the MENA region in general and Tunisia in particular, interventions targeted at youth have been an increased focus of policymakers both at a national and international level. However, comprehensive youth empowerment measures that could be used in program evaluations remain scarce. While most policy interventions focus on empowering youth along the economic dimension through youth employment programs, it must be acknowledged that youth empowerment is a complex, multi-dimensional concept that encompasses not only whether young people have decision-making power over their economic resources but are also able to decide on key aspects of their life such as education, occupational choice, marriage, leadership, and personal freedom.

In this paper, we have adapted a prominent measure of women's empowerment, the multi-dimensional WEAI as developed by Alkire et al. (2013), to the context of youth

empowerment. We defined four empowerment domains that we deemed all important for young people to be able to make decisions: control over the future, resources, leadership, and personal freedom. In contrast to the WEAI, we only define absolute empowerment levels along these domains. Yet in the same way, the YEI can be used to compare empowerment levels across different groups of young people within Tunisia or to track progress of empowerment over time. In addition, this index is not strictly refined to agriculture, but aims at measuring empowerment levels both in an urban and rural context. A particular advantage of the index is that it allows policymakers to identify the dimensions and indicators along which youth are disempowered. Focusing attention and financial resources on those dimensions can thereby increase the efficiency of policy interventions. Additionally, to further enhance efficient targeting, the index can be disaggregated by gender and reveal areas in which gender gaps might be particularly salient.

Applying the YEI to a sample of 722 young adults in urban and rural areas in Tunisia we find that youth are highly disempowered in the indicators related to economic opportunities, such as labor market participation, access to credit and household assets, while they are fairly empowered in the dimensions related to choices about their future, leadership, and personal freedom. On average, young women in Tunisia are less empowered than men. This is mainly driven by differences in empowerment in the activity status, as young women are more likely to be economically inactive relative to men. Indeed, it is the only indicator in which there is a significant gender gap. Disaggregating the results further for young men and women still living in their parents' homes versus youth that are living in their own household reveals that among youth strong traditional gender roles are exacerbated once they leave their parents' home. Young women in independent households are more likely to be inactive to take on domestic tasks, while young men are expected to earn for the family. As a result, the gender gap in empowerment between young men and women increases for the youth living independently from their parents. However, this does not correlate with lower levels of well-being for young women living independently from the parents.

We believe the YEI is a flexible and powerful tool to measure youth empowerment in a comprehensive way. It can easily be applied to other contexts than Tunisia or the MENA region at large. Expanding surveys with the questions underlying the construction of the YEI can be done at a very low cost and offers plenty of opportunities to monitor youth empowerment including gender differences and to assess the impact of policy interventions on the youth along several important dimensions of their life. Unemployment, crime, marginalization, and

radicalization are all phenomena that very often affect especially the youth and hence require not just well targeted policy responses but also thoughtful monitoring tools.

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Supplementary Material

Table S1. Absolute YEI – 20% cut-off

Indices	Youth Tunisia	
	Women	Men
Disempowered headcount (H_{ny}), %	80.78	75.22
Average inadequacy score (A_{ny}), %	36.20	34.28
Disempowerment index (M_{0y})	0.29	0.26
4DE-index (1 - M_{0y})	0.71	0.74
Observations	312	317

