In Egypt, as in many Middle East countries, the society has a great effect on imposing different roles on girls and boys throughout their transition to adulthood. These society’s attitudes about gender and gender roles have a significant impact on young people’s life course decisions and outcomes. Such attitudes shapes how simple household duties are assigned, how decisions are made, how power in relationships is balanced, which in turn affects women’s right, their access to institutions such as schools, the labor market, and electoral politics, and their risk of experiencing gender-based violence.

Furthermore, it is not only that gender roles attitudes shape young people’s life transitions, but also experience may in turn alter individuals’ gender roles attitudes and perceptions. Hence, a key empirical problem that arises when modeling the effect of gender roles attitudes on youth life transition is the endogeneity of gender roles. This simultaneity issue has been frequently sighted in previous research; however, only few studies were able to properly control for such a problem when modeling the relationship between attitudes and behavior.

The standard solution in this context is to use panel data to regress individual’s behavior on ones lagged attitudes in earlier years, but such data is rarely available. Accordingly, most of the previous research utilized cross-sectional data and focused on limited set of transitions and gender role attitudes. Cotter et al. (1998), Fortin (2005), Farre and Vella (2007) found that women's attitudes towards gender roles significantly affects their labor force participation using cross-sectional data. Lu (1993) explored the causal relationship between gender roles attitudes and females’ employments using 2SLS techniques. The author found that the effect of employment on attitudes is more noticeable among the younger group of the population.

Some researchers utilized panel data. Nevertheless, they focused mostly on one side only of this reciprocal relationship, either on the effect of attitudes on behavior (selection effect) or on the effect of life experience on attitudes change (adaptation effect). Fan et al. (2000) studied the effect of behavior on attitudes using longitudinal U.S. youth data. The authors concluded that while both males and females experienced change in an egalitarian direction as they age, the attitudes were influenced by particular experiences during transition to adulthood. Kaufman (2000) studied the effect of the gender roles attitudes on family formation and dissolution using two waves of national data. The results indicated that egalitarian women are less likely to intend or actually have a child than traditional women, and egalitarian men are less likely to divorce than traditional men. Kaufman and Bernhardt (2012) examined the influence of family transitions, including marriage, divorce, and childbearing, on changes in gender role attitudes using a panel data from Sweden. Their
results showed minor and insignificant effect of those transitions on attitudes, which was justified by the liberal welfare regimes in Sweden. Katze wise et al. (2010) examined changes in gender-role attitudes as a result of transitioning to parenthood for the first time. They found that parents became more traditional in their gender-role attitudes and behavior following the birth of a child. Women changed more than men.

Few researchers made use of panel data to examine the reciprocal relationships between gender roles and life course using different techniques. Thornton et al. (1983) used an 18-year panel data and structural equations model to show that labor force experience and educational attainment contribute to the formation of egalitarian views of gender roles. The evidence of reciprocal effect was significant only with labor force participation. Cunningham et al. (2005) used 31-year panel study to model the reciprocal relationships between gender roles attitude and adulthood transitions that included school, labor market, independent living arrangement, cohabitation, marriage and parenthood. Their results supported the positive association between more egalitarian roles attitudes and females’ school enrollment, employment and living independently, and these events on return caused changes in individual’s attitudes about gender. On the contrary the egalitarian role attitudes were negatively associated with timing to marriage and parenthood. Corrigal and Konrad (2007) illustrated, using longitudinal study, that gender role attitudes influence subsequent behavior, but they may also be adjusted to accommodate to situational constraints, such as work, marriage, and children. Moors (2003) estimated the reciprocal effect of gender role attitudes and family formation using the log-linear path model with latent variables that allowed taking measurement errors into account. Berrington 2008 used a graphical chain model to investigate the reciprocal relationships between changes in women's labor force participation following entry into parenthood and changes in gender role attitude. The author results showed that attitudes are not fixed and that revision of these attitudes in the light of recent life course events is important. The results showed that adaptation of attitudes to events appears to be stronger than the selection of individuals on the basis of attitudes. We show that it is not entry into parenthood as such, but the change in economic activity that is related to this event that is associated with attitude change.

Although the Middle East region is considered among the most conservative societies, to our knowledge, none of the previous research investigated the dynamic relationship between gender roles attitudes and individuals’ behavior. The main objective of this paper is to contribute in filling this gap in the empirical literature. Using new panel data from the rich and nationally-representative longitudinal Survey of Young People in Egypt (SYPE), we will empirically study the dual relationship between young people’s gender attitudes and their transition to work, marriage, parenting and civic and political participation during the January 25th 2011 Egyptian revolution and subsequent political events.

Theoretical Framework

The analyses in this paper are based on the life course theory, where early life experiences such as labor force participation, marriage, and even parenthood are associated with changes in individuals

**Data and Methods**

This paper will use a nationally representative panel data from the 2009 and 2014 SYPE to provide an account of young people’s gender attitudes and behavior during the last 5 years in Egypt. The 2009 Survey of Young People (SYPE) generated a unique source of data on the situation of youth in Egypt, covering a broad set of areas crucial to the transition to adulthood. Given the unprecedented series of political changes that have occurred in Egypt since 2009, the Population Council designed and implemented the second wave of SYPE in 2013/2014 in order to observe how Egyptian young people have been faring following this transitional period. The second round of data for the SYPE in 2013/2014 re-interviewed the same sample of young people who were interviewed in 2009.

The initial 2009 survey round targeted a nationally-representative sample of 15,029 young people aged 10 to 29 from 11,372 households, thus encompassing both "youth" and "adolescents." The 2014 round managed to successfully track 10,916 (72.6%) of those same young individuals (now age 13-35) who were interviewed in SYPE 2009. Every possible effort was made to track down the current contact information of households and/or eligible young people who had changed their location since the 2009 interview. Attrition was mainly due to family refusal to participate (9%) as well as the relocation of respondents (14%) who could not be tracked in 2014. Almost 60.0% of the interviewed individuals were still in their original 2009 households, while 12.6% were found in split households. Weights based on the probability of non-response were constructed to adjust the sample of the 2014 SYPE for attrition.

Hence SYPE 2009 and 2014 yield a panel dataset that is nationally representative for both time periods. SYPE is the most comprehensive source of data on young people in Egypt and the region today. The SYPE provides a rich source of key information on adolescents and youth living in Egypt before and after the revolution, including education, employment status, unemployment, job mobility, wage earnings, migration, family formation, mental and reproductive health, and civic and political participation. Furthermore, the SYPE includes extensive modules on life aspirations, gender

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1 The purpose of this age range was to track young people throughout the complete duration of their transition to adulthood, allowing for an extended period to account for the phenomenon of delayed marriage and in some cases transition to productive work (Assaad and Barsoum 2007). See Population Council (2010) for more details on the 2009 SYPE sample and its sampling weights.

2 Data collection for SYPE 2014 started in late 2013 and continued until mid-2014. So, respondents should be age 14-34 during the second SYPE interview. However, it seems that some respondents were below age 10 or above age 29 during the 2009 interview, but misreported (or approximated) their age. This often occurs at the boundaries of the eligible age group in household surveys. In the SYPE 2014 data, the age is left as reported during the 2013/2014 interview without any adjustment, after carefully checking their exact age.

3 A split household is defined in this 2014 SYPE panel as a household that was formed due to the move of at least one eligible young person out of his/her original 2009 household to form a new household after the 2009 interview.
roles attitudes, opinion towards domestic violence and social values.\textsuperscript{4} The SYPE also contains a great deal of information on the household members’ demographic and socioeconomic characteristics, housing conditions, ownership of durable goods, and access to basic services and infrastructure, information of any household migrant members.\textsuperscript{5}

**Methodology**

Several regression techniques will be employed in this paper to model the reciprocal relationship between attitudes and behavior. The panel structure of SYPE will allow us to control for this simultaneity problem. First, fixed effect regression model techniques will be employed here to separately model each youth outcome and gender roles attitudes. Since mostly the same questions were asked in both waves of SYPE, including attitudes and social values questions, each youth outcome and attitude will be measured in terms of change over time before and after the revolutionary era. A similar set of explanatory variables as those listed above will be employed in this analysis.

In the second sets of model, we will make use of the panel feature of the SYPE through regressing youth outcomes observed in SYPE 2014 on lagged youth characteristics as well as gender roles from the 2009 SYPE survey and vice versa. This will allow us to avoid possible simultaneity between young people’s attitudes and outcomes in the same survey year. Furthermore, structural equations model will be used in the paper, where it allows to study the complex and recursive patterns of relationships among measured variables and latent constructs in a conceptual framework.

We are aware of the fact that the environment festering and escalating violence in Egypt before the Arab Spring was very different than that in the period following the January 25\textsuperscript{th} Egyptian revolution because not only the environment changes around the person, but the person changes as well. This “change” might directly affect outcomes of youth, for example via labor demand shocks. We will address this point by controlling for factors that influence outcomes and attitudes such as changes in local process, the local unemployment levels, and changes in tourism.

**References**


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\textsuperscript{4} See Population Council (2010) for details of the SYPE questionnaires

\textsuperscript{5} The SYPE study protocol, including required informed consent and data collection instruments was reviewed and approved by the Population Council’s Institutional Review Board before initiation of data collection in 2009 as well as in 2014. The SYPE was also approved to be conducted by the government Central Agency for Public Mobilization and Statistics in both survey years.