Table S2. Correlates of youth empowerment, by indicator

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Actual activity status	Decision about employment	Decision about education	Household assets	Access to and decisions on credit	Group membership	Use of social media	Speaking in public	Choice partner/ children	Interaction with friends	Hobbies
Female	-0.10**	0.06***	-0.03	-0.02	-0.01	-0.07*	-0.05	0.01	0.04	-0.03*	0.00
	(-2.28)	(2.70)	(-1.42)	(-0.50)	(-0.43)	(-1.81)	(-1.29)	(1.13)	(1.58)	(-1.72)	(0.03)
Independent HH	0.16*	0.01	-0.06	-0.08	0.07	-0.29***	-0.12	-0.04	0.12***	-0.05	-0.03
	(1.84)	(0.09)	(-1.04)	(-0.81)	(0.81)	(-2.99)	(-1.45)	(-0.92)	(4.02)	(-0.93)	(-0.57)
Female × independent HH	-0.46***	-0.11*	0.04	0.05	-0.11	0.18*	-0.17*	-0.01	-0.05*	-0.07	-0.03
	(-5.12)	(-1.74)	(0.69)	(0.52)	(-1.08)	(1.74)	(-1.85)	(-0.30)	(-1.83)	(-1.14)	(-0.45)
Rural	-0.09**	-0.03	-0.01	0.10*	0.01	-0.05	-0.09**	-0.01	0.01	-0.04*	-0.01
	(-2.17)	(-1.09)	(-0.54)	(1.95)	(0.30)	(-1.20)	(-2.18)	(-0.64)	(0.24)	(-1.68)	(-0.49)
Coastal	0.07*	0.05**	0.06**	0.02	-0.01	0.08**	0.09**	-0.01	0.02	0.02	-0.01
	(1.67)	(2.13)	(2.58)	(0.41)	(-0.38)	(2.03)	(2.31)	(-0.86)	(0.95)	(1.07)	(-0.44)
Household size	-0.03*	0.02**	0.00	-0.01	-0.02*	-0.03*	-0.04***	-0.00	0.01	-0.00	-0.01
	(-1.87)	(2.12)	(0.52)	(-0.45)	(-1.71)	(-1.85)	(-2.89)	(-0.14)	(1.58)	(-0.21)	(-0.93)
Age (years)	-0.01*	0.01	0.00	-0.00	0.02***	0.00	-0.00	0.00	0.00	-0.00	-0.00
	(-1.84)	(1.64)	(0.56)	(-0.21)	(4.01)	(0.40)	(-0.17)	(1.62)	(0.34)	(-1.17)	(-0.21)
Primary education	0.21*	0.05	0.12	0.19	0.17***	0.21	0.04	0.14	-0.04**	-0.02	0.05
	(1.83)	(0.56)	(1.11)	(1.59)	(3.01)	(1.52)	(0.41)	(1.47)	(-2.10)	(-0.34)	(0.58)
Secondary education	0.22**	0.04	0.13	0.15	0.22***	0.17	0.20**	0.13	-0.06***	-0.03	0.04
	(2.01)	(0.50)	(1.21)	(1.30)	(3.89)	(1.26)	(2.10)	(1.37)	(-2.85)	(-0.49)	(0.51)
Tertiary or higher education	0.29**	0.07	0.15	0.24**	0.17***	0.29**	0.40***	0.12	-0.05**	0.02	0.05
	(2.52)	(0.87)	(1.42)	(1.99)	(2.96)	(2.12)	(4.09)	(1.25)	(-2.07)	(0.26)	(0.68)
Constant	0.73***	0.61***	0.71***	0.32	-0.31**	0.57***	0.68***	0.78***	0.84***	1.10***	0.95***
	(3.87)	(5.04)	(5.04)	(1.46)	(-2.21)	(2.77)	(3.64)	(6.73)	(9.20)	(8.88)	(7.18)
Observations	722	722	722	722	722	722	722	722	722	722	722
R-squared	0.12	0.04	0.03	0.02	0.04	0.06	0.17	0.02	0.03	0.06	0.01

Note: Robust t-statistics in parentheses, clustered at the household level, *** p<0.01, ** p<0.05, * p<0.1. For education 'no education' is the reference category.

Table S3. Youth well-being indicators, by region, gender, education and household status

	NGSE		SE		LS		LS + 5		LS - 7	
	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
Region										
Urban										
Men	222	3.70	221	2.85	221	3.40	173	3.47	215	3.53
Women	194	3.81	191	2.99	192	3.65	187	3.75	135	3.80
Rural										
Men	135	3.63	134	2.77	132	3.30	102	3.45	131	3.56
Women	163	3.76	163	2.91	162	3.60	125	3.73	161	3.81
Education										
Primary										
Men	116	3.53	116	2.71	114	3.26	95	3.40	114	3.45
Women	67	3.69	65	2.94	65	3.77	44	4.00	66	3.73
Secondary										
Men	160	3.67	158	2.83	158	3.47	116	3.49	154	3.52
Women	151	3.77	150	2.95	150	3.55	110	3.75	145	3.77
Tertiary										
Men	75	3.93	75	2.99	75	3.36	60	3.53	72	3.81
Women	128	3.91	128	2.99	128	3.66	97	3.74	127	3.83
Household status										
Independent HH										
Men	30	3.66	29	2.89	30	3.33	28	3.54	30	3.30
Women	91	3.72	91	2.95	90	3.82	67	3.77	87	3.98
Parental HH										
Men	327	3.68	326	2.82	323	3.37	247	3.46	316	3.57
Women	266	3.81	263	2.96	264	3.57	193	3.77	261	3.70
Total	714	3.73	709	2.89	707	3.5	535	3.66	694	3.61

Note: NGSE denotes the 'New General Self-Efficacy Scale'-index [1, 5]. SE denotes the 'Self Esteem'-scale [1, 4]. LS denotes life satisfaction at the time of the interview [1, 5]. LS-7 denotes life satisfaction before the revolution [1, 5]. LS+5 denotes life satisfaction in 5 years' time [1, 5].